Tulare County Housing Element Action Program 9

Existing Infrastructure

April 2014

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Introduction

Tulare County is composed of eight incorporated cities and numerous unincorporated communities and hamlets. Most of the unincorporated communities and hamlets are located on the Valley floor. The 2009 Update of the Tulare County Housing Element is a comprehensive assessment of current and future housing needs for all segments of the County's population living in unincorporated areas, as well as a program for meeting those needs. It serves as a policy guide to address issues related to the provision of adequate and affordable housing, as well as the comprehensive housing needs of the unincorporated areas of Tulare County during the 2009 to 2014 planning period and beyond.

According to the 2009 Update, the purpose of the Housing Element is to:

- Determine the existing and projected housing needs of residents of the unincorporated areas;
- Establish goals, objectives, policies, and programs that guide decision-making to address housing needs; and
- Implement actions that encourage the private sector to build housing, while ensuring that governmental policies do not serve as a constraint to housing production.

A major constraint to development of affordable housing throughout Tulare County is the lack of sufficient infrastructure such as domestic water, wastewater, storm drainage, and street lights. Government Code Section 65583(a)(3) requires local governments to prepare an inventory of land suitable for residential development, including vacant sites and sites having the potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites. This inventory is designed to be used to identify sites that can be developed for housing within the planning period of the Housing Element. The purpose of this report is to document the existing infrastructure provided in the disadvantaged unincorporated communities and hamlets.

Action Program 9

Housing Related Infrastructure Needs

As stated in the 2009 Update of the Tulare County Housing Element, a major constraint to development of affordable housing throughout the County is the lack of sufficient infrastructure and basic municipal services. The County continues to identify housing related infrastructure needs, such as; water, sewer, natural gas or streetlights, using community needs assessments, housing condition surveys, public comments at community meetings, redevelopment implementation plans and amendments, community plans and other relevant information from the Health & Human Services Agency (HHSA) Environmental Health Services, Regional Water Quality Control Board, public utility districts, community services districts and other agencies.

In August 2010, in an effort to address the drinking and wastewater needs for disadvantaged communities in the Tulare Lake Basin, which includes Fresno, Kern, Kings, and Tulare counties. The Board of Supervisors approved an agreement with the California Department of Water Resources to accept $2 million in funding for the Tulare Lake Basin Disadvantaged Community Water Study Project.

This funding came as a direct result of lobbying efforts by the Tulare County Water Commission, an advisory board made up of local water experts including engineers, water district managers, elected officials and community activists. The $2 million grant will fund a water study project which will seek to identify the water and wastewater problems affecting disadvantaged communities in the Tulare Lake Basin and develop recommended solutions to address these problems through pilot projects and studies. The project will develop a plan that provides rural, disadvantaged communities with a safe, clean and affordable potable water supply and effective and affordable wastewater treatments and disposal. Tasks included in the water study project are: developing a database of all disadvantaged communities in the Tulare Lake Basin that includes data covering groundwater, groundwater recharge areas, etc.; stakeholder consultation and community outreach; selecting and designing pilot projects and studies to develop priority issues; implementing pilot projects; and preparing and finalizing a report to the State Legislature, among others. This study will be a tremendous step to address the drinking and wastewater needs for some of our region's poorest communities.

In addition, Tulare County has taken an important step to replace an aging water distribution system in the unincorporated community of Seville. At its December 7th, 2011 meeting, the Tulare County Board of Supervisors unanimously approved the submission of a grant application to seek more than $1 million in Federal funding for the replacement of deteriorating distribution lines and water storage facilities in Seville, otherwise known as the Seville Water System Rehabilitation Project. The total cost of the project is estimated to be more than $2 million. The grant application for Federal funding and an existing grant application for State funding would cover the cost of the project. Self-Help Enterprises has worked extensively with Tulare County in the preparation of the grant application.

Tulare County will continue to seek grant and loan opportunities to provide and assist in the delivery of reliable, clean water and/or wastewater services, stormwater drainage, and other critical municipal services to the lower income and disadvantaged unincorporated communities in Tulare County.

In addition to this commitment, the County will also take the following steps:

Technical Assistance to local service providers:

- Create a referral system with an initial response within 3-5 days, with the goal of providing timely responses and technical assistance to Public Utility Districts (PUDs), Community Services Districts (CSDs) and other water and wastewater providers including Mutual Water Companies (MWCs), on issues related to public health goals, board governance and effective service delivery; board member responsibilities; compliance with local, state and federal mandates; identification of and support in preparing applications for local, State, Federal, and private grant and loan opportunities to improve water, wastewater and other basic infrastructure, such as sidewalks, curbs, gutters, streetlights, parks and community centers. Recommend to those representing PUDs, CSDs and MWCs that they attend future Government 101 trainings and other available and known trainings that will provide technical assistance to special districts (within one year of adoption and going forth on a continuous basis throughout the planning period).

- Seek grant funding to provide annual trainings designed to increase the capacity of PUDs, CSDs and other service providers (e.g., MWCs). Trainings will include board member roles and responsibilities; relevant local, state and federal mandates; and potential local, state, federal, and private funding opportunities for water, wastewater, stormwater, natural gas, streetlights, and sidewalk improvements (seek grant funding within one year of adoption and going forth on a continuous basis throughout the planning period).

Infrastructure Development Priorities:

- Create a matrix of Infrastructure Development Priorities for disadvantaged unincorporated communities in Tulare County that establishes infrastructure development priorities in four phases. The matrix will determine evaluation criteria to assess current infrastructure conditions and the affordability and adequacy of delivery of municipal services to disadvantaged unincorporated communities in Tulare County. The matrix shall establish infrastructure development priorities for basic infrastructure services, including: drinking water, wastewater, stormwater drainage, curbs, gutters, roads, and street lights. The matrix shall establish priorities for Tulare County's applications and use of funds for infrastructure development during the Housing Element planning period and in future years
    - Phase One: Aggregate and compile existing information and data from extant documents and studies as well as from relevant stakeholders regarding infrastructure and service needs and availability. Information and data will be gathered from stakeholders at an initial stakeholder meeting and through written comments submitted during this phase (within 6 months of adoption and going forth on a continuous basis throughout the planning period)
    - Phase Two: Seek grant funding to expand and further investigate the data compiled as part of Phase One to include communities not identified in Phase One and more thorough information regarding infrastructure and services (seek grant funding within 12 months of adoption and continuous throughout the planning period)
    - Phase Three: Seek grant funding to design the matrix of Infrastructure Development Priorities that will address inadequate infrastructure and service delivery needs to disadvantaged communities identified in Phase One and Two. Prior to adoption, the Resource Management Agency (RMA) will release a draft matrix and hold a public meeting to consider comments from stakeholders (seek grant funding within 12 months of adoption and going forth on a continuous

basis throughout the planning period)

- Phase Four: Seek grant funding to implement the completed Infrastructure Development Priorities matrix with the goal of providing infrastructure sufficient to support new low-income housing on the sites identified in the adequate sites inventory that lack necessary infrastructure (seek grant funding within 12 months of adoption and going forth on a continuous basis throughout the planning period)

➢ Annual Public Meeting: The County will hold a public meeting annually, where the County informs the community of the steps taken in meeting its goals and objectives to remedy infrastructure and municipal services needs in lower income, disadvantaged communities in the unincorporated areas, where community members, community organizations and other stakeholders can provide input/comments, ask questions and receive technical assistance. These meetings will be held at a time and location accessible to working community members. Meetings and related notices will be provided in Spanish and any other language spoken by a significant proportion of Tulare County residents. Interpreters will be supplied for the meetings (12 months from adoption and anually going forth throughout the planning period)

➢ Matrix Content: The adopted matrix of Infrastructure Development Priorities will include at least the following components:

- An analysis of the specific infrastructure and service needs in each of the unincorporated communities of Tulare County. This infrastructure analysis should include: water system capacity, water quality, necessary water system repairs, availability of a public sewer system, wastewater capacity (if applicable), quality and functionality of septic systems, stormwater drainage, flood control, the availability of natural gas services, adequacy of streetlights, sidewalks, road quality and existence of parks and community centers
- An analysis of less costly methods to address infrastructure needs by implementing municipal service review recommendations prepared by Local Agency Formation Commission (L.A.F.C.O.), including consolidations and extension of services from one system to another
- An analysis of potential Local, State, and Federal programs and other public resources available that would remedy the specific infrastructure and municipal service needs identified. This analysis would consider potential sources of matching funds available to complete these projects. This analysis would consider the feasibility of crating Assessment Districts and Tax-Increment Financing Districts to support capital infrastructure investment and on-going operations and maintenance costs
- Identification of past or on-going infrastructure and municipal services funds and/or in-kind assistance to expand or repair infrastructure in each unincorporated community that was provided by any infrastructure service provider or Tulare County, including the time period this assistance was provided
- Methodology to establish priorities for infrastructure and municipal services repair and expansion that includes all of the unincorporated communities in Tulare County. The priorities will include the following factors: whether a project will address a threat to public health (i.e. drinking water contamination, overflowing septic systems), the frequency of infrastructure assistance provided by the County in the past, and whether a community is “disadvantaged”

➢ Support applications from cities, special districts and non-profit organizations for Federal and State grant funds and other appropriate funding sources to upgrade public facilities

- Utilize benefit assessment districts, County Service Areas (CSAs), Municipal Improvement Act 1913 and/or similar vehicles to establish and maintain new public facilities in unincorporated communities (whenever appropriate)

- In redevelopment areas, use Redevelopment Agency funds to leverage other funds and resources as a means to subsidize expansion or repair of infrastructure and municipal services (continuous throughout the planning period), provided that the County continues its participation as a Redevelopment Agency

- During building permit process, review applications to ensure adequate water source and proper liquid waste disposal (current policy and going forth on a continuous basis)

- Where community sewer systems are not available, the County will evaluate soil data to regulate and monitor installation of septic systems to assure public health and safety (current policy and going forth on a continuous basis)

- Support and provide technical assistance for applications from cities and non-profit organizations for Federal and State grant funds and other appropriate funding sources to upgrade public facilities to assure adequate capacity for affordable housing (whenever funding opportunities are available)

- For new improvements which serve both new and existing residents, and over which the County has fee-setting authority, the County will balance new charges and assessments between new and existing residents (current policy and going forth on a continuous basis)

Report Presentation

The remainder of this report is presented in chapters separated into each of the communities and hamlets. Each chapter identifies the existing infrastructure for domestic water and sewer services, and storm drainage facilities. They also identify the location of existing street lights, sidewalks, Americans with Disabilities Act (ADA) compliant curbs, and roads in need of repair. The existing infrastructure is documented in tables as well as maps, when available and appropriate.

The information presented in this report was compiled from a variety of sources including Tulare County RMA, the 2009 Update of the Housing Element, Tulare County L.A.F.C.O. Municipal Service Reviews (MSRs), and discussions with individual Public Utility Districts (PUDs) and Community Services Districts (CSDs). Information was verified using Google Earth and Google Maps programs.

1. COMMUNITY OF ALPAUGH

1.1 General Information

Alpaugh is a census-designated place located in the southwest portion of Tulare County. It is generally bounded by Avenue 50 in the south, Avenue 58 in the north, Road 34 in the west, and Road 42 in the east and encompasses one (1) square mile of land. It is not directly served by any State Route. The Tulare County/Kings County Line is located approximately two miles west of Alpaugh, and the Tulare County/Kern County Line is located approximately seven miles south of Alpaugh. Communities located near Alpaugh include Allensworth and Earlimart to the east, Pixley to the northeast, Delano to the southeast, and Corcoran to the northwest. Alpaugh is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land.

Based on the 2010 Census, the population in Alpaugh was 1,026. Similar to other communities in Tulare County, the population of Alpaugh is racially diverse with 37% White, less than 1% African American, 1% Native American, less than 1% Asian/Pacific Islander, 58% from other races, and 3% from 2 or more races. 85% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 243 housing units located within Alpaugh, of which 53% are owner-occupied and 47% are renter-occupied.

1.2 Domestic Water & Wastewater

Domestic water service in Alpaugh is provided by the Alpaugh Joint Powers Authority (AJPA) which was formed in March 2003. It is a separate governing agency responsible for all operations and maintenance to the domestic water system in the rural community. Table 1-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (AJPA, February 2014). These connections do not directly correspond to number of housing units but include the number of service connections, both residential and commercial. Figure 1-1 graphically displays the approximate location of water wells and water lines. These are based on correspondence with AJPA because accurate mapping is unavailable.

According to the Municipal Service Review 2006 (MSR), domestic water service providers for Alpaugh have been unable to support any new connections to their water system in recent years due to severe water quality problems (including arsenic contamination), inadequate system pressures, and deterioration of water pipelines resulting in breaks and leaks. Water system problems have halted any new development from occurring in the community.

Alpaugh's water problems have long been documented. Since its formation, the AJPA has received over $4 million in grants and loans to improve the community's water supply and distribution system. The water supply is currently derived from a single well (Well #10). Well #9, owned and operated by the Alpaugh Irrigation District (AID), is used as a backup in case Well #10 fails to function. The AJPA expects to have an additional well drilled in the future, at which time Well #10 would function as the backup well.

While the AJPA has struggled over recent years to supply customers with safe, affordable drinking water, they appear to be taking steps in the right direction by obtaining funding necessary for a complete overhaul of its water system. While the AJPA is unable to support additional connections at this time, ongoing system improvements will improve the system capacity and level of service and allow for additional service connections in the future. Assuming 290 equivalent dwelling units (EDUs) in order to meet Tulare County Improvement Standards, the AJPA water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,030 gallons per minute (GPM) (500 GPM fire flow and 530 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. EDUs include housing units and other types of connections such as commercial uses. The current pumping efficiency of the AJPA water system is unknown, and therefore it cannot be determined if the water system meets the requirements of the Tulare County Improvement Standards.

Alpaugh lacks a sanitary sewer system and is served by individual or community septic systems.

TABLE 1-1

Existing Water & Wastewater Connections in Alpaugh

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
377 [1]	377 [2]	0	Septic Only		

* Data current as of February 2014 (per conversations with Alpaugh CSD)

1 Twenty (20) of these connections are not currently in use

2 Per Alpaugh CSD, the system is not technically "at capacity" since at present they are using only half the delivery capability of the two wells. The real "capacity" problem arises from sinking of the water table.

1.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage

- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Alpaugh does not currently have a storm drainage system.

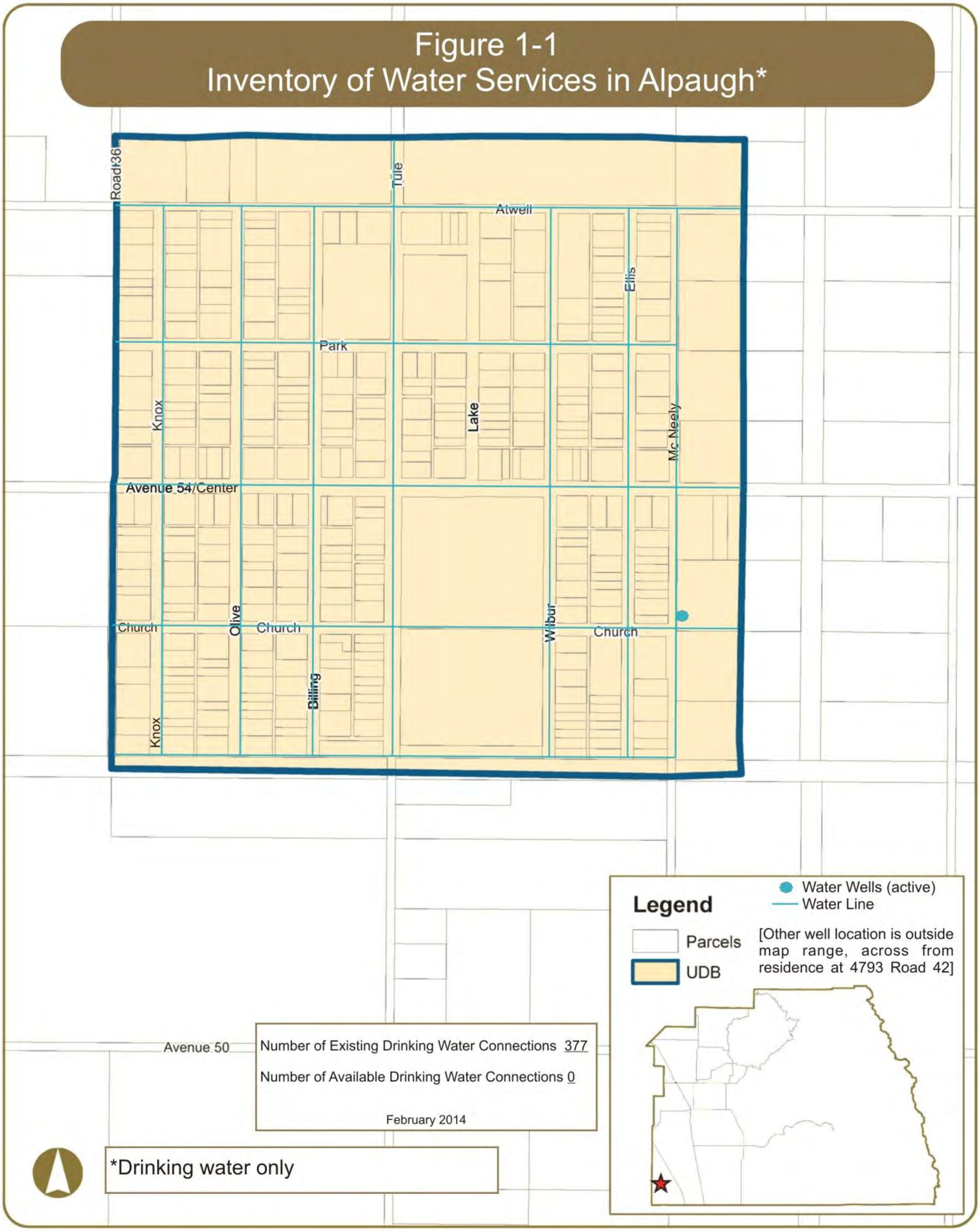


Figure 1-1
Inventory of Water Services in Alpaugh*
Road 36
Tule
Atwell
Ellis
Park
Knox
Lake
Mc Neely
Avenue 54/Center
Church
Olive
Church
Wilbur
Church
Billing
Knox
Legend
Water Wells (active)
Water Line
Parcels
UDB
[Other well location is outside map range, across from residence at 4793 Road 42]
Avenue 50
Number of Existing Drinking Water Connections 377
Number of Available Drinking Water Connections 0
February 2014
*Drinking water only

1.4 Roads

There are various roadways in Alpaugh that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 1-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 1-2 graphically displays this information on a map.

TABLE 1-2
Roads in Need of Major and Medium Repair in Alpaugh

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Billing Road	Atwell Avenue to south end	CHIP
2	Center Street	Knox Road to Tule Road	GRX
3	Center Street	Tule Road to Wilbur Road	CHIP
4	Center Street	Wilbur Road to Mc Neely Road	GRX
5	Church Avenue	Knox Road to Tule Road	CHIP
6	Ellis Road	Church Avenue to Center Street	GRX
7	Ellis Road	Center Street to Park Avenue	CHIP
8	Knox Road	Atwell Avenue to south end	CHIP
9	Lake Road	Center Street to north end	CHIP
10	Mc Neely Road	Center Street to north end	CHIP

TABLE 1-2 (Continued)
Roads in Need of Major and Medium Repair in Alpaugh

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Olive Road	Center Street to south end	GRX
12	Tule Road	Park Avenue to Atwell Avenue	GRX
13	Wilbur Road	Boswell Avenue to Center Street	CHIP
14	Wilbur Road	Center Street to Park Avenue	GRX

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

1.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are several ADA compliant curb ramps located within Alpaugh and are listed in Table 1-3 and displayed in Figure 1-2.

TABLE 1-3
Existing ADA Curb Ramps in Alpaugh

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Center Street	Wilbur Road	NW Corner
2	Center Street	Tule Road	NE Corner

(Source: County of Tulare Public Works, August 2013)

1.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 1-4 identifies the location of existing sidewalks in Alpaugh. Figure 1-2 also displays this information graphically. The sidewalks represented in Table 1-4 and Figure 1-2 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 1-4

Existing Sidewalks in Alpaugh

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Center Street	Tule Road to 150' east	North side
2	Center Street	Tule Road to Wilbur Road	South side
3	Center Street	Lake Road to Wilbur Road	North side
4	Lake Road	Center Street to 100' north	East side
5	Park Avenue	Tule Road to 150' east	North side
6	Tule Road	Park Avenue to 150' north	East side
7	Tule Road	Center Street to 400' north	East side
8	Wilbur Road	Center Street to 150' north	West side
9	Wilbur Road	Center Street to 100' north of Boswell Avenue	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

1.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 1-5 identifies the location of existing street lights that are maintained by Tulare County, in Alpaugh, as well as their specifications. Figure 1-2 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 1-5
Existing Street Lights in Alpaugh

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Atwell Street	Tule Road	South of Atwell (W side)	GTC1039233	5800	W	E	PG&E
2	Center Street	Billing Road	NW Corner	859	5800	W	S	PG&E
3	Center Street	Tule Road	NW Corner	857	5800	W	S	PG&E
4	Center Street	Lake Road	NE Corner	858	5800	W	S	PG&E
5	Center Street	Wilbur Road	NE Corner	861	5800	W	S	PG&E
6	Center Street	Ellis Road	NW Corner	866	5800	W	S	PG&E
7	Center Street	Mc Neely Road	NE Corner	862	5800	W	N	PG&E
8	Church Avenue	Billing Road	NW Corner	860	5800	W	E	PG&E
9	Church Avenue	Tule Road	NW Corner	855	5800	W	E	PG&E
10	Church Avenue	Wilbur Road	SE Corner	856	5800	W	N	PG&E
11	Park Avenue	Billing Road	NE Corner	865	5800	W	S	PG&E
12	Park Avenue	Tule Road	NW Corner	863	5800	W	E	PG&E

(Source: Tulare County Public Works, March 2013)

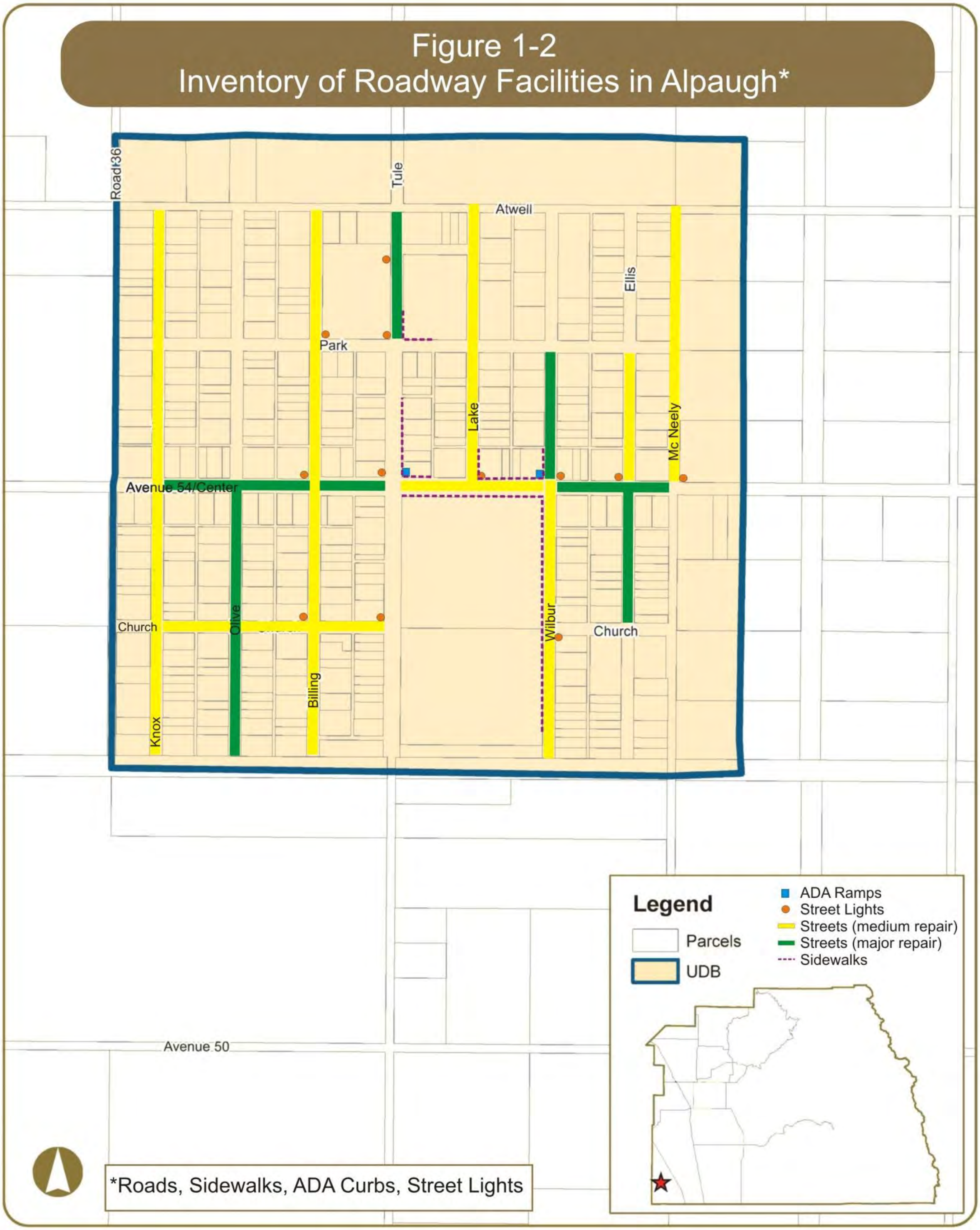


Figure 1-2
Inventory of Roadway Facilities in Alpaugh*
Road 36
Tule
Atwell
Ellis
Park
Lake
Mc Neely
Avenue 54/Center
Church
Olive
Wilbur
Church
Billing
Knox
Avenue 50
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

2. COMMUNITIES OF CUTLER AND OROSI

2.1 General Information

Cutler is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 402 in the south, Avenue 408 in the north, Road 120 in the west, and the Bowhay Ditch in the east and encompasses 0.8 square miles of land. It is directly served by State Route (SR) 63. Cutler is located south of and adjacent to the community of Orosi. Cutler is an agriculturally oriented service community surrounded on the south, west and east by lands in agricultural production, vacant lands, and scattered residential homes. Cities and communities surrounding Cutler include Visalia to the south, Dinuba to the west, the community of Orosi to the north, and the community of East Orosi to the northeast. The Tulare County/Fresno County Line is located approximately 3.3 miles northwest of Cutler.

Based on the 2010 Census, the population in Cutler was 5,000. Similar to other communities in Tulare County, the population of Cutler is racially diverse with 48% White, 1% African American, 1% Native American, 1% Asian/Pacific Islander, 45% from other races, and 3% from 2 or more races. 97% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 1,136 housing units located within Cutler, of which 44% are owner-occupied and 56% are renter-occupied.

Orosi is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 408 in the south, Alta East Branch Canal in the north, Road 120 in the west, and the Bowhay Ditch and Sand Creek in the east and encompasses 2.4 square miles of land. It is directly served by State Route (SR) 63. Orosi is located north of and adjacent to the community of Cutler. Orosi is an agriculturally oriented service community surrounded on the north, west and east by lands in agricultural production, vacant lands, and scattered residential homes.

Based on the 2010 Census, the population in Orosi was 8,770. Similar to other communities in Tulare County, the population of Orosi is racially diverse with 44% White, 1% African American, 1% Native American, 9% Asian/Pacific Islander, 42% from other races, and 4% from 2 or more races. 87% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 2,070 housing units located within Orosi, of which 56% are owner-occupied and 44% are renter-occupied.

2.2 Domestic Water & Wastewater

Domestic water and sanitary sewer service in Cutler and Orosi is provided by their respective Public Utilities Districts (PUDs), which were formed in June 1922. Their primary function is providing sanitary sewer and domestic water service for the communities. Table 2-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). These connections do not directly correspond to number of housing units but include the number of service connections, both residential and commercial. Figure 2-1 graphically displays the approximate location of water wells and water lines. According to the Municipal Service Review 2006 (MSR), the Cutler PUD's water supply is derived from two existing deep underground wells that have a total maximum production efficiency of approximately 2,100 gallons per minute (GPM), or 3.024 million gallons per day (MGD). The PUD also has an elevated water storage tank with a capacity of approximately 50,000 gallons. Two test wells have been drilled, have proven successful, and the PUD has awarded a contract for drilling of the first (Well #8) of two new wells. The PUD is also securing funding for a water system rehabilitation project, and a blending tank project.

Water supplied from one of the new wells (Well #9) would be mixed with water derived from two existing wells (Wells #3 and #4) which are currently inactive due to high nitrate levels as a part of the blending tank project. By mixing the water supply from wells that produce acceptable water quality with those which have contaminant levels which exceed maximum levels, the PUD's water supply capabilities will be increased, while bringing the water quality to within acceptable standards before entering the distribution system.

Lovell High School, which is operated by the Cutler-Orosi Joint Unified School District, has requested water capacity from the Cutler PUD. The PUD plans to provide the school with water service pending the approval and implementation of the blending tank project. The school is located at the northwest quadrant of Avenue 392 and State Route 63, which is currently outside of the Cutler PUD boundary and sphere of influence (SOI). It is anticipated that the PUD would provide water service to the school on a contractual basis.

Assuming 1,100 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Cutler PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,700 GPM (1,500 GPM fire flow, and 1,200 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served; The PUD's water system is capable of delivering a combined source flow of 2,515 GPM indicating that the system falls short of meeting the Tulare County Improvement Standards. EDUs include housing units and other types of connections such as commercial uses. After accounting for the required domestic demand, the PUD's water system would be capable of supplying a fire flow of approximately 1,315 GPM, which meets the residential fire flow requirement. The water system would need to be tested at actual system pressure to determine the actual amount of available capacity for domestic and fire flow. The PUD could increase its fire flow capacity by adding wells, or adding storage capacity to the system.

Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is concluded that the District's water system is currently operating at or near its capacity and cannot support additional connections at this time. The amount of developable land available, including the availability of infrastructure, are two factors that have limited community growth from occurring, including affordable housing objectives, and commercial enterprise. The PUD's plans to construct several upcoming water system improvement projects will significantly increase its ability to provide service to proposed development projects.

The PUD's water supply is derived from four existing deep underground wells that have a total maximum production efficiency of 2,930 GPM, or 4.22 MGD. The District also has a water storage tank with a capacity of approximately 750,000 gallons. A test well has been drilled, has proven successful, and the PUD has awarded a contract for the drilling of a new well (Well #10). The District also indicated a need to replace older asbestos cement distribution piping with larger diameter ductile iron piping, and that improvements will be on a phased basis and dependent upon available funding.

Assuming 1,800 EDUs, in order to meet Tulare County Improvement Standards the Orosi PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 3,400 GPM (1,500 GPM fire flow, and 1,900 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 PSI to each lot served; The PUD's water system is capable of delivering a combined source flow of approximately 8,660 GPM not including the well that pumps into the storage tank (approximately 6,250 GPM could be delivered for two hours from the 750,000 gallon storage tank, assuming the tank is full). The PUD's water system would need to be tested at actual system pressure to determine the actual amount of available capacity for domestic and fire flow.

Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is estimated that the PUD's water supply sources could support an additional 2,000 equivalent dwelling units. Special circumstances (i.e. distribution system pressure constraints) could significantly affect the available capacity, and a complete assessment should be completed by the District Engineer prior to the approval of additional connections.

The MSR states that both Cutler and Orosi PUD staff are working with Alta Irrigation District officials to study the feasibility of constructing a regional water treatment facility that would use water from the Kings River by exchange out of the Friant-Kern Canal. The regional facility would potentially provide domestic water to the City of Dinuba, Cutler, Orosi, and other unincorporated communities in the region. A feasibility study would be a three to five year process, and project implementation could be ten to fifteen years out.

Figure 2-2 graphically displays the approximate location of the sewer system and wastewater treatment plant. The Cutler PUD is currently allocated 1,255 equivalent dwelling units of capacity at the Cutler-Orosi Wastewater Treatment Facility (WWTF). The Orosi PUD is currently allocated 2,162 equivalent dwelling units of capacity at the WWTF. The Cuter and Orosi PUDs are currently under a building moratorium, and have waiting lists for additional sewer connections.

According to Cutler and Orosi PUD staff, the sanitary sewer collection system is very old and pipe leaks and breaks cause significant problems including groundwater inflow/infiltration and cross contamination with groundwater. The Orosi PUD is implementing a phased sewer collection system rehabilitation/replacement project, and has awarded a contract for the construction of the phase 1 improvements.

Treatment and disposal of the collected effluent is provided at the Cutler-Orosi WWTF, jointly owned and operated by the Cutler PUD and Orosi PUD. The Cutler-Orosi WWTF serves the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana. It operates under the provisions of Waste Discharge Requirements (WDR) Order No. 97-106, issued by the California Regional Water Quality Control Board (RWQCB). The average dry weather flow at the WWTF is approximately 1.40 MGD, with a historical high flow of 1.89 MGD. Flow at the WWTF is greater during winter months than in summer months due to inflow/infiltration of storm water into the collection system during winter months, and ex-filtration during dry summer months. The PUDs will be able to more accurately predict the remaining capacity at the WWTF once repairs are made to leaking pipes throughout the collection system.

The Cutler PUD and Orosi PUD are working with Tulare County to secure funding that will be used to correct deficiencies that would increase the capacity of the WWTF. Proposed improvements will modernize the facility and add capacity to bring the serviceable operational limits to 2.4 MGD.

TABLE 2-1
Existing Water & Wastewater Connections in Cutler-Orosi

Description of Existing Infrastructure						
Community	Drinking Water*			Waste Water *		
	No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
Cutler	1,032	1,032	0	1,255	1,255	0
Orosi	1,788	3,788	2,000	2,162	2,162	0

* Data current as of May 2012

2.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 2-2 identifies the location of drainage inlets and sumps in Cutler and Orosi. Figure 2-1 also displays this information graphically.

TABLE 2-2
Existing Storm Drainage Facilities in Cutler-Orosi

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	1st Drive	Road 124	Inlet
2	1st Drive	Topeka Drive	Inlet
3	1st Drive	Santa Fe Drive	Inlet
4	1st Drive	Cutler Drive	Inlet
5	1st Drive	Orosi Drive	Inlet
6	1st Drive	Road 128	Inlet
7	2nd Drive	Eddy Avenue	Inlet
8	2nd Drive	Road 128	Inlet
9	Amethyst Avenue	Lincoln Road	Inlet
10	Amethyst Avenue	George Road	Inlet
11	Amethyst Avenue	Eddy Avenue	Inlet
12	Avenue 404	Road 128	Inlet
13	Avenue 404	Mueller Road	Inlet
14	Avenue 404	Road 130	Inlet
15	Avenue 406	Eddy Avenue	Inlet
16	Avenue 406	Alta Drive	Inlet
17	Avenue 407	Road 124	Inlet
18	Avenue 413	David Road	Sump
19	Avenue 413	Road 127	Inlet
20	Avenue 413	East of Road 128	Inlet
21	Avenue 414	David Road	Sump
22	Avenue 414	Road 127	Sump
23	Avenue 414	East of Road 128	Inlet
24	Avenue 414	Road 128	Inlet
25	Avenue 414	Sand Creek	Inlet
26	Avenue 414	Road 130	Inlet
27	Avenue 415	East of Road 128	Inlet
28	Avenue 416	Road 124	Inlet
29	Avenue 416	Road 125	Inlet
30	Avenue 416	David Road	Inlet
31	Avenue 416	Road 126	Inlet
32	Avenue 416	Eddy Road	Inlet
33	Avenue 416	Claude Road	Inlet
34	Avenue 416	Road 130	Inlet
35	Avenue 417	Claude Road	Sump

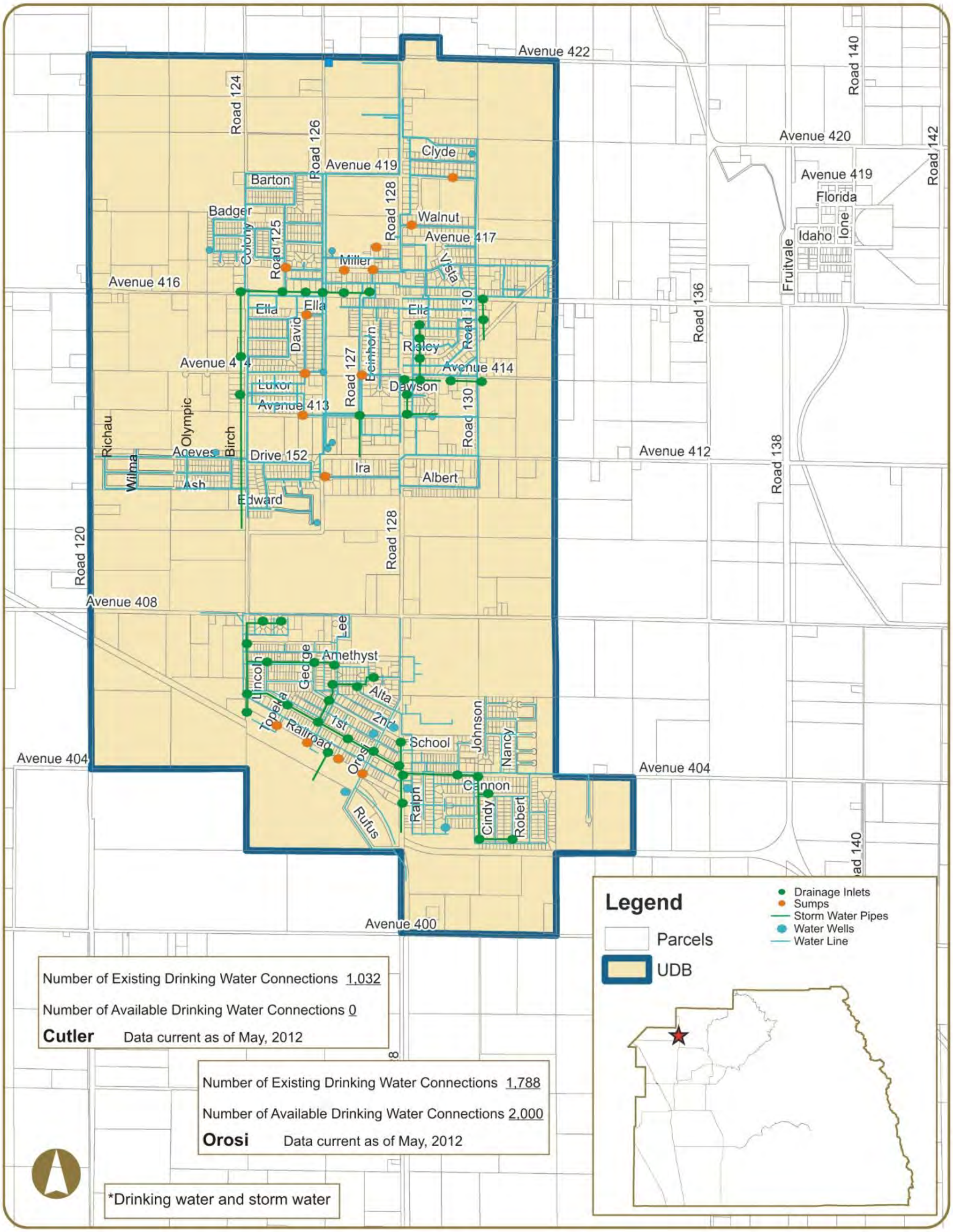
TABLE 2-2 (Continued)

Existing Storm Drainage Facilities in Cutler-Orosi

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
36	Avenue 419	Between Ralph Rd and Road 130	Sump
37	Cannon Avenue	East of Road 130	Inlet
38	Dawson Avenue	East of Road 128	Inlet
39	Ella Avenue	David Road	Sump
40	Ella Avenue	East of Road 128	Inlet
41	Ella Avenue	Road 130	Inlet
42	Emerald Avenue	Road 127	Inlet
43	Ira Avenue	West end	Sump
44	Luxor Avenue	Road 124	Inlet
45	Miller Avenue	Road 125	Sump
46	Miller Avenue	Eddy Road	Sump
47	Miller Avenue	Claude Road	Sump
48	Railroad Drive	Road 124	Inlet
49	Railroad Drive	Topeka Drive	Sump
50	Railroad Drive	Santa Fe Drive	Sump
51	Railroad Drive	Between Santa Fe Drive and Cutler Drive	Inlet
52	Railroad Drive	Cutler Drive	Sump
53	Railroad Drive	Orosi Drive	Sump
54	Risley Avenue	Road 124	Inlet
55	Risley Avenue	East of Road 128	Inlet
56	Rosalie Avenue	Road 130	Inlet
57	Rosalie Avenue	Nancy Road	Inlet
58	Sierra Avenue	Road 128	Inlet
59	South of Avenue 408	Lincoln Road	Inlet
60	South of Avenue 408	Topeka Road	Inlet
61	Walnut Avenue	Road 128	Sump

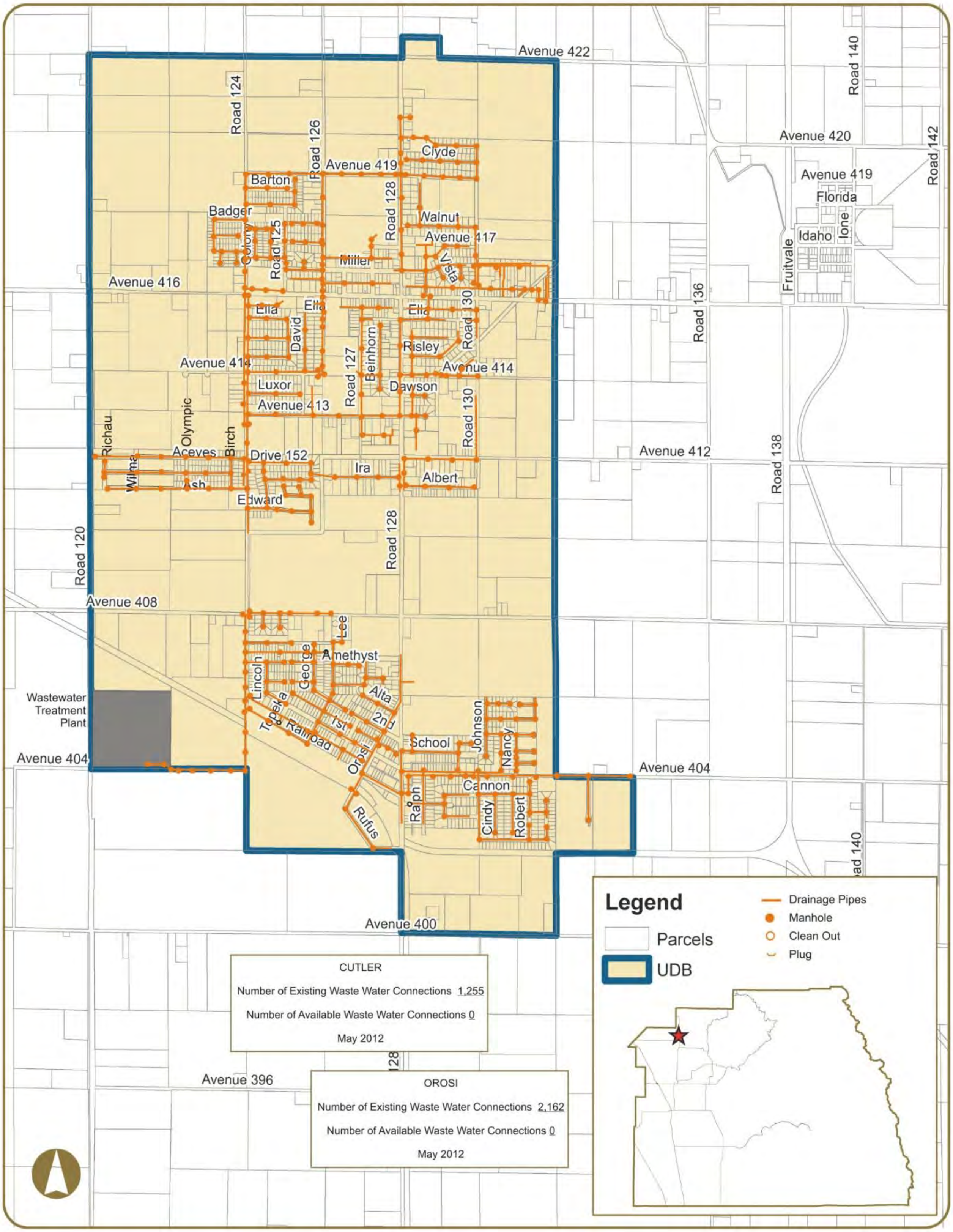
(Source: County of Tulare Public Works, 2014)

Figure 2-1
Inventory of Water Services in Cutler-Orosi*



*Drinking water and storm water

Figure 2-2
Inventory of Sewer Services in Cutler-Orosi



2.4 Roads

There are various roadways in Cutler and Orosi that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 2-3 lists the roadways in need of repair, the limits, and type of maintenance strategy expected. Figure 2-3 graphically displays this information on a map.

TABLE 2-3
Roads in Need of Major and Medium Repair in Cutler-Orosi

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Aceves Avenue	Road 124 to David Road	OLAY
2	Albert Avenue	Road 128 to Road 130	CHIP
3	Albert Avenue	Frances Road to David Road	CHIP
4	Alta Drive	Orosi Drive to Avenue 406	CHIP
5	Amethyst Avenue	Road 124 to George Road	CHIP
6	Amethyst Avenue	Eddy Road to Road 127	CHIP
7	Avenue 403	Robert Road to Dianna Road	OLAY
8	Avenue 404	Road 128 to Cindy Road	GRX
9	Avenue 404	Cindy Road to Nancy Road	OLAY
10	Avenue 404	Nancy Road to Robert Road	GRX

TABLE 2-3 (Continued)
Roads in Need of Major and Medium Repair in Cutler-Orosi

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Avenue 406	Lincoln Road to George Road	CHIP
12	Avenue 406	Eddy Road to Road 127	CHIP
13	Avenue 408	Topeka Road to Lee Road	GRX
14	Avenue 413	Road 124 to Road 128	CHIP
15	Avenue 413	Road 128 to East end	OLAY
16	Avenue 414	Road 127 to Beinhorn Road	CHIP
17	Avenue 415	Road 124 to Elrod Road	OLAY
18	Avenue 415	Road 128 to Mueller Road	CHIP
19	Avenue 417	Road 130 to West end	CHIP
20	Avenue 419	Road 128 to Road 130	CHIP
21	Badger Avenue	Wilsonia Avenue to Road 124	CHIP
22	Barton Avenue	Road 124 to Van Tassel Road	CHIP
23	Beinhorn Road	Avenue 414 to South end	OLAY
24	Beinhorn Road	Avenue 414 to Ella Avenue	CHIP
25	Buena Vista Avenue	Colony Street to Road 125	CHIP
26	Cindy Road	Rosalie Avenue to Cannon Avenue	OLAY
27	Cindy Road	Avenue 404 to Merlo Avenue	CHIP
28	Clyde Avenue	Road 128 to Road 130	OLAY
29	David Road	Albert Avenue to Aceves Avenue	CHIP
30	Dawson Avenue	Road 128 to East end	CHIP
31	Dennison Avenue	Road 124 to Stewart Street	CHIP
32	Dianna Road	Rosalie Avenue to North end	OLAY
33	Eddy Road	Santa Fe Drive to Avenue 407	CHIP
34	Edward Avenue	Road 124 to David Road	OLAY
35	El Monte Way	Road 128 to Road 130	CHIP
36	El Monte Way	Road 130 to Road 136	OLAY
37	El Monte Way	Elrod Road to Road 126	GRX
38	Ella Avenue	Road 124 to Elrod Road	OLAY
39	Ella Avenue	David Road to George Road	CHIP
40	Ella Avenue	Road 127 to Road 128	GRX
41	Ella Avenue	Road 128 to Road 130	CHIP
42	Elrod Road	Risley Avenue to Ella Avenue	CHIP
43	First Drive	Road 128 to Santa Fe Drive	CHIP
44	George Road	Second Street to Avenue 407	CHIP
45	Johnston Road	South end (Merlo Avenue) to North end (Quinto Court)	CHIP
46	Lincoln Road	First Drive to Amethyst Avenue	CHIP
47	Merlo Avenue	Johnston Road to Nancy Road	CHIP
48	Miller Avenue	Road 126 to Road 128	CHIP
49	Miller Avenue	Ralph Road to Road 130	CHIP
50	Mueller Road	School Avenue to North end	CHIP

TABLE 2-3 (Continued)

Roads in Need of Major and Medium Repair in Cutler-Orosi

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
51	Mueller Road	Avenue 415 to Ella Avenue	CHIP
52	Nancy Road	Rosalie Avenue to Cannon Avenue	OLAY
53	Nancy Road	Avenue 404 to Virgil Avenue	CHIP
54	Orosi Drive	Railroad Drive to Road 128	CHIP
55	Pacifica Court	Miller Avenue to South end	CHIP
56	Quinto Court	Johnston Road to East end	CHIP
57	Railroad Drive	Road 124 to Road 128	CHIP
58	Ralph Road	Avenue 404 to South end	CHIP
59	Ralph Road	Ella Avenue to El Monte Way	CHIP
60	Ralph Road	Avenue 419 to South end	OLAY
61	Risley Road	Road 124 to Elrod Road	CHIP
62	Road 124	Edward Avenue to Aceves Avenue	CHIP
63	Road 124	Luxor Avenue to El Monte Way	CHIP
64	Road 126	Avenue 414 to Ella Avenue	GRX
65	Road 127	Avenue 406 to North end	CHIP
66	Road 127	Avenue 413 to Avenue 414	CHIP
67	Road 130	Albert Avenue to Avenue 414	CHIP
68	Road 130	Avenue 414 to El Monte Way	GRX
69	Road 130	Walnut Avenue to North end	CHIP
70	Robert Road	Rosalie Avenue to Avenue 404	OLAY
71	Rosalie Avenue	Road 130 to Dianna Road	CHIP
72	Rufus Drive	Road 128 to Orosi Drive	CHIP
73	Santa Fe Drive	Railroad Drive to Second Drive	CHIP
74	School Avenue	Road 128 to Mueller Road	GRX
75	Sequoia Avenue	Wilsonia Avenue to Road 124	CHIP
76	Short Avenue	Road 124 to Lincoln Road	GRX
77	Sierra Avenue	Road 128 to Road 129	CHIP
78	Stewart Street	Buena Vista Avenue to Dennison Avenue	CHIP
79	Tactacan Avenue	Road 130 to West end	CHIP
80	Topeka Drive	Railroad Drive to First Drive	CHIP
81	Twin Peaks Court	Wilsonia Avenue to East end	CHIP
82	Van Tassel Road	Whitaker Avenue to Avenue 419	CHIP
83	Virgil Avenue	Johnston Road to Nancy Road	CHIP
84	Walnut Avenue	Elrod Road to Road 126	GRX
85	Whitaker Avenue	Road 124 to Van Tassel Road	CHIP
86	Wilma Street	Ash Avenue to North end	CHIP
87	Wilsonia Avenue	Sequoia Avenue to Badger Avenue	CHIP

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

2.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Cutler and Orosi and are listed in Table 2-4 and displayed in Figure 2-3.

TABLE 2-4
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	1st Drive	Santa Fe Drive	NW Corner
2	1st Drive	Santa Fe Drive	SW Corner
3	1st Drive	Cutler Drive	SW Corner
4	1st Drive	Orosi Drive	NE Corner
5	1st Drive	Orosi Drive	NW Corner
6	Aceves Avenue	Road 120	NE Corner
7	Aceves Avenue	Road 120	SE Corner
8	Aceves Avenue	Richau Street	SE Corner
9	Aceves Avenue	Richau Street	SW Corner
10	Aceves Avenue	Wilma Road	NE Corner
11	Aceves Avenue	Wilma Road	NW Corner
12	Aceves Avenue	Wilma Road	SE Corner
13	Aceves Avenue	Wilma Road	SW Corner
14	Aceves Avenue	Olympic Street	NE Corner
15	Aceves Avenue	Olympic Street	NW Corner
16	Aceves Avenue	Olympic Street	SE Corner
17	Aceves Avenue	Olympic Street	SW Corner
18	Aceves Avenue	Birch Road	SE Corner
19	Aceves Avenue	Birch Road	SW Corner
20	Aceves Avenue	Road 124	NW Corner
21	Aceves Avenue	Road 124	SW Corner
22	Aceves Avenue	Road 124	NE Corner
23	Aceves Avenue	Road 124	SE Corner
24	Aceves Avenue	Frances Road	SE Corner
25	Aceves Avenue	Frances Road	SW Corner

TABLE 2-4 (Continued)
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
26	Aceves Avenue	David Road	SW Corner
27	Albert Avenue	Richau Street	NE Corner
28	Albert Avenue	Richau Street	SE Corner
29	Albert Avenue	Wilma Road	SW Corner
30	Albert Avenue	Wilma Road	NE Corner
31	Albert Avenue	Wilma Road	SE Corner
32	Albert Avenue	Olympic Street	NE Corner
33	Albert Avenue	Olympic Street	NW Corner
34	Albert Avenue	Olympic Street	SE Corner
35	Albert Avenue	Olympic Street	SW Corner
36	Albert Avenue	Birch Road	NW Corner
37	Albert Avenue	Birch Road	SW Corner
38	Albert Avenue	Frances Road	SE Corner
39	Alta Drive	Orosi Drive	NW Corner
40	Alta Drive	Orosi Drive	SW Corner
41	Amethyst Avenue	Eddy Avenue	SE Corner
42	Amethyst Avenue	George Road	SW Corner
43	Antonia Avenue	Nancy Road	NE Corner
44	Antonia Avenue	Nancy Road	SE Corner
45	Ash Avenue	Richau Street	NE Corner
46	Ash Avenue	Wilma Road	NE Corner
47	Ash Avenue	Wilma Road	NW Corner
48	Ash Avenue	Olympic Street	NE Corner
49	Ash Avenue	Olympic Street	NW Corner
50	Ash Avenue	Birch Road	NE Corner
51	Ash Avenue	Birch Road	NW Corner
52	Ash Avenue	Road 124	NW Corner
53	Ash Avenue	Rancho Court	NE Corner
54	Ash Avenue	Central Drive	NE Corner
55	Ash Avenue	Central Drive	NW Corner
56	Ash Avenue	David Road	SW Corner
57	Avenue 404	Mueller Road	NW Corner
58	Avenue 404	Cindy Road	NE Corner
59	Avenue 404	Cindy Road	NW Corner
60	Avenue 404	Nancy Road	NE Corner

TABLE 2-4 (Continued)
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
61	Avenue 404	Nancy Road	NW Corner
62	Avenue 404	Robert Road	SE Corner
63	Avenue 404	Robert Road	SW Corner
64	Avenue 406	Eddy Avenue	SE Corner
65	Avenue 408	Villa de Guadalupe	NE Corner
66	Avenue 408	Villa de Guadalupe	NW Corner
67	Avenue 413	Road 124	SE Corner
68	Avenue 413	David Road	NE Corner
69	Avenue 413	Road 127	NE Corner
70	Avenue 413	Road 127	NW Corner
71	Avenue 413	Sequoia View Apts.	NE Corner
72	Avenue 413	Sequoia View Apts.	NW Corner
73	Avenue 414	David Road	SE Corner
74	Avenue 414	David Road	SW Corner
75	Avenue 414	Beinhorn Road	SW Corner
76	Avenue 414	Beinhorn Road	NE Corner
77	Avenue 414	Beinhorn Road	SE Corner
78	Avenue 414	Road 130	SW Corner
79	Avenue 415	Road 124	NW Corner
80	Avenue 415	Elrod Road	NW Corner
81	Avenue 416	Road 124	NE Corner
82	Avenue 416	Road 124	NW Corner
83	Avenue 416	Road 124	SE Corner
84	Avenue 416	Road 124	SW Corner
85	Avenue 416	Road 125	NW Corner
86	Avenue 416	David Road	SE Corner
87	Avenue 416	David Road	SW Corner
88	Avenue 416	Road 126	NE Corner
89	Avenue 416	Road 126	NW Corner
90	Avenue 416	Eddy Road	NE Corner
91	Avenue 416	Eddy Road	NW Corner
92	Avenue 416	Road 127	SE Corner
93	Avenue 416	Road 127	SW Corner
94	Avenue 419	Road 124	SE Corner
95	Avenue 419	Van Tassel Road	SW Corner

TABLE 2-4 (Continued)
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
96	Avenue 419	Van Tassel Road	SE Corner
97	Avenue 419	Road 126	NE Corner
98	Avenue 419	Road 126	SE Corner
99	Avenue 419	Ralph Road	SW Corner
100	Avenue 419	Road 130	SW Corner
101	Avenue 422	Road 126	SE Corner
102	Badger Avenue	Wilsonia Avenue	SE Corner
103	Badger Avenue	Road 124	NW Corner
104	Badger Avenue	Road 124	SW Corner
105	Barton Avenue	Road 124	NE Corner
106	Barton Avenue	Road 124	SE Corner
107	Barton Avenue	Van Tassel Road	NW Corner
108	Barton Avenue	Van Tassel Road	SW Corner
109	Buenna Vista Avenue	Colony Street	NE Corner
110	Buenna Vista Avenue	Stewart Street	NE Corner
111	Buenna Vista Avenue	Stewart Street	NW Corner
112	Buenna Vista Avenue	Road 125	NW Corner
113	Buenna Vista Avenue	Road 125	SW Corner
114	Cannon Avenue	Road 130	NE Corner
115	Cannon Avenue	Road 130	SE Corner
116	Cannon Avenue	Cindy Road	SE Corner
117	Cannon Avenue	Cindy Road	SW Corner
118	Cannon Avenue	Nancy Road	SE Corner
119	Cannon Avenue	Nancy Road	SW Corner
120	Cannon Avenue	Robert Road	NW Corner
121	Cannon Avenue	Robert Road	SW Corner
122	Dennison Drive	Road 124	NE Corner
123	Dennison Drive	Road 124	SE Corner
124	Dennison Drive	Colony Street	SE Corner
125	Dennison Drive	Colony Street	SW Corner
126	Dennison Drive	Stewart Street	SW Corner
127	Edward Avenue	David Road	NW Corner
128	Edward Avenue	David Road	SW Corner
129	Ella Avenue	David Road	SE Corner
130	Ella Avenue	Beinhorn Road	SE Corner

TABLE 2-4 (Continued)
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
131	Emerald Avenue	Pearl Road	SE Corner
132	Emerald Avenue	Pearl Road	SW Corner
133	Kahlo Court	Nancy Road	NE Corner
134	Kahlo Court	Nancy Road	SE Corner
135	Luxor Avenue	David Road	NW Corner
136	Merlo Avenue	Nancy Road	NE Corner
137	Merlo Avenue	Nancy Road	SE Corner
138	Merlo Avenue	Johnston Road	NE Corner
139	Merlo Avenue	Johnston Road	SE Corner
140	Merlo Avenue	Cindy Road	SE Corner
141	Merlo Avenue	Cindy Road	SW Corner
142	Merlo Avenue	Nancy Road	NW Corner
143	Merlo Avenue	Nancy Road	SW Corner
144	Miller Avenue	Road 130	NW Corner
145	Miller Avenue	Road 130	SW Corner
146	Miller Avenue	Pacifica Court	SW Corner
147	Miller Avenue	Pacifica Court	SE Corner
148	Miller Avenue	Vista Court	SE Corner
149	Miller Avenue	Vista Court	SW Corner
150	Miller Avenue	Ralph Road	SE Corner
151	Quinto Court	Johnston Road	NE Corner
152	Quinto Court	Johnston Road	SE Corner
153	Railroad Drive	Cutler Drive	NE Corner
154	Railroad Drive	Cutler Drive	NW Corner
155	Rivera Court	Robert Road	NW Corner
156	Rivera Court	Robert Road	SW Corner
157	Rosalie Avenue	Road 130	NE Corner
158	Rosalie Avenue	Cindy Road	NE Corner
159	Rosalie Avenue	Cindy Road	NW Corner
160	Rosalie Avenue	Nancy Road	NE Corner
161	Rosalie Avenue	Nancy Road	NW Corner
162	Rosalie Avenue	Robert Road	NE Corner
163	Rosalie Avenue	Robert Road	NW Corner
164	Rosalie Avenue	Dianna Road	NW Corner
165	Sequoia Avenue	Granite Court	SW Corner

TABLE 2-4 (Continued)
Existing ADA Curb Ramps in Cutler-Orosi

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
166	Sequoia Avenue	Paradise Court	SW Corner
167	Sequoia Avenue	Wilsonia Avenue	NE Corner
168	Sequoia Avenue	Road 124	NW Corner
169	Sierra Avenue	Robert Road	NE Corner
170	Sierra Avenue	Robert Road	NW Corner
171	Sierra Avenue	Robert Road	SE Corner
172	Sierra Avenue	Robert Road	SW Corner
173	Tactacan Avenue	Road 130	NW Corner
174	Tactacan Avenue	Road 130	SW Corner
175	Twin Peaks Avenue	Wilsonia Avenue	NE Corner
176	Twin Peaks Avenue	Wilsonia Avenue	SE Corner
177	Virgil Avenue	Johnston Road	NE Corner
178	Virgil Avenue	Johnston Road	SE Corner
179	Virgil Avenue	Nancy Road	SE Corner
180	Virgil Avenue	Nancy Road	SW Corner
181	Virgil Avenue	Robert Road	NW Corner
182	Whittaker Avenue	Road 124	NE Corner
183	Whittaker Avenue	Road 124	SE Corner
184	Whittaker Avenue	Road 125	SE Corner
185	Whittaker Avenue	Road 125	SW Corner
186	Whittaker Avenue	Van Tassel Road	NW Corner

(Source: County of Tulare Public Works, August 2013)

2.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Communities. Table 2-5 identifies the location of existing sidewalks in Cutler and Orosi. Figure 2-3 also displays this information graphically. The sidewalks represented in Table 2-5 and Figure 2-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 2-5

Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	1st Drive	Lincoln Road to Cutler Drive	North side
2	1st Drive	150' east of Cutler Drive to 150' east of Orosi Drive	North side
3	1st Drive	Lincoln Road to Topeka Drive	South side
4	1st Drive	175' east of Topeka Drive to Santa Fe Drive	South side
5	1st Drive	75' east of Santa Fe Drive to Cutler Drive	South side
6	1st Drive	150' east of Cutler Drive to Road 128	South side
7	2nd Drive	175' east of Santa Fe Drive to Road 128	North side
8	2nd Drive	225' east of Santa Fe Drive to 150' east of Cutler Drive	South side
9	2nd Drive	Road 128 to 250' west	South side
10	Aceves Avenue	Road 120 to David Road	North side
11	Aceves Avenue	Road 120 to David Road	South side
12	Albert Avenue	Richau Street to Birch Road	North side
13	Albert Avenue	Richau Street to Birch Road	South side
14	Albert Avenue	Rancho Court to David Road	North side
15	Albert Avenue	Central Drive to David Road	South side
16	Alta Drive	250' west of Orosi Drive to 250' west	North side
17	Amethyst Avenue	150' west of Lincoln Road to 300' east of Lincoln Road	North side
18	Amethyst Avenue	George Road to 375' west	South side
19	Amethyst Avenue	Eddy Avenue to 475' east	North side
20	Antonia Avenue	Nancy Road to east end	North side
21	Antonia Avenue	Nancy Road to east end	South side
22	Ash Avenue	Richau Street to Road 124	North side
23	Ash Avenue	Rancho Court to David Road	North side
24	Ash Avenue	Rancho Court to David Road	South side
25	Avenue 403	Ralph Road to 175' west	North side
26	Avenue 404	Road 128 to Robert Road	North side
27	Avenue 404	175' east of Ralph Road to Mueller Road	South side
28	Avenue 404	Road 130 to Robert Road	South side
29	Avenue 406	George Road to 275' west	North side
30	Avenue 408	Topeka Road to 450' east of Villa de Guadalupe	North side
31	Avenue 413	Road 127 to Road 128	North side
32	Avenue 413	Road 128 to east end	South side
33	Avenue 414	Road 124 to David Road	South side
34	Avenue 414	Road 127 to Beinhorn Road	North side
35	Avenue 414	Road 127 to Beinhorn Road	South side

TABLE 2-5 (Continued)
Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
36	Avenue 415	Road 124 to Elrod Road	North side
37	Avenue 415	Road 124 to Elrod Road	South side
38	Avenue 415	Mueller Road to 300' west	South side
39	Avenue 416	650' west of Road 124 to Road 124	North side
40	Avenue 416	Road 125 to Ella Avenue	North side
41	Avenue 416	Road 126 to Road 130	North side
42	Avenue 416	225' west of Road 124 to Road 128	South side
43	Avenue 417	Road 130 to west end	North side
44	Avenue 417	Road 130 to west end	South side
45	Avenue 419	Road 124 to Road 130	South side
46	Avenue 419	Ralph Road to Road 130	North side
47	Avenue 422	Road 126 to Road 128	South side
48	Badger Avenue	Wilsonia Avenue to Road 124	North side
49	Badger Avenue	Wilsonia Avenue to Road 124	South side
50	Barton Avenue	Road 124 to Van Tassel Road	North side
51	Barton Avenue	Road 124 to Van Tassel Road	South side
52	Beinhorn Road	South end to 575' north of Avenue 414	West side
53	Beinhorn Road	South end to 125' north of Avenue 414	East side
54	Beinhorn Road	Ella Avenue to 600' south	East side
55	Birch Road	Ash Avenue to Aceves Avenue	East side
56	Birch Road	Ash Avenue to Aceves Avenue	West side
57	Buenna Vista Avenue	Road 124 to Road 125	North side
58	Buenna Vista Avenue	Road 124 to Road 125	South side
59	Cannon Avenue	Sierra Avenue to Robert Road	North side
60	Cannon Avenue	Sierra Avenue to Robert Road	South side
61	Central Drive	Albert Avenue to Ash Avenue	East side
62	Central Drive	Albert Avenue to Ash Avenue	West side
63	Cindy Road	Cannon Avenue to Rosalie Avenue	East side
64	Cindy Road	Cannon Avenue to Rosalie Avenue	West side
65	Cindy Road	Avenue 404 to Merlo Avenue	West side
66	Clyde Avenue	Road 128 to Road 130	North side
67	Clyde Avenue	Road 128 to Road 130	South side
68	Colony Street	Dennison Drive to Buenna Vista Avenue	East side
69	Colony Street	Dennison Drive to Buenna Vista Avenue	West side
70	Cutler Drive	Railroad Drive to 2nd Drive	West side
71	Cutler Drive	2nd Drive to 200' south	East side
72	David Road	Aceves Avenue to Albert Avenue	East side
73	David Road	Ash Avenue to south end	East side
74	David Road	Ash Avenue to south end	West side
75	David Road	Avenue 414 to Luxor Avenue	West side

TABLE 2-5 (Continued)
Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
76	David Road	Avenue 416 to 200' south	East side
77	David Road	Avenue 416 to 200' south	West side
78	Dennison Drive	Road 124 to Stewart Street	North side
79	Dennison Drive	Road 124 to Stewart Street	South side
80	Dianna Road	Rosalie Avenue to north end	East side
81	Dianna Road	Rosalie Avenue to north end	West side
82	Eddy Avenue	Amethyst Avenue to 200' south	East side
83	Eddy Avenue	Amethyst Avenue to 175' north	West side
84	Eddy Road	Miller Avenue to Avenue 416	East side
85	Eddy Road	Miller Avenue to Avenue 416	West side
86	Edward Avenue	Road 124 to David Road	South side
87	Edward Avenue	Frances Road to David Road	North side
88	Ella Avenue	Road 124 to Elrod Road	North side
89	Ella Avenue	Road 124 to Elrod Road	South side
90	Ella Avenue	Beinhorn Road to Road 128	South side
91	Elrod Road	Ella Avenue to Risley Avenue	East side
92	Elrod Road	Ella Avenue to Risley Avenue	West side
93	Emerald Avenue	Road 127 to Road 128	South side
94	Frances Road	Aceves Avenue to Edward Avenue	East side
95	Frances Road	Aceves Avenue to Edward Avenue	West side
96	George Road	Amethyst Avenue to Avenue 406	West side
97	Granite Court	Sequoia Avenue to south end	East side
98	Granite Court	Sequoia Avenue to south end	West side
99	Johnston Road	North of Quinto Court to south end	East side
100	Kahlo Court	Nancy Road to east end	North side
101	Kahlo Court	Nancy Road to east end	South side
102	Lincoln Road	Short Avenue to 400' north	West side
103	Lincoln Road	Short Avenue to 300' north	East side
104	Luxor Avenue	Road 124 to David Road	North side
105	Merlo Avenue	Johnston Road to east end	North side
106	Merlo Avenue	Johnston Road to east end	South side
107	Miller Avenue	Road 126 to Claude Road	North side
108	Miller Avenue	Road 126 to Road 128	South side
109	Miller Avenue	Ralph Road to Road 130	North side
110	Miller Avenue	Ralph Road to Road 130	South side
111	Mueller Road	Avenue 404 to 175' north	West side
112	Nancy Road	Cannon Avenue to Rosalie Avenue	East side
113	Nancy Road	Cannon Avenue to Rosalie Avenue	West side
114	Nancy Road	Avenue 404 to Virgil Avenue	West side
115	Nancy Road	Avenue 404 to Virgil Avenue	East side

TABLE 2-5 (Continued)
Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
116	Olympic Street	Ash Avenue to north of Aceves Avenue	East side
117	Olympic Street	Ash Avenue to north of Aceves Avenue	West side
118	Orosi Drive	2nd Drive to Road 128	East side
119	Orosi Drive	2nd Drive to Road 128	West side
120	Orosi Drive	1st Drive to 200' north	West side
121	Orosi Drive	1st Drive to 200' north	East side
122	Orosi Drive	Railroad Drive to 200' north	East side
123	Pacifica Court	Miller Avenue to south end	East side
124	Pacifica Court	Miller Avenue to south end	West side
125	Paradise Court	Sequoia Avenue to south end	East side
126	Paradise Court	Sequoia Avenue to south end	West side
127	Quinto Court	Johnston Road to east end	North side
128	Quinto Court	Johnston Road to east end	South side
129	Railroad Drive	Road 124 to Topeka Drive	North side
130	Railroad Drive	225' east of Santa Fe Drive to Cutler Drive	North side
131	Railroad Drive	Orosi Drive to Road 128	North side
132	Ralph Road	Avenue 419 to 300' south	East side
133	Ralph Road	Avenue 419 to 300' south	West side
134	Ralph Road	Miller Avenue to Avenue 416	East side
135	Rancho Court	Albert Avenue to Ash Avenue	East side
136	Rancho Court	Albert Avenue to Ash Avenue	West side
137	Richau Street	Aceves Avenue to Ash Avenue	East side
138	Richau Street	Aceves Avenue to Ash Avenue	West side
139	Risley Avenue	Road 124 to Elrod Road	North side
140	Risley Avenue	Road 124 to Elrod Road	South side
141	Risley Avenue	Bend to Mueller Road	North side
142	Risley Avenue	Bend to Mueller Road	South side
143	Rivera Court	Robert Road to west end	North side
144	Rivera Court	Robert Road to west end	South side
145	Road 124	Railroad Drive to Short Avenue	East side
146	Road 124	Avenue 413 to Aceves Avenue	East side
147	Road 124	Avenue 413 to Ash Avenue	West side
148	Road 124	400' south of Edward Avenue to 150' north of Ash Avenue	East side
149	Road 124	Avenue 414 to Luxor Avenue	East side
150	Road 124	Ella Avenue to Avenue 415	West side
151	Road 124	Ella Avenue to Risley Avenue	East side
152	Road 124	Avenue 419 to Buenna Vista Avenue	East side
153	Road 124	Badger Avenue to Buenna Vista Avenue	West side
154	Road 125	Whittaker Avenue to Avenue 419	East side
155	Road 125	Whittaker Avenue to Avenue 419	West side

TABLE 2-5 (Continued)
Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
156	Road 126	Avenue 422 to Avenue 419	East side
157	Road 126	Avenue 417 to Miller Avenue	West side
158	Road 127	Avenue 413 to 450' north	East side
159	Road 127	Avenue 416 to 500' south	West side
160	Road 127	Avenue 416 to Ella Avenue	East side
161	Road 128	Avenue 422 to 750' south	West side
162	Road 128	Avenue 419 to 550' south of Avenue 403	West side
163	Road 128	Clyde Avenue to 550' south of Avenue 403	East side
164	Road 130	Rosalie Avenue to Avenue 404	East side
165	Road 130	North end to 175' north of Walnut Avenue	West side
166	Road 130	North end to Avenue 419	East side
167	Road 130	Walnut Avenue to Avenue 416	East side
168	Robert Road	Avenue 404 to Rosalie Avenue	East side
169	Robert Road	Avenue 404 to Rosalie Avenue	West side
170	Robert Road	Virgil Avenue to north end	East side
171	Robert Road	Virgil Avenue to north end	West side
172	Rosalie Avenue	Road 130 to Dianna Road	North side
173	Rosalie Avenue	Road 130 to Dianna Road	South side
174	Santa Fe Drive	Railroad Drive to 125' north of 1st Drive	West side
175	Santa Fe Drive	1st Drive to 2nd Drive	East side
176	School Avenue	Road 128 to Mueller Road	North side
177	School Avenue	400' east of Road 128 to Mueller Road	South side
178	Sequoia Avenue	Wilsonia Avenue to Road 124	North side
179	Sequoia Avenue	Wilsonia Avenue to Road 124	South side
180	Short Avenue	Road 124 to Lincoln Road	North side
181	Short Avenue	Road 124 to Lincoln Road	South side
182	Sierra Avenue	Robert Road to Dianna Road	North side
183	Sierra Avenue	Robert Road to Dianna Road	South side
184	Stewart Street	Dennison Drive to Buenna Vista Avenue	East side
185	Stewart Street	Dennison Drive to Buenna Vista Avenue	West side
186	Tactacan Avenue	Road 130 to west end	North side
187	Tactacan Avenue	Road 130 to west end	South side
188	Topeka Drive	Railroad Drive to 1st Drive	West side
189	Twin Peaks Avenue	Wilsonia Avenue to east end	North side
190	Twin Peaks Avenue	Wilsonia Avenue to east end	South side
191	Van Tassel Road	Avenue 419 to Whittaker Avenue	East side
192	Van Tassel Road	Avenue 419 to Whittaker Avenue	West side
193	Virgil Avenue	Johnston Road to Robert Road	North side
194	Virgil Avenue	Johnston Road to Robert Road	South side
195	Vista Court	Miller Avenue to south end	East side

TABLE 2-5 (Continued)
Existing Sidewalks in Cutler-Orosi

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
196	Vista Court	Miller Avenue to south end	West side
197	Whittaker Avenue	Road 124 to Van Tassel Road	North side
198	Whittaker Avenue	Road 124 to Van Tassel Road	South side
199	Wilma Road	Ash Avenue to north of Aceves Avenue	East side
200	Wilma Road	Ash Avenue to north of Aceves Avenue	West side
201	Wilsonia Avenue	Badger Avenue to Sequoia Avenue	East side
202	Wilsonia Avenue	Badger Avenue to Sequoia Avenue	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

2.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 2-6 identifies the location of existing street lights that are maintained by Tulare County, in Cutler and Orosi, as well as their specifications. Figure 2-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 2-6
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	1st Drive	Lincoln Road	NE Corner	N/A	5800	W	S	PG&E
2	1st Drive	Topeka Drive	NE Corner	1526	5800	W	S	PG&E
3	1st Drive	Santa Fe Drive	NW Corner	1528	5800	W	S	PG&E
4	1st Drive	Cutler Drive	SW Corner	1582	5800	W	S	PG&E
5	1st Drive	Orosi Drive	SE Corner	1523	5800	W	W	PG&E
6	1st Drive	Between Topeka Drive	North Side	1526	5800	W	S	PG&E
7	1st Drive	Between Santa Fe Drive	South Side	1560	5800	W	N	PG&E
8	1st Drive	Between Cutler Drive	South Side	1523	5800	W	W	PG&E
9	2nd Drive	George Road	West Side	N/A	5800	W	NE	PG&E
10	2nd Drive	Orosi Drive	NE Corner	1524	5800	W	S	PG&E
11	2nd Drive	Road 128	East Side	1606	5800	M	E	PG&E
12	2nd Drive	Santa Fe Drive	SW Corner	1586	5800	W	N	PG&E
13	2nd Drive	Between Santa Fe Drive and Cutler Drive	South Side	N/A	5800	W	N	PG&E
14	2nd Drive	Cutler Drive	SE Corner	1562	5800	W	N	PG&E
15	Aceves Avenue	Road 124	NE Corner	2025	N/A	M	E	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
16	Aceves Avenue	Frances Road	North Side	2026	N/A	M	S	PG&E
17	Aceves Avenue	Between Frances Road and David Road	North Side	2027	N/A	N/A	S	PG&E
18	Aceves Avenue	Between Frances Road and David Road	North Side	N/A	N/A	N/A	S	PG&E
19	Aceves Avenue	David Road	East Side	2029	N/A	W	W	PG&E
20	Aceves Avenue	Birch Road	North Side	2642	5800	N/A	S	PG&E
21	Aceves Avenue	Road 120	NE Corner	N/A	5800	S	W	PG&E
22	Albert Avenue	Frances Road	West Side	N/A	N/A	N/A	E	PG&E
23	Albert Avenue	Between Rancho Court	North Side	2251	N/A	N/A	S	PG&E
24	Albert Avenue	David Road	East Side	N/A	N/A	N/A	W	PG&E
25	Albert Avenue	Birch Road	East Side	2643	5800	N/A	W	PG&E
26	Albert Avenue	Road 128	SE Corner	2449	5800	N/A	W	PG&E
27	Albert Avenue	Road 130	South Side	2280	5800	N/A	N	PG&E
28	Alta Drive	South of Avenue 406	West Side	1600	5800	W	S	PG&E
29	Alta Drive	Between Avenue 406 and Orosi Drive	South Side	N/A	5800	N/A	N	PG&E
30	Alta Drive	Orosi Drive	SW Corner	1602	5800	W	E	PG&E
31	Amethyst Avenue	Road 124	SE Corner	1544	5800	W	E	PG&E
32	Amethyst Avenue	Lincoln Road	NE Corner	N/A	5800	W	S	PG&E
33	Amethyst Avenue	Road 125	North Side	1579	5800	W	S	PG&E
34	Amethyst Avenue	George Road	East Side	1580	5800	W	W	PG&E
35	Amethyst Avenue	Eddy Avenue	West Side	N/A	5800	W	E	PG&E
36	Amethyst Avenue	East of Eddy Avenue	South Side	1580	5800	W	N	PG&E
37	Amethyst Avenue	Road 127	East Side	1595	5800	W	W	PG&E
38	Ash Avenue	Birch Road	NW Corner	2644	5800	N/A	S	PG&E
39	Ash Avenue	Road 124	NW Corner	N/A	N/A	N/A	E	PG&E
40	At south end	Ralph Road	East Side	1534	5800	W	S	PG&E
41	Avenue 404	Road 128	NE Corner	1520	5800	W	W	PG&E
42	Avenue 404	Ralph Road	SE Corner	1525	5800	W	N	PG&E
43	Avenue 404	Mueller Road	South Side	1505	5800	W	N	PG&E
44	Avenue 404	Nancy Road	NW Corner	2758	5800	M	S	PG&E
45	Avenue 404	Between Ralph Road and Mueller Road	South Side	1554	5800	W	N	PG&E
46	Avenue 404	Cindy Road	South Side	2390	5800	S	N	PG&E
47	Avenue 404	Robert Road	SE Corner	2022	5800	S	N	PG&E
48	Avenue 406	Lincoln Road	West Side	1582	5800	W	E	PG&E
49	Avenue 406	Eddy Avenue	West Side	N/A	N/A	N/A	E	PG&E
50	Avenue 406	Between Eddy Avenue and Alta Drive	North Side	N/A	N/A	N/A	S	PG&E
51	Avenue 406	Between Alta Drive and Road 127	North Side	N/A	N/A	N/A	S	PG&E
52	Avenue 406	Between Lincoln Road and George Road	North Side	N/A	N/A	N/A	S	PG&E
53	Avenue 406	George Road	East Side	N/A	N/A	N/A	W	PG&E
54	Avenue 407	George Road	SE Corner	1538	5800	W	N	PG&E
55	Avenue 407	Eddy Avenue	SE Corner	1539	5800	W	W	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
56	Avenue 407	Road 124	West Side	1575	5800	W	E	PG&E
57	Avenue 407	Lincoln Road	South Side	1576	5800	W	N	PG&E
58	Avenue 407	Topeka Drive	South Side	1578	5800	W	N	PG&E
59	Avenue 407	Between Topeka Drive	South Side	N/A	N/A	N/A	N	PG&E
60	Avenue 408	Road 120	NW Corner	2762	9500	W	S	PG&E
61	Avenue 408	Road 124	NW Corner	1483	5800	N/A	S	PG&E
62	Avenue 408	Lincoln Road	NW Corner	1586	5800	W	S	PG&E
63	Avenue 408	Villa De Guadalupe Apts.	NW Corner	1569	5800	N/A	S	PG&E
64	Avenue 408	West of Lee Road	North Side	1593	5800	N/A	S	PG&E
65	Avenue 408	SR 63	NW Corner	N/A	5800	N/A	S	PG&E
66	Avenue 408	SR 63	NE Corner	N/A	5800	N/A	W	PG&E
67	Avenue 408	SR 63	SE Corner	N/A	5800	N/A	N	PG&E
68	Avenue 408	SR 63	SW Corner	N/A	5800	N/A	E	PG&E
69	Avenue 408	West of SR 63	North Side	N/A	N/A	N/A	S	PG&E
70	Avenue 412	SR 63	SE Corner	N/A	5800	N/A	N	PG&E
71	Avenue 412	Between Road 128 and Road 130	South Side	N/A	5800	N/A	N	PG&E
72	Avenue 412	Road 130	SE Corner	2279	N/A	W	N	PG&E
73	Avenue 413	Road 124	SE Corner	1668	N/A	N/A	W	PG&E
74	Avenue 413	Between Road 124 and David Road	North Side	1678	N/A	N/A	S	PG&E
75	Avenue 413	Between Road 124 and	North Side	1680	N/A	N/A	S	PG&E
76	Avenue 413	David Road	NW Corner	1682	N/A	N/A	SE	PG&E
77	Avenue 413	Between David Road and Road 127	South Side	1683	N/A	N/A	N	PG&E
78	Avenue 413	Road 127	NE Corner	N/A	N/A	N/A	S	PG&E
79	Avenue 413	Road 127	South Side	N/A	N/A	N/A	N	PG&E
80	Avenue 413	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
81	Avenue 413	SR 63	NW Corner	N/A	N/A	N/A	S	PG&E
82	Avenue 413	SR 63	SE Corner	N/A	N/A	N/A	N	PG&E
83	Avenue 413	SR 63	SW Corner	N/A	N/A	N/A	E	PG&E
84	Avenue 413	East end	North Side	2639	5800	N/A	S	PG&E
85	Avenue 414	David Road	SE Corner	1651	5800	W	W	PG&E
86	Avenue 414	Ledbetter Drive	NW Corner	1641	5800	W	SE	PG&E
87	Avenue 414	Road 127	SE Corner	1636	5800	N/A	W	PG&E
88	Avenue 414	Road 126	East Side	1676	N/A	N/A	W	PG&E
89	Avenue 414	Road 124	West Side	1667	N/A	N/A	E	PG&E
90	Avenue 414	East of Road 124	North Side	1669	N/A	N/A	S	PG&E
91	Avenue 414	Road 130	NE Corner	1662	5800	N/A	W	PG&E
92	Avenue 414	SR 63	NE Corner	N/A	5800	N/A	W	PG&E
93	Avenue 414	East of Road 128	North Side	1660	N/A	N/A	S	PG&E
94	Avenue 415	SR 63	NE Corner	1715	5800	W	W	PG&E
95	Avenue 415	Mueller Road	SE Corner	1643	5800	W	W	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
96	Avenue 415	Road 128	NE Corner	1666	5800	W	N	PG&E
97	Avenue 415	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
98	Avenue 415	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
99	Avenue 415	Elrod Road	NW Corner	2033	N/A	S	S	PG&E
100	Avenue 416	Road 124	NW Corner	3338	9500	W	S	PG&E
101	Avenue 416	Road 124	SE Corner	3341	9500	W	N	PG&E
102	Avenue 416	Road 125	NW Corner	1648	5800	O	S	PG&E
103	Avenue 416	David Road	NW Corner	1647	5800	O	S	PG&E
104	Avenue 416	Road 126	NW Corner	1611	5800	O	S	PG&E
105	Avenue 416	Eddy Road	NW Corner	2187	5800	O	S	PG&E
106	Avenue 416	Road 127	NW Corner	1632	5800	M	S	PG&E
107	Avenue 416	Claude Road	NE Corner	1613	5800	O	S	PG&E
108	Avenue 416	Ralph Road	NE Corner	2188	5800	W	S	PG&E
109	Avenue 416	Road 130	NE Corner	1649	5800	W	S	PG&E
110	Avenue 416	Road 120	NW Corner	3259	16000	W	S	PG&E
111	Avenue 416	Lincoln Road	NE Corner	2188	5800	N/A	S	PG&E
112	Avenue 416	SR 63	NE Corner	2358	N/A	N/A	W	PG&E
113	Avenue 416	SR 63	NW Corner	2357	N/A	N/A	S	PG&E
114	Avenue 416	SR 63	SE Corner	2356	N/A	N/A	N	PG&E
115	Avenue 416	SR 63	SW Corner	2355	16000	N/A	E	PG&E
116	Avenue 417	Road 125	NE Corner	1639	5800	W	W	PG&E
117	Avenue 417	Road 126	SW Corner	1634	5800	W	E	PG&E
118	Avenue 417	SR 63	SW Corner	2189	5800	M	E	PG&E
119	Avenue 417	Claude Road	SW Corner	1631	5800	W	E	PG&E
120	Avenue 417	Road 130	SW Corner	2199	5800	S	E	PG&E
121	Avenue 417	West of Road 130	South Side	2198	5800	S	N	PG&E
122	Avenue 418	SR 63	West Side	1637	5800	N/A	E	PG&E
123	Avenue 419	Ralph Road	NW Corner	1655	5800	W	S	PG&E
124	Avenue 419	Road 126	SW Corner	1689	N/A	W	E	PG&E
125	Avenue 419	Claude Road	South Side	1690	N/A	W	N	PG&E
126	Avenue 419	SR 63	SW Corner	1716	N/A	W	W	PG&E
127	Avenue 419	Between Road 129 and Road 130	North Side	1696	5800	W	S	PG&E
128	Avenue 419	Between Road 129 and	North Side	1690	5800	W	S	PG&E
129	Avenue 419	Road 130	East Side	1698	5800	W	W	PG&E
130	Badger Avenue	Wilsonia Avenue	West Side	2920	N/A	N/A	E	PG&E
131	Badger Avenue	Between Wilsonia	North Side	2921	N/A	N/A	S	PG&E
132	Badger Avenue	Road 124	SW Corner	2922	N/A	N/A	E	PG&E
133	Between Avenue 414 and Ella Avenue	David Road	East Side	1671	N/A	W	W	PG&E
134	Between Avenue 414	David Road	East Side	1672	N/A	N/A	W	PG&E
135	Between Avenue 414	Road 126	West Side	1674	N/A	N/A	E	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
136	Between Avenue 414 and Ella Avenue	Road 126	West Side	1675	N/A	N/A	E	PG&E
137	Cannon Avenue	Between Sierra Avenue and Road 130	North Side	1549	5800	W	W	PG&E
138	Cannon Avenue	Road 130	NE Corner	1550	5800	W	W	PG&E
139	Cannon Avenue	Robert Road	East Side	2023	5800	S	W	PG&E
140	Cannon Avenue	Nancy Road	North Side	2021	5800	S	S	PG&E
141	Cannon Avenue	Cindy Road	North Side	2020	5800	S	S	PG&E
142	Cannon Avenue	Road 130	NE Corner	N/A	N/A	N/A	W	PG&E
143	Clyde Avenue	SR 63	NE Corner	1695	16000	W	W	PG&E
144	Clyde Avenue	East of SR 63	North Side	1707	5800	W	S	PG&E
145	Clyde Avenue	Between SR 63 and Road 130	North Side	N/A	5800	N/A	S	PG&E
146	Clyde Avenue	Road 130	East Side	1710	5800	W	W	PG&E
147	Dawson Avenue	SR 63	NE Corner	1652	5800	M	W	PG&E
148	Dawson Avenue	East end	East Side	1652	5800	N/A	W	PG&E
149	Edward Avenue	Road 124	SE Corner	2249	N/A	N/A	N	PG&E
150	Edward Avenue	Frances Road	South Side	2249	N/A	M	S	PG&E
151	Ella Avenue	Beinhorn Road	SW Corner	1654	5800	W	N	PG&E
152	Ella Avenue	David Road	NE Corner	1650	5800	W	W	PG&E
153	Ella Avenue	Road 127	NW Corner	1629	5800	W	E	PG&E
154	Ella Avenue	Ralph Road	SE Corner	1645	5800	W	N	PG&E
155	Ella Avenue	Mueller Road	NW Corner	1646	5800	W	S	PG&E
156	Ella Avenue	SR 63	SW Corner	1615	5800	W	E	PG&E
157	Ella Avenue	Elrod Road	NE Corner	2037	N/A	S	SW	PG&E
158	Ella Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
159	Ella Avenue	Between Road 124 and Elrod Road	North Side	2035	N/A	S	S	PG&E
160	Ella Avenue	Road 126	North Side	1673	N/A	N/A	S	PG&E
161	Ella Avenue	Road 130	East Side	1665	9500	W	W	PG&E
162	Emerald Avenue	Road 127	West Side	1598	5800	W	E	PG&E
163	Emerald Avenue	Pearl Road	North Side	1590	5800	W	S	PG&E
164	Emerald Avenue	SR 63	East Side	1604	9500	S	E	PG&E
165	Hazel Avenue	Lee Road	NW Corner	1540	5800	W	E	PG&E
166	Ira Avenue	SR 63	East Side	N/A	5800	N/A	W	PG&E
167	Ira Avenue	Road 127	North Side	3036	N/A	W	S	PG&E
168	Ledbetter Drive	Road 130	East Side	1663	5800	W	W	PG&E
169	Luxor Avenue	Road 124	SW Corner	1653	5800	N/A	E	PG&E
170	Luxor Avenue	David Road	SW Corner	1681	N/A	N/A	E	PG&E
171	Luxor Avenue	Between Road 124 and	South Side	1677	N/A	N/A	N	PG&E
172	Luxor Avenue	Between Road 124 and David Road	South Side	N/A	N/A	N/A	N	PG&E
173	Merlo Avenue	Johnston Road	SW Corner	2759	5800	W	E	PG&E
174	Merlo Avenue	Cindy Road	SE Corner	2756	5800	M	N	PG&E
175	Merlo Avenue	Nancy Road	SW Corner	2757	5800	M	E	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

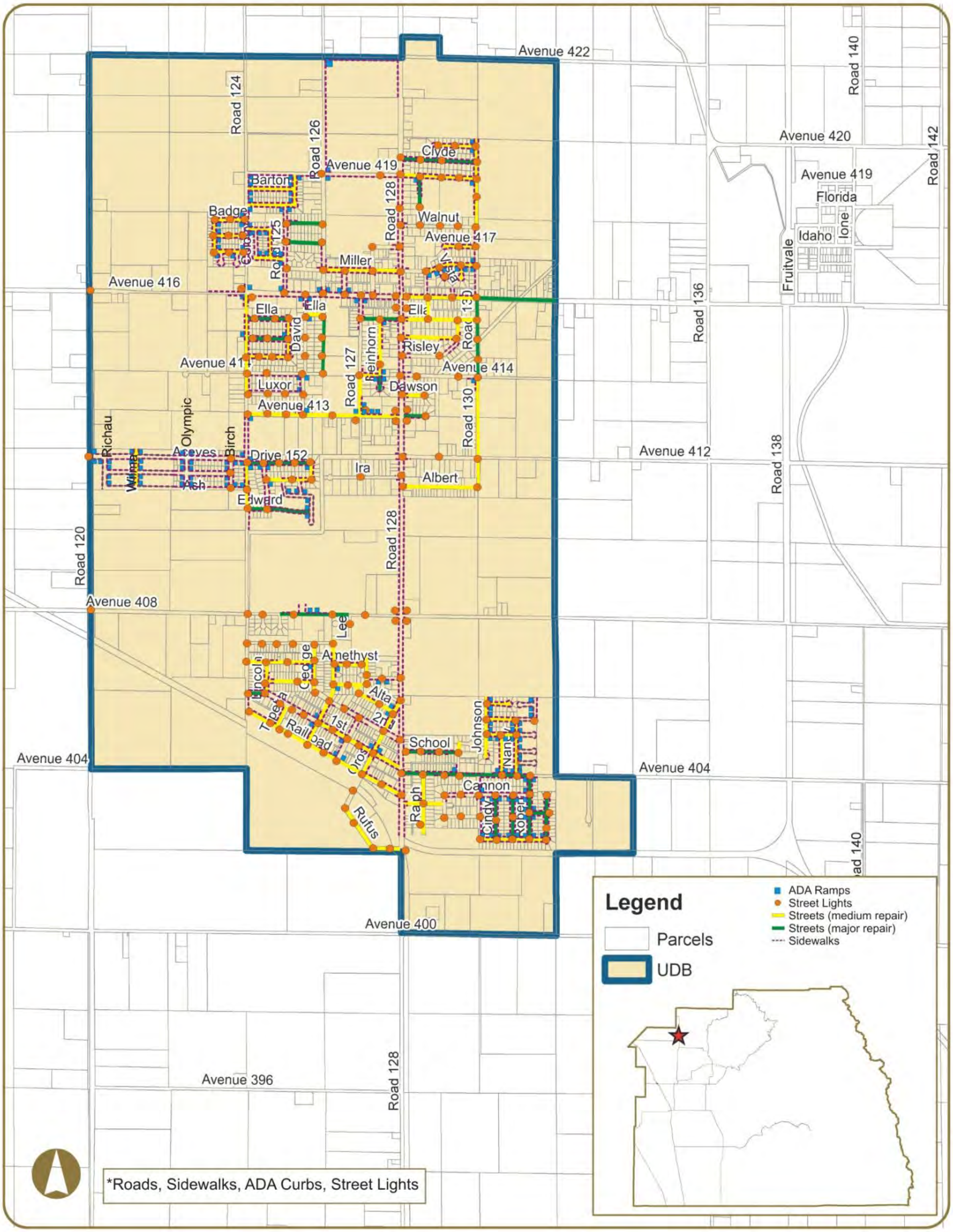
Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
176	Miller Avenue	Road 125	SE Corner	1638	5800	W	W	PG&E
177	Miller Avenue	Road 126	NW Corner	1628	5800	W	E	PG&E
178	Miller Avenue	Eddy Road	NW Corner	1618	5800	W	S	PG&E
179	Miller Avenue	Claude Road	NW Corner	1627	5800	W	E	PG&E
180	Miller Avenue	SR 63	NW Corner	1633	5800	O	E	PG&E
181	Miller Avenue	Ralph Road	SE Corner	1704	5800	W	W	PG&E
182	Miller Avenue	Road 130	East Side	3033	5800	W	W	PG&E
183	Miller Avenue	Pacifica Court	SE Corner	3327	5800	S	W	PG&E
184	Miller Avenue	Vista Court	SE Corner	3326	5800	S	N	PG&E
185	North of Avenue 414	Beinhorn Road	West Side	1687	N/A	N/A	E	PG&E
186	North of Rosalie Avenue	Dianna Road	East Side	2269	5800	S	W	PG&E
187	North of Rosalie Avenue	Nancy Road	East Side	2077	5800	S	W	PG&E
188	North of Rosalie Avenue	Cindy Road	East Side	2076	5800	S	W	PG&E
189	North of Sierra Avenue	Dianna Road	North Side	2079	5800	S	S	PG&E
190	Orosi Drive	Road 128	SW Corner	1607	5800	W	E	PG&E
191	Quinto Court	Johnston Road	West Side	2651	5800	M	E	PG&E
192	Railroad Drive	Orosi Drive	SE Corner	1522	5800	W	N	PG&E
193	Railroad Drive	Santa Fe Drive	NW Corner	1527	5800	W	S	PG&E
194	Railroad Drive	Road 128	East Side	N/A	5800	W	W	PG&E
195	Railroad Drive	Road 124	East Side	1543	5800	N/A	SW	PG&E
196	Railroad Drive	Lincoln Road	North Side	N/A	5800	W	S	PG&E
197	Railroad Drive	Topeka Drive	NE Corner	1591	5800	W	S	PG&E
198	Railroad Drive	Between Topeka Drive and Santa Fe Drive	North Side	1592	5800	N/A	S	PG&E
199	Railroad Drive	Between Santa Fe Drive and Cutler Drive	North Side	N/A	5800	W	S	PG&E
200	Railroad Drive	Cutler Drive	South Side	N/A	5800	W	N	PG&E
201	Railroad Drive	Between Orosi Drive and Road 128	South Side	1522	5800	W	N	PG&E
202	Risley Avenue	Between Road 128 and Avenue 415	South Side	1642	5800	W	N	PG&E
203	Risley Avenue	Road 124	NE Corner	2044	N/A	N/A	W	PG&E
204	Risley Avenue	Between Road 124 and Elrod Road	North Side	2045	N/A	S	S	PG&E
205	Risley Avenue	Elrod Road	NW Corner	2047	N/A	W	W	PG&E
206	Risley Avenue	Between Road 124 and Elrod Road	North Side	N/A	N/A	N/A	S	PG&E
207	Risley Avenue	SR 63	NE Corner	N/A	N/A	N/A	W	PG&E
208	Rosalie Avenue	Road 130	NE Corner	453	5800	S	W	PG&E
209	Rosalie Avenue	Nancy Road	South Side	2180	5800	S	N	PG&E
210	Rosalie Avenue	Robert Road	South Side	2267	5800	S	N	PG&E
211	Rosalie Avenue	Dianna Road	South Side	2268	5800	S	NW	PG&E
212	Rosalie Avenue	Cindy Road	South Side	N/A	N/A	N/A	N	PG&E
213	Rufus Drive	Orosi Drive	North Side	1566	5800	W	S	PG&E
214	Rufus Drive	Orosi Drive	East Side	1533	5800	W	W	PG&E
215	Rufus Drive	Road 127	North Side	1566	5800	W	S	PG&E

TABLE 2-6 (Continued)
Existing Street Lights in Cutler-Orosi

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
216	Rufus Drive	East of SR 63	North Side	1567	5800	W	S	PG&E
217	Rufus Drive	SR 63	SW Corner	1609	9500	W	E	PG&E
218	School Avenue	Mueller Road	East Side	711F	5800	W	W	PG&E
219	School Avenue	SR 63	NE Corner	1606	9500	S	W	PG&E
220	School Avenue	East of SR 63	North Side	1557	5800	W	S	PG&E
221	School Avenue	West of Mueller Road	North Side	1606	5800	S	S	PG&E
222	Sequoia Avenue	Wilsonia Avenue	NE Corner	2916	N/A	N/A	S	PG&E
223	Sequoia Avenue	Between Wilsonia Avenue and Road 124	North Side	2913	N/A	N/A	S	PG&E
224	Sequoia Avenue	Road 124	NW Corner	N/A	N/A	N/A	E	PG&E
225	Short Avenue	Road 124	NE Corner	1587	N/A	W	W	PG&E
226	Sierra Avenue	Ralph Road	NW Corner	N/A	5800	W	S	PG&E
227	Sierra Avenue	Cannon Avenue	NW Corner	1542	5800	W	S	PG&E
228	Sierra Avenue	Road 129	South Side	1553	5800	W	N	PG&E
229	Sierra Avenue	West of Road 130	South Side	1552	5800	W	N	PG&E
230	Sierra Avenue	Road 130	East Side	1551	5800	W	W	PG&E
231	Sierra Avenue	Dianna Road	NW Corner	2078	5800	S	S	PG&E
232	Sierra Avenue	Robert Road	West Side	2024	5800	S	E	PG&E
233	South end	Ralph Road	South Side	N/A	N/A	N/A	N	PG&E
234	South of Avenue 419	Road 130	East Side	1705	5800	W	W	PG&E
235	South of Miller Avenue	Vista Court	South Side	3347	5800	S	N	PG&E
236	South of Railroad Drive	Orosi Drive	East Side	1603	9500	S	W	PG&E
237	Tactacan Avenue	Road 130	NW Corner	2328	5800	S	S	PG&E
238	Tactacan Avenue	West of Road 130	North Side	2696	5800	M	E	PG&E
239	Tactacan Avenue	West of Road 130	West Side	N/A	5800	S	E	PG&E
240	Twin Peaks Court	Wilsonia Avenue	West Side	2916	N/A	N/A	E	PG&E
241	Twin Peaks Court	Between Wilsonia Avenue and Road 124	North Side	2918	N/A	N/A	S	PG&E
242	Twin Peaks Court	East end	East Side	2918	N/A	N/A	W	PG&E
243	Virgil Avenue	Johnston Road	West Side	2652	5800	S	E	PG&E
244	Virgil Avenue	Robert Road	West Side	2653	5800	S	E	PG&E
245	Virgil Avenue	Nancy Road	SW Corner	2653	5800	S	E	PG&E
246	Walnut Avenue	Road 125	SE Corner	1640	5800	W	W	PG&E
247	Walnut Avenue	Road 126	SW Corner	1635	5800	W	E	PG&E
248	Walnut Avenue	SR 63	NE Corner	1617	5800	M	W	PG&E
249	Walnut Avenue	Road 130	East Side	1702	5800	W	W	PG&E
250	Walnut Avenue	Between Road 128 and Road 130	South Side	1700	9500	W	N	PG&E
251	Walnut Avenue	Between Road 128 and Road 130	South Side	1701	5800	W	N	PG&E
252	Walnut Avenue	Between Road 128 and Road 130	South Side	1617	9500	S	W	PG&E

(Source: Tulare County Public Works, March 2013)

Figure 2-3
Inventory of Roadway Facilities in Cutler-Orosi*



3. COMMUNITY OF DUCOR

3.1 General Information

Ducor is a census-designated place located in the southern portion of Tulare County. It is generally bounded by Divizich Avenue in the south, Avenue 60 in the north, State Route (SR) 65 in the west, and Road 240 in the east and encompasses 0.6 square miles of land.

Based on the 2010 Census, the population in Ducor was 612. Similar to other communities in Tulare County, the population of Ducor is racially diverse with 41% White, 0% African American, 3% Native American, 3% Asian/Pacific Islander, 49% from other races, and 4% from 2 or more races. 82% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 154 housing units located within Ducor, of which 74% are owner-occupied and 26% are renter-occupied.

1.2 Domestic Water & Wastewater

Domestic water service in Ducor is provided by the Ducor Community Services District (CSD). Ducor does not have sanitary sewer service and relies on individual or community septic systems. Table 3-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Housing Element, May 2012). Maps of the existing water system are currently unavailable.

According to the Municipal Service Review 2011 (MSR), the CSD's community water system consists of 2 drilled wells, Well No. 4 located in the southern portion of the District and Well No. 5 located on the northern end of the District. Well No. 4 was drilled in 1987 and had a production rate of 115 gallons per minute (GPM) before it was taken offline (well has not been formally abandoned), while Well No. 5 was drilled in 2004 and has a production rate of 450 GPM. The water system once included an additional well, Well No. 3, which has been disconnected from the system due to low productivity. Well No.1 was abandoned due to high nitrates and a broken well casing, while Well No. 2 collapsed during construction in 1984.

Each well is equipped with a single 100 high pressure (hp) turbine pump that pumps water through a single RPP check valve (used to prevent water backflow) into a 240,000 gallon storage tank. Water is then funneled through a 25 hp booster pump and out to the system's distribution pluming. The distribution system consists of 8" PVC mains, 4" galvanized laterals and 1" PVC risers. Due to high levels of Hydrogen Sulfate in both Well No.4 and No.5, a system chlorinator was installed. 10 gallons of sodium-hypochlorite was added to the system each day when both wells were in operation.

A January 26, 2009 compliance order issued by Environmental Health indicates that test samples extracted from Well No. 4 had exceeded the Nitrate maximum contaminant level (MCL) allowed. The order directed the CSD to provide notice of this violation to district customers on a quarterly basis for as long as the well remained in violation. The order also directed the CSD to provide sample Nitrate test results on a quarterly basis (the law requires community water systems to provide Nitrate test results on an annual basis if not in violation) and that the District prepare a plan, complete with timeline, to address the high Nitrate levels. The plan was to be submitted to Environmental Health by June 30, 2009. A copy of this plan was not found in the District's Environmental Health file.

One January 31, 2009, the CSD responded to the aforementioned compliance order and indicated that in response to the order, the CSD Board held an emergency meeting where it was decided that Well No. 4 would be taken offline until a new well could be secured. In order to fund the process of securing a new well site and drilling the well, the CSD submitted an application for a Safe Drinking Water State Revolving Fund (SRF) grant, contracted engineers to prepare an engineer's report that offers recommendations (this report is part of the SRF preliminary planning process), procured the services of Self-Help Enterprises for grant application and technical assistance and intended to explore additional funding options through the state Proposition 84 United States Department of Agriculture (USDA) Rural Development program. The CSD also expressed its intention to adhere to all customer noticing and well testing requirements. An application for Proposition 50 funding was submitted in September of 2009.

As a result of the compliance order and the subsequent action taken by the CSD Board of Directors, the District currently relies entirely on Well No. 5 for all system water supplies. Well No.5 must be pumped many hours each day 7 days per week. The over reliance on Well No. 5 has weakened its pump, increasing the need for repairs and maintenance.

The CSD has indicted that Well No. 5 has higher levels of Hydrogen Sulfate than did Well No. 4. As a result, overall system water supplies now have a higher concentration of treatment chemicals, predominantly sodium-hypochlorite. The latest district Consumer Confidence Report (CCR), mailed out to district customers June 1, 2010, indicates that the systems single operational well is producing water that meets all safety and health standards.

The system's well, storage and distribution infrastructure are constructed according to State of California standards and include anti-back flow and treatment mechanisms that guard against some causes of water quality degradation. System pipes and conveyances are relatively new (constructed in 1987) and should have a lifespan of at least 75 years and perhaps more depending on the type of lining used; thus, there is no immediate need to replace distribution infrastructure.

However, the overreliance on Well No. 5, resulting from the Nitrate contamination and subsequent shutdown of Well No. 4, hinders the CSD's ability to effect its legal responsibility, outlined in H & S Section 116555 (a) (3), to ensure that a reliable and adequate supply of pure, wholesome, healthful, and potable drinking water is supplied. According to information provided by the Community Water Center, who has conducted outreach and organizational efforts within the community of Ducor, the high level of treatment chemicals introduced into the water supply in order to address the high levels of Hydrogen Sulfate in Well No. 5 give system water a foul smell, strange texture and white tinge, making the water undrinkable and forcing customers to rely on bottled water. Additionally, the CSD system has had to shutdown 4 of its 5 wells, a trend that points to the high probability that Well No. 5 will become similarly compromised or cease to be productive, a scenario made more likely by overuse of the well. As with district population trends, this creates a vulnerability to a crises situation in which residents could be exposed to health hazards for a prolonged period of time and/or saddled with an economic burden that customers can ill-afford.

It is determined that although the CSD does provide a reliable supply of water that's distributed with adequate pressure to customer taps, the quality of the water itself is sub-par and, with the added expense of bottled water, forces district customers to allot a substantial portion of their income to the purchase of water supplies, approximately 10% of their total income compared to the 1.5% affordability threshold recommended by the Environmental Protection Agency (EPA), according to a Pacific Institute study of Central Valley unincorporated communities served by small water systems. The percentage spent by households varies from community to community and may be higher or lower than 10%. In order to address the issue of continuously needing secure new well sites while preemptively addressing the inevitable replacement of Well No. 5, the CSD must examine methods of using alternative water supplies such as treated surface water. Treated surface water provided by the Terra Bella Irrigation District (TBID) is the most feasible approach. This partnership can take place through a Joint Powers Authority agreement or district consolidation.

TABLE 3-1
Existing Water & Wastewater Connections in Ducor

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
150	150	0	Septic Only	--	--

* Data current as of May 2012

3.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Ducor does not currently have a storm drainage system.

3.4 Roads

There are various roadways in Ducor that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 3-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed.
Figure 3-1 graphically displays this information on a map.

TABLE 3-2
Roads in Need of Major and Medium Repair in Ducor

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 58	Braly Avenue to west end	OLAY
2	Braly Avenue	Parsons Avenue to Avenue 58	OLAY
3	Divizich Avenue	Road 232 to Braly Avenue	OLAY
4	Divizich Avenue	Braly Avenue to Carlisle Road	CHIP
5	Ducor Avenue	Road 234 to Carlisle Road	CHIP
6	Fountain Springs Avenue	SR 65 to Road 236	CHIP
7	Parsons Avenue	Road 234 to Carlisle Road	GRX
8	Road 236	Road 232 to Avenue 56	CHIP
9	Zimmerman Road	Avenue 48 to Divizich Avenue	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal reconstruction	RCST – cold mix
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

3.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are several ADA compliant curb ramps located within Ducor and are listed in Table 3-3 and displayed in Figure 3-1.

TABLE 3-3
Existing ADA Curb Ramps in Ducor

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Fountain Springs Avenue	Dennis Road	SE Corner
2	Fountain Springs Avenue	Dennis Road	SW Corner

(Source: County of Tulare Public Works, August 2013)

3.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 3-4 identifies the location of existing sidewalks in Ducor. Figure 3-1 also displays this information graphically. The sidewalks represented in Table 3-4 and Figure 3-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 3-4
Existing Sidewalks in Ducor

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Dennis Road	Fountain Springs Avenue to 175' south	East side
2	Dennis Road	Fountain Springs Avenue to 175' south	West side
3	Fountain Springs Avenue	75' west of Road 234 to 100' east of Road 234	South side
4	Fountain Springs Avenue	Road 234 to 75' east	North side
5	Fountain Springs Avenue	175' west of Dennis Road to 125' east of Dennis Road	South side
6	Fountain Springs Avenue	Dennis Road to 125' east	North side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

3.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 3-5 identifies the location of existing street lights that are maintained by Tulare County, in Ducor, as well as their specifications. Figure 3-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 3-5
Existing Street Lights in Ducor

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 55	Dennis Road	SW Corner	2138480E	5800	W	N	SCE
2	Avenue 55	Road 234	NE Corner	4574113E	5800	W	S	SCE
3	Divizich Avenue	Carlisle Road	SW Corner	667295E	5800	W	E	SCE
4	Ducor Avenue	Road 234	NW Corner	1368194E	5800	W	S	SCE
5	Ducor Avenue	Dennis Road	NW Corner	561573E	5800	W	S	SCE
6	Fountain Springs Avenue	Braly Avenue	NW Corner	1823786E	5800	W	S	SCE
7	Fountain Springs Avenue	Road 234	NE Corner	450908E	5800	W	S	SCE
8	Fountain Springs Avenue	Dennis Road	NW Corner	450906E	5800	W	S	SCE
9	Fountain Springs Avenue	Carlisle Road	NE Corner	450903E	5800	W	S	SCE
10	Fountain Springs Avenue	Road 236	NE Corner	450901E	5800	W	W	SCE
11	Fountain Springs Avenue	SR 65	SE Corner	9-982	16000	S	N	SCE
12	Fountain Springs Avenue	SR 65	NW Corner	6-983	16000	S	S	SCE
13	Parsons Avenue	Road 234	NE Corner	2081070E	5800	W	S	SCE
14	Parsons Avenue	Braly Avenue	SW Corner	1732755E	5800	W	E	SCE
15	Parsons Avenue	Dennis Road	NW Corner	561654E	5800	W	S	SCE

(Source: Tulare County Public Works, March 2013)

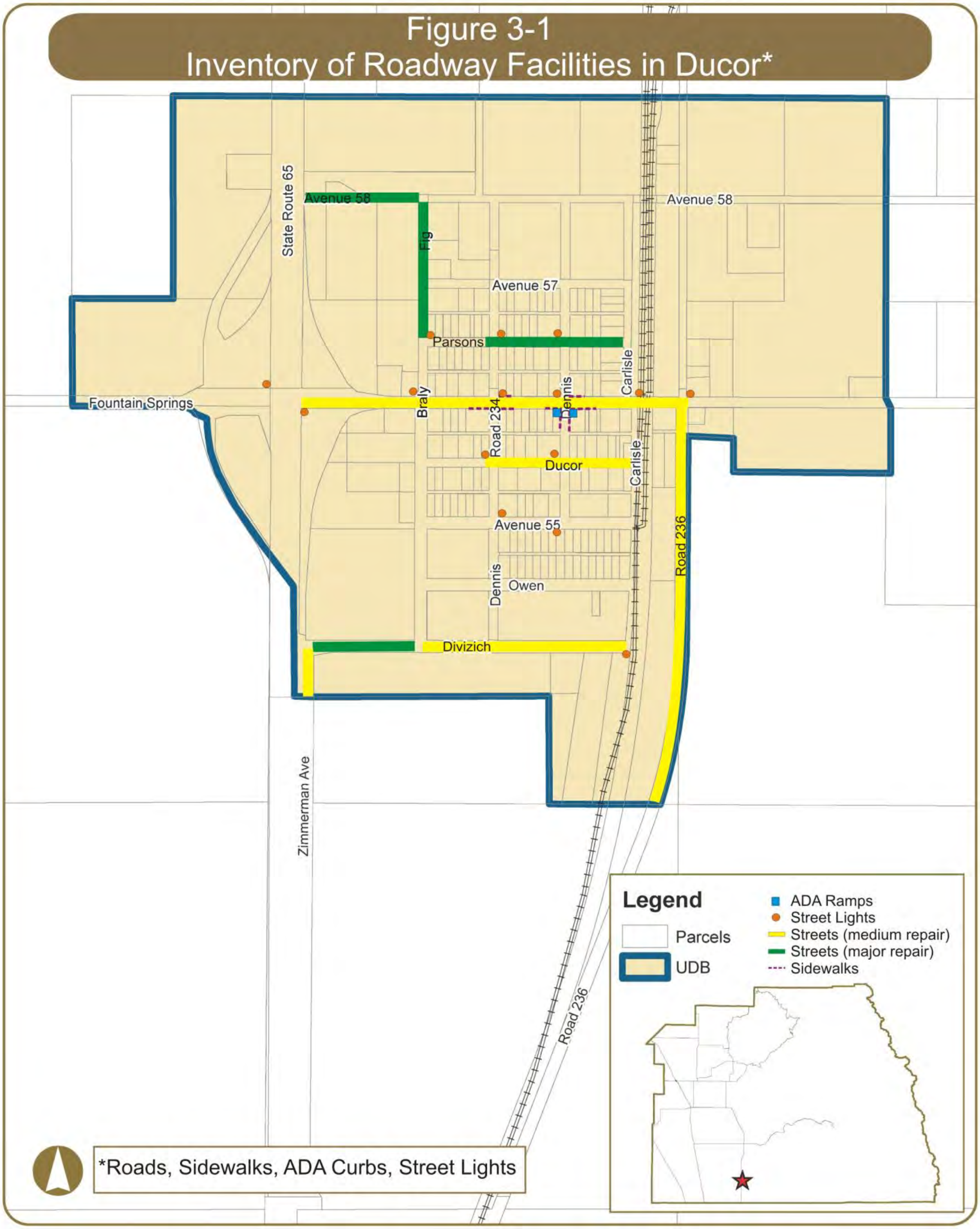


Figure 3-1
Inventory of Roadway Facilities in Ducor*
Avenue 58
Avenue 58
State Route 65
Fig
Avenue 57
Parsons
Carlisle
Fountain Springs
Braly
Road 234
Dennis
Ducor
Carlisle
Avenue 55
Road 236
Dennis
Owen
Divizich
Zimmerman Ave
Road 236
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

4. COMMUNITY OF EARLIMART

4.1 General Information

Earlimart is a census-designated place located in the southwest portion of Tulare County, southwest of Visalia. It is generally bounded by Cable Avenue in the south, Sierra Avenue in the north, Howard Road in the west, and Dietz Road in the east and encompasses 2.1 square miles of land. Earlimart is located approximately 40 miles north of the City of Bakersfield. It lies 7 miles northeast of the City Limits of Delano. The community is long and linear in shape, and is bisected in an east-west direction by State Route (SR) 99 and the Union Pacific Railroad tracks. Earlimart is an agriculturally oriented service community surrounded on all sides by lands in agricultural production and vacant land. Cities and communities surrounding Earlimart include Delano to the south, Pixley to the north, and the communities of Ducor and Terra Bella to the east and northeast respectively, and the community of Richgrove to the southeast. Earlimart is approximately 13 miles east of the Tulare County/Kings County Line, and approximately 8 miles north of the Tulare County/Kern County Line.

Based on the 2010 Census, the population in Earlimart was 8,537. Similar to other communities in Tulare County, the population of Earlimart is racially diverse with 37% White, 1% African American, 1% Native American, 6% Asian/Pacific Islander, 50% from other races, and 5% from 2 or more races. 91% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 2,023 housing units located within Earlimart, of which 52% are owner-occupied and 48% are renter-occupied.

4.2 Domestic Water & Wastewater

Domestic water and sewer service in Earlimart is provided by the Earlimart Public Utility District (PUD) which was formed in December 1954. Table 4-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012 and Municipal Service Review, March 2006). Figure 4-1 graphically displays the approximate location of water wells and water lines.

According to the Municipal Service Review 2006 (MSR), the PUD began requiring water meters for all new development in 2000 but very little development has occurred since then indicating that the majority of the PUD's water connections are currently un-metered. Water meters will also be installed on existing properties when they change ownership.

Assuming 1,500 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Earlimart PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 3,100 gallons per minute (GPM) (1,500 GPM fire flow, and 1,600 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The PUD's water system is capable of delivering a source flow of 3,300 GPM, and includes pneumatic pressure tanks for storage, indicating that the system currently meets the requirements of the Tulare County Improvement Standards.

Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is estimated that the District's current water system could support approximately 200 additional EDUs. It is likely that the PUD will need to continue to repair and/or replace older pipelines in the water system. Additionally, it is likely that the PUD will need to supplement its water supply to support additional development within its sphere of influence (SOI) (i.e. the addition of wells to the system).

Figure 4-2 graphically displays the approximate location of the sewer system and wastewater treatment plant. The PUD has applied for $750,000 grant to install a new sewer line. The District will need to match the grant with $250,000. An additional 15" trunk line will be added under Washington Street to Road 128 towards the plant, to the west of Earlimart. The PUD indicated that no additional development is to be approved prior to the installation of the new trunk line.

The PUD's Wastewater Treatment Facility (WWTF) is operated under the provisions of Order No. 98-140 issued by the California Regional Water Quality Control Board (RWQCB). The PUD currently complies with the provisions of the Order. As prescribed by Order No. 98-140, when a California registered civil engineer has certified that the WWTF can reliably treat 1.24 million gallons per day (MGD), the monthly average discharge shall not exceed 1.24 MGD; otherwise the monthly average discharge shall not exceed 0.80 MGD. PUD staff has indicated that the average dry weather flow is approximately 0.88 MGD. The PUD's collection system is in adequate operating condition as there is no significant inflow and infiltration during winter months. Upon an engineer's certification to reliably treat 1.24 MGD the WWTF would have additional capacity to treat approximately 360,000 GPD. Based upon an available capacity of 360,000 GPD, it is estimated that approximately 600 additional connections (EDUs) to the system could be supported.

Although there is remaining capacity, the PUD indicated that the WWTF was constructed in 1956 and needs upgrading including electrical upgrades. Intermediate upgrades to the plant occurred in 1973 and 1986.

TABLE 4-1

Existing Water & Wastewater Connections in Earlimart

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
1,485	1,688	203	1,485	2,085	600

* Data current as of May 2012

** Data current as of March 2006

4.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself

typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 4-2 identifies the location of drainage inlets and sumps in Earlimart. Figure 4-1 also displays this information graphically.

TABLE 4-2

Existing Storm Drainage Facilities in Earlimart

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Andrea Avenue	Diane Street	Inlet
2	Armstrong Avenue	Market Road	Inlet
3	Armstrong Avenue	east of Market Road	Inlet
4	Armstrong Avenue	Church Street	Inlet
5	Armstrong Avenue	west of State Street	Sump
6	Center Avenue	Market Road	Inlet
7	Clay Avenue	west of Ash Street	Inlet
8	Clay Avenue	Front Street	Inlet
9	Elm Road	south of Washing Street	Inlet
10	Elm Road	north of Mary Ann Avenue	Inlet
11	Elm Road	north of Cannon Avenue	Inlet
12	Elm Road	Frankline Avenue	Inlet
13	Franklin Avenue	Market Road	Inlet
14	Franklin Avenue	Front Street	Inlet
15	Kelly Avenue	Front Street	Inlet
16	Kelly Avenue	Market Road	Inlet
17	Main Avenue	Market Road	Inlet
18	Marin Avenue	Molly Road	Inlet
19	Marin Avenue	Earlimart Avenue	Inlet
20	north of Sutter Avenue	State Street	Inlet

TABLE 4-2 (Continued)
Existing Storm Drainage Facilities in Earlimart

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
21	Rhoden Court	west of Ash Street	Inlet
22	Sierra Avenue	Front Street	Inlet
23	south of Bent Ranch Avenue	Spring Road	Sump
24	south of Washington Avenue	Davis Street	Inlet
25	Spruce Avenue	State Street	Inlet
26	State Street	north of Armstrong Avenue	Sump
27	Sutter Avenue	Spring Road	Inlet
28	Sutter Avenue	State Street	Inlet
29	Sutter Avenue	west of State Street	Inlet
30	Tulare Avenue	Church Street	Inlet
31	Washington Avenue	Market Road	Inlet
32	Washington Avenue	west of Ash Street	Inlet

(Source: County of Tulare Public Works, 2014)

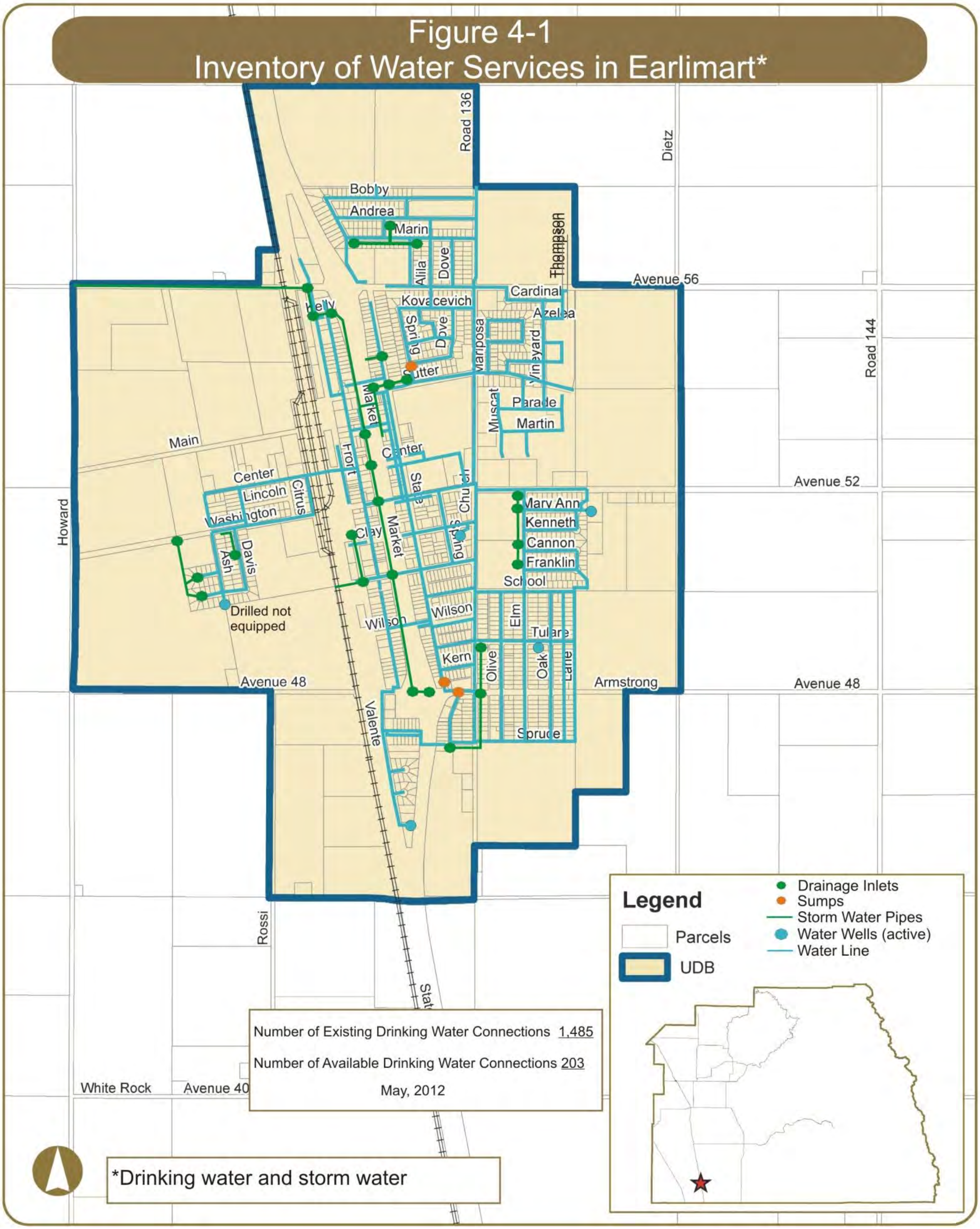


Figure 4-1
Inventory of Water Services in Earlimart*
Road 136
Dietz
Bobby
Andrea
Marin
Alila
Dove
Thompson
Avenue 56
Cardinal
Kovacevich
Azelea
Kelly
Spring
Dove
Mariposa
Vineyard
Sutter
Road 144
Parade
Market
Muscat
Martin
Main
Front
Center
Center
State
Church
Avenue 52
Lincoln
Citrus
Mary Ann
Washington
Kenneth
Howard
Clay
Spring
Cannon
Market
Davis
Ash
Franklin
School
Drilled not equipped
Wilson
Wilson
Elm
Tulare
Kern
Olive
Oak
Lane
Avenue 48
Armstrong
Avenue 48
Valente
Spruce
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Rossi
State
Number of Existing Drinking Water Connections 1,485
Number of Available Drinking Water Connections 203
May, 2012
White Rock
Avenue 40
*Drinking water and storm water

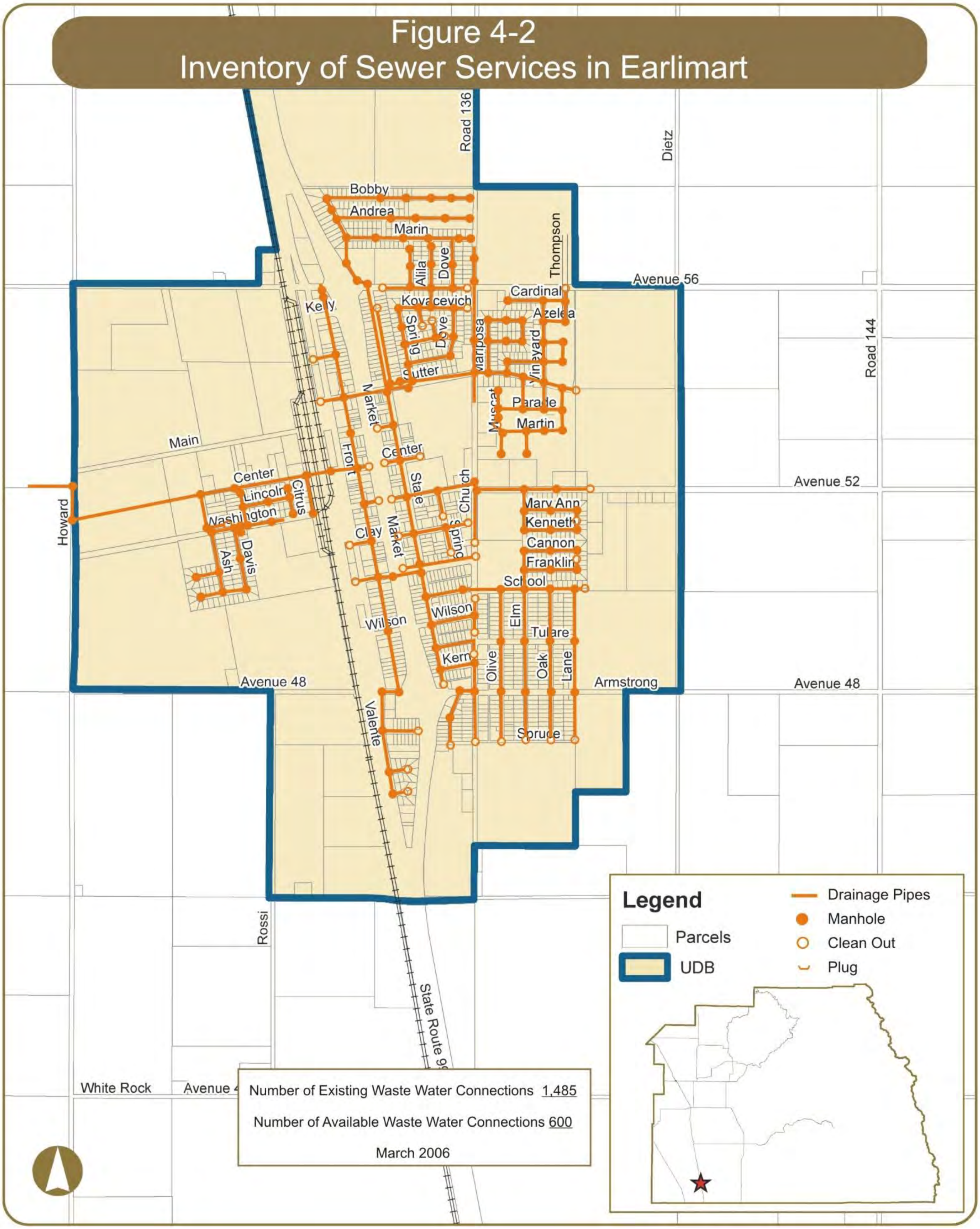


Figure 4-2
Inventory of Sewer Services in Earlimart
Bobby
Andrea
Marin
Road 136
Dietz
Thompson
Alila
Dove
Avenue 56
Cardinal
Kovacevich
Azelea
Kelly
Spring
Dove
Mariposa
Vineyard
Road 144
Sutter
Market
Muscat
Parade
Martin
Main
Center
Front
Center
Avenue 52
Lincoln
Citrus
State
Church
Mary Ann
Washington
Kenneth
Howard
Clay
Market
Spring
Cannon
Ash
Davis
Franklin
School
Wilson
Wilson
Elm
Tulare
Kern
Olive
Oak
Lane
Avenue 48
Armstrong
Avenue 48
Valente
Spruce
Rossi
State Route 99
White Rock
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Number of Existing Waste Water Connections 1,485
Number of Available Waste Water Connections 600
March 2006

4.4 Roads

There are various roadways in Earlimart that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost.. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 4-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 4-3 graphically displays this information on a map.

TABLE 4-3

Roads in Need of Major and Medium Repair in Earlimart

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Alfalfa Road	Washington Avenue to Center Avenue	CHIP
2	Alila Street	Kovacevich Street to Andrea Avenue	CHIP
3	Armstrong Avenue	Rossi Road to Valente Road	CHIP
4	Armstrong Avenue	Elm Road to Dietz Road	CHIP
5	Ash Street	Clay Avenue to Washington Avenue	CHIP
6	Bent Ranch Avenue	Spring Road to Dove Road	CHIP
7	Cable Avenue	Rossi Road to Valente Road	CHIP
8	Camelia Drive	Mariposa Road to Primavera Court	CHIP
9	Cannon Avenue	Elm Road to Lane Avenue	CHIP
10	Cardinal Avenue	Muscat Street to Thompson Road	CHIP

TABLE 4-3 (Continued)
Roads in Need of Major and Medium Repair in Earlimart

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Cedar Avenue	Front Street to east end	GRX
12	Center Avenue	Valente Road to west end	CHIP
13	Center Avenue	Front Street to Market Road	CHIP
14	Chaparral Street	Front Street to east end	ACST
15	Church Street	Armstrong Avenue to Tulare Avenue	GRX
16	Church Street	Cable Avenue to Spruce Avenue	RCST
17	Church Street	Tulare Avenue to Franklin Avenue	CHIP
18	Church Street	Franklin Avenue to Washington Avenue	GRX
19	Church Street	Sutter Avenue to Sierra Avenue	CHIP
20	Church Street	Sierra Avenue to Bobbi Avenue	OLAY
21	Citrus Road	Washington Avenue to Center Avenue	CHIP
22	Clay Avenue	Ash Street to west end	ACST
23	Clay Avenue	Ash Street to Davis Street	CHIP
24	Clay Avenue	Front Street to Market Road	CHIP
25	Davis Street	Clay Avenue to Washington Avenue	CHIP
26	Dietz Road	Armstrong Avenue to Washington Avenue	CHIP
27	Dietz Road	Washington Avenue to Sierra Avenue	GRX
28	Dove Road	Bent Ranch Avenue to Kovacevich Street	CHIP
29	Dove Road	Sierra Avenue to Marin Avenue	CHIP
30	Earlimart Avenue	Quail Avenue to Kovacevich Street	CHIP
31	Elm Road	Spruce Avenue to Armstrong Avenue	CHIP
32	Franklin Avenue	State Street to west end	RCST
33	Franklin Avenue	Elm Road to Lane Avenue	CHIP
34	Front Street	Cedar Avenue to south end	CHIP
35	Front Street	Cedar Avenue to Armstrong Avenue	GRX
36	Front Street	Armstrong Avenue to Sutter Avenue	CHIP
37	Front Street	Sutter Avenue to north end	GRX
38	Kelly Avenue	Front Street to Market Road	CHIP
39	Kenneth Avenue	Elm Road to Lane Avenue	OLAY
40	Kern Avenue	State Street to Church Street	GRX
41	Kovacevich Street	Spring Road to Church Road	CHIP
42	Lane Avenue	Franklin Avenue to Cannon Avenue	CHIP
43	Lane Avenue	Kenneth Avenue to Mary Ann Avenue	CHIP
44	Lincoln Avenue	Alfalfa Road to Citrus Road	CHIP
45	Marin Avenue	Molly Road to Church Road	CHIP
46	Market Road	Armstrong Avenue to Clay Avenue	CHIP
47	Market Road	Clay Avenue to Washington Avenue	OLAY
48	Market Road	Sutter Avenue to Kelly Avenue	CHIP
49	Mary Ann Avenue	Elm Road to Lane Avenue	OLAY
50	Muscat Court	south of Martin Avenue to north of Parade Avenue	CHIP

TABLE 4-3 (Continued)
Roads in Need of Major and Medium Repair in Earlimart

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
51	Muscat Street	Cardinal Avenue to Sierra Avenue	CHIP
52	Olive Road	Spruce Avenue to Armstrong Avenue	GRX
53	Olympia Street	Front Street to east end	OLAY
54	Quail Avenue	Spring Road to Dove Road	CHIP
55	Rhoden Court	Ash Street to west end	CHIP
56	Rossi Road	Cable Avenue to Armstrong Avenue	RCST
57	School Avenue	Church Road to Elm Road	GRX
58	School Avenue	Lane Road to east end	GRX
59	Sierra Avenue	Front Street to State Street	OLAY
60	Sierra Avenue	State Street to Church Road	CHIP
61	Sierra Avenue	Thompson Road to Dietz Road	CHIP
62	Spring Road	Sutter Avenue to Kovacevich Street	CHIP
63	Spruce Avenue	State Drive to Church Road	GRX
64	Spruce Avenue	Church Road to Oak Road	CHIP
65	State Street	Spruce Avenue to School Avenue	CHIP
66	State Street	School Avenue to Clay Avenue	GRX
67	State Street	Clay Avenue to Washington Avenue	CHIP
68	State Street	Sutter Avenue to Sierra Avenue	GRX
69	Sutter Avenue	Muscat Street to east end	CHIP
70	Tulare Avenue	State Street to Church Street	GRX
71	Valente Road	Cable Avenue to Sierra Avenue	CHIP
72	Washington Avenue	Church Road to Dietz Road	CHIP
73	Washington Avenue	Ash Street to Citrus Road	GRX
74	Washington Avenue	Citrus Road to Front Street	CHIP
75	Wilson Avenue	State Street to west end	RCST

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

4.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Earlimart and are listed in Table 4-4 and displayed in Figure 4-3.

TABLE 4-4
Existing ADA Curb Ramps in Earlimart

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Andrea Avenue	Molly Road	NE Corner
2	Andrea Avenue	Molly Road	SE Corner
3	Andrea Avenue	Diane Street	SE Corner
4	Andrea Avenue	Diane Street	SW Corner
5	Andrea Avenue	Bobbi Avenue	NE Corner
6	Andrea Avenue	Bobbi Avenue	NW Corner
7	Andrea Avenue	Church Road	NW Corner
8	Armstrong Avenue	Church Street	NE Corner
9	Armstrong Avenue	Church Street	NW Corner
10	Azalea Avenue	Vineyard Road	NE Corner
11	Azalea Avenue	Vineyard Road	SE Corner
12	Bent Ranch Avenue	Muscat Lane	SE Corner
13	Bent Ranch Avenue	Vineyard Road	NE Corner
14	Bent Ranch Avenue	Vineyard Road	NW Corner
15	Bent Ranch Avenue	Vineyard Road	SE Corner
16	Bent Ranch Avenue	Vineyard Road	SW Corner
17	Bent Ranch Avenue	Thompson Road	NW Corner
18	Bent Ranch Avenue	Spring Road	SE Corner
19	Bent Ranch Avenue	Spring Road	NE Corner
20	Bobbi Avenue	Molly Road	SE Corner
21	Bobbi Avenue	Between Molly Road and Bobbi Avenue	NE Corner
22	Bobbi Avenue	Between Molly Road and Bobbi Avenue	NW Corner
23	Bobbi Avenue	Bobbi Avenue	SE Corner
24	Bobbi Avenue	Bobbi Avenue	SW Corner
25	Bobbi Avenue	Church Road	NW Corner

TABLE 4-4 (Continued)
Existing ADA Curb Ramps in Earlimart

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
26	Bobbi Avenue	Church Road	SW Corner
27	Camelia Drive	Vineyard Road	NE Corner
28	Camelia Drive	Thompson Road	SW Corner
29	Camelia Drive	Vineyard Road	SE Corner
30	Cardinal Avenue	Muscat Lane	NE Corner
31	Cardinal Avenue	Vineyard Road	SE Corner
32	Cardinal Avenue	Vineyard Road	SW Corner
33	Cardinal Avenue	Thompson Road	NW Corner
34	Cardinal Avenue	Thompson Road	SW Corner
35	Cedar Avenue	Front Street	SE Corner
36	Center Avenue	State Street	NE Corner
37	Center Avenue	State Street	SE Corner
38	Center Avenue	Church Street	NE Corner
39	Center Avenue	Church Street	SE Corner
40	Center Avenue	Muscat Lane	NW Corner
41	Center Avenue	Muscat Lane	SW Corner
42	Clay Avenue	Ash Street	NE Corner
43	Kovacevich Street	Spring Road	SE Corner
44	Kovacevich Street	Earlimart Avenue	SE Corner
45	Kovacevich Street	Earlimart Avenue	SW Corner
46	Kovacevich Street	Alila Street	NE Corner
47	Kovacevich Street	Alila Street	NW Corner
48	Marin Avenue	Molly Road	NE Corner
49	Marin Avenue	Diane Street	NE Corner
50	Marin Avenue	Earlimart Avenue	SE Corner
51	Marin Avenue	Earlimart Avenue	SW Corner
52	Marin Avenue	Alila Street	NE Corner
53	Marin Avenue	Alila Street	NW Corner
54	Marin Avenue	Alila Street	SE Corner
55	Marin Avenue	Alila Street	SW Corner
56	Marin Avenue	Dove Road	SE Corner
57	Marin Avenue	Dove Road	SW Corner
58	Marin Avenue	Church Road	NW Corner
59	Marin Avenue	Church Road	SW Corner
60	Martin Avenue	Muscat Lane	NE Corner

TABLE 4-4 (Continued)
Existing ADA Curb Ramps in Earlimart

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
61	Martin Avenue	Muscat Lane	SE Corner
62	Martin Avenue	Primavera Court	SE Corner
63	Martin Avenue	Primavera Court	SW Corner
64	Martin Avenue	Thompson Road	NW Corner
65	North of Quail Avenue	Earlimart Avenue	SW Corner (at bend)
66	Parade Avenue	Muscat Lane	NE Corner
67	Parade Avenue	Muscat Lane	NW Corner
68	Parade Avenue	Muscat Lane	SE Corner
69	Parade Avenue	Primavera Court	NW Corner
70	Parade Avenue	Vineyard Road	NE Corner
71	Parade Avenue	Vineyard Road	NW Corner
72	Parade Avenue	Thompson Road	NW Corner
73	Parade Avenue	Thompson Road	SW Corner
74	Quail Avenue	Spring Road	NE Corner
75	Quail Avenue	Spring Road	SE Corner
76	Quail Avenue	Earlimart Avenue	NE Corner
77	Quail Avenue	Earlimart Avenue	NW Corner
78	Quail Avenue	Dove Road	NW Corner
79	Quail Avenue	Dove Road	SW Corner
80	Rhoden Court	Ash Street	NW Corner
81	Rhoden Court	Ash Street	SW Corner
82	Sierra Avenue	Muscat Lane	SE Corner
83	Sierra Avenue	Muscat Lane	SW Corner
84	Sierra Avenue	Thompson Road	SE Corner
85	Sierra Avenue	Thompson Road	SW Corner
86	Sierra Avenue	Front Street	SE Corner
87	Sierra Avenue	Earlimart Avenue	NE Corner
88	Sierra Avenue	Alila Street	NE Corner
89	Sierra Avenue	Alila Street	NW Corner
90	Sierra Avenue	Alila Street	SE Corner
91	Sierra Avenue	Alila Street	SW Corner
92	Sierra Avenue	Dove Road	NE Corner
93	Sierra Avenue	Dove Road	NW Corner
94	Sierra Avenue	Church Road	NW Corner
95	Sierra Avenue	Church Road	SW Corner

TABLE 4-4 (Continued)
Existing ADA Curb Ramps in Earlimart

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
96	South of Kovacevich Street	Earlimart Avenue	NE Corner (at bend)
97	Sutter Avenue	State Street	SE Corner
98	Sutter Avenue	Spring Road	NE Corner
99	Sutter Avenue	Spring Road	NW Corner
100	Sutter Avenue	Church Street	NE Corner
101	Sutter Avenue	Church Street	SE Corner
102	Sutter Avenue	Mariposa Road	NE Corner
103	Sutter Avenue	Mariposa Road	NW Corner
104	Sutter Avenue	Muscat Lane	NE Corner
105	Sutter Avenue	Muscat Lane	NW Corner
106	Sutter Avenue	Primavera Court	SE Corner
107	Sutter Avenue	Primavera Court	SW Corner
108	Sutter Avenue	Vineyard Road	NE Corner
109	Sutter Avenue	Vineyard Road	NW Corner
110	Sutter Avenue	Vineyard Road	SE Corner
111	Sutter Avenue	Vineyard Road	SW Corner
112	Washington Avenue	Ash Street	SE Corner
113	Washington Avenue	Ash Street	SW Corner
114	Washington Avenue	Davis Street	SE Corner
115	Washington Avenue	Davis Street	SW Corner
116	Washington Avenue	Citrus Road	NE Corner
117	Washington Avenue	Citrus Road	NW Corner
118	Washington Avenue	Valente Road	SW Corner
119	Washington Avenue	State Street	SW Corner
120	Washington Avenue	State Street	NE Corner
121	Washington Avenue	Church Street	NE Corner
122	Washington Avenue	Church Street	NW Corner

(Source: County of Tulare Public Works, August 2013)

4.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk

width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 4-5 identifies the location of existing sidewalks in Earlimart. Figure 4-3 also displays this information graphically. The sidewalks represented in Table 4-5 and Figure 4-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 4-5
Existing Sidewalks in Earlimart

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Alila Street	Kovacevich Street to Andrea Avenue	East side
2	Alila Street	Kovacevich Street to Andrea Avenue	West side
3	Andrea Avenue	Molly Road to Church Street	North side
4	Andrea Avenue	Molly Road to Church Street	South side
5	Armstrong Avenue	State Street to Church Street	North side
6	Ash Street	Washington Avenue to Clay Avenue	East side
7	Ash Street	Washington Avenue to Clay Avenue	West side
8	Azalea Avenue	Vineyard Road to Thompson Road	North side
9	Azalea Avenue	Vineyard Road to Thompson Road	South side
10	Azelia Court	Mariposa Road to La Primavera Avenue	North side
11	Azelia Court	Mariposa Road to La Primavera Avenue	South side
12	Bent Ranch Avenue	Spring Road to Dove Road	North side
13	Bent Ranch Avenue	Spring Road to Dove Road	South side
14	Bent Ranch Avenue	Vineyard Road to Thompson Road	North side
15	Bent Ranch Avenue	Vineyard Road to Thompson Road	South side
16	Bent Ranch Avenue	Muscat Road to Thompson Road	North side
17	Bent Ranch Avenue	Muscat Road to Thompson Road	South side
18	Bobbi Avenue	Molly Road to Church Street	North side
19	Bobbi Avenue	Molly Road to Church Street	South side
20	Bobbi Avenue	Bobbi Avenue to Andrea Avenue	East side
21	Bobbi Avenue	Bobbi Avenue to Andrea Avenue	West side
22	Camelia Drive	Mariposa Road to La Primavera Avenue	North side
23	Camelia Drive	Mariposa Road to La Primavera Avenue	South side
24	Cannon Avenue	Elm Road to Lane Avenue	North side
25	Cannon Avenue	Elm Road to Lane Avenue	South side

TABLE 4-5 (Continued)
Existing Sidewalks in Earlimart

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
26	Cardinal Avenue	Muscat Road to Thompson Road	North side
27	Cardinal Avenue	Muscat Road to Thompson Road	South side
28	Center Avenue	Church Road to Muscat Road	North side
29	Center Avenue	Church Road to Muscat Road	South side
30	Church Road	School Avenue to Kovacevich Street	East side
31	Church Street	Washington Avenue to Center Avenue	West side
32	Church Street	Sutter Avenue to Bobbi Avenue	West side
33	Clay Avenue	Davis Street to west end	North side
34	Clay Avenue	Davis Street to west end	South side
35	Clay Avenue	State Street to Church Street	South side
36	Clay Avenue	Spring Road to Church Street	North side
37	Davis Street	Washington Avenue to Clay Avenue	East side
38	Davis Street	Washington Avenue to Clay Avenue	West side
39	Diane Street	Andrea Avenue to Marin Avenue	East side
40	Diane Street	Andrea Avenue to Marin Avenue	West side
41	Dove Road	Kovacevich Street to Bent Ranch Avenue	East side
42	Dove Road	Kovacevich Street to Bent Ranch Avenue	West side
43	Dove Road	Marin Avenue to Sierra Avenue	East side
44	Dove Road	Marin Avenue to Sierra Avenue	West side
45	Earlimart Avenue	Kovacevich Street to Quail Avenue	East side
46	Earlimart Avenue	Kovacevich Street to Quail Avenue	West side
47	Earlimart Avenue	Marin Avenue to Sierra Avenue	East side
48	Earlimart Avenue	Marin Avenue to Sierra Avenue	West side
49	Elm Road	Cannon Avenue to Washington Avenue	West side
50	Elm Road	Kenneth Avenue to Washington Avenue	East side
51	Franklin Avenue	Elm Road to Lane Avenue	North side
52	Franklin Avenue	Elm Road to Lane Avenue	South side
53	Front Street	Center Avenue to Clay Avenue	East side
54	Kenneth Avenue	Elm Road to Lane Avenue	North side
55	Kenneth Avenue	Elm Road to Lane Avenue	South side
56	Kovacevich Street	Spring Road to Church Street	North side
57	Kovacevich Street	Spring Road to Church Street	South side
58	La Primavera Avenue	Azelia Court to Camelia Drive	East side
59	La Primavera Avenue	Azelia Court to Camelia Drive	West side
60	Marin Avenue	Molly Road to Church Street	North side
61	Marin Avenue	Molly Road to Church Street	South side
62	Mariposa Road	Azelia Court to Sutter Avenue	East side
63	Mariposa Road	Azelia Court to Sutter Avenue	West side
64	Martin Avenue	Muscat Road to Thompson Road	North side
65	Martin Avenue	Muscat Road to Thompson Road	South side
66	Mary Ann Avenue	Elm Road to Lane Avenue	North side
67	Mary Ann Avenue	Elm Road to Lane Avenue	South side
68	Molly Road	Marin Avenue to Bobbi Avenue	East side
69	Molly Road	Marin Avenue to Bobbi Avenue	West side
70	Muscat Road	Sierra Avenue to Cardinal Avenue	East side

TABLE 4-5 (Continued)
Existing Sidewalks in Earlimart

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
71	Muscat Road	Sierra Avenue to Cardinal Avenue	West side
72	Muscat Road	Sutter Avenue to Bent Ranch Avenue	East side
73	Muscat Road	Sutter Avenue to Bent Ranch Avenue	West side
74	Muscat Road	North of Parade Avenue to South of Martin Avenue	East side
75	Muscat Road	North of Parade Avenue to South of Martin Avenue	West side
76	Parade Avenue	Muscat Road to Thompson Road	North side
77	Parade Avenue	Muscat Road to Thompson Road	South side
78	Primavera Court	Sutter Avenue to Parade Avenue	East side
79	Primavera Court	Sutter Avenue to Parade Avenue	West side
80	Primavera Court	Martin Avenue to south end	East side
81	Primavera Court	Martin Avenue to south end	West side
82	Quail Avenue	Spring Road to Dove Road	North side
83	Quail Avenue	Spring Road to Dove Road	South side
84	Rhoden Court	Ash Street to west end	North side
85	Rhoden Court	Ash Street to west end	South side
86	School Avenue	Elm Road to Lane Avenue	North side
87	Sierra Avenue	Front Street to SR 99	South side
88	Sierra Avenue	State Street to Church Street	South side
89	Sierra Avenue	Earlimart Avenue to Church Street	North side
90	Sierra Avenue	Muscat Road to Thompson Road	South side
91	Spring Road	Washington Avenue to Clay Avenue	East side
92	Spring Road	Kovacevich Street to Sutter Avenue	East side
93	Spring Road	Kovacevich Street to Sutter Avenue	West side
94	State Street	Center Avenue to Washington Avenue	East side
95	State Street	Center Avenue to Washington Avenue	West side
96	Sutter Avenue	Spring Road to east end	North side
97	Sutter Avenue	Church Street to east end	South side
98	Thompson Road	Sierra Avenue to Azalea Avenue	East side
99	Thompson Road	Sierra Avenue to Azalea Avenue	West side
100	Thompson Road	Bent Ranch Avenue to Bent Ranch Avenue	East side
101	Thompson Road	Bent Ranch Avenue to Bent Ranch Avenue	West side
102	Thompson Road	Martin Avenue to north end	East side
103	Thompson Road	Martin Avenue to north end	West side
104	Vineyard Road	Cardinal Avenue to Parade Avenue	East side
105	Vineyard Road	Cardinal Avenue to Parade Avenue	West side
106	Washington Avenue	Ash Street to Alfalfa Road	South side
107	Washington Avenue	200' west of Citrus Road to Valente Road	South side
108	Washington Avenue	Alfalfa Road to Citrus Road	North side
109	Washington Avenue	Church Road to Elm Road	South side
110	Washington Avenue	Market Road to Elm Road	North side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

4.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 4-6 identifies the location of existing street lights that are maintained by Tulare County, in Earlimart, as well as their specifications. Figure 4-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 4-6
Existing Street Lights in Earlimart

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	135' South of Olympia Street	Front Street	East Side	4097790E	5800	W	W	SCE
2	Andrea Avenue	Alila Street	SE Corner	N/A	5800	C	N	SCE
3	Andrea Avenue	Diane Street	SE Corner	4347745E	5800	C	N	SCE
4	Andrea Avenue	Molly Road	NE Corner	4347742E	5800	C	W	SCE
5	Andrea Avenue	Church Street	SW Corner	N/A	5800	C	E	SCE
6	Armstrong Avenue	Olive Road	NW Corner	1342465E	5800	W	S	SCE
7	Armstrong Avenue	Front Street	NE Corner	345598E	5800	W	S	SCE
8	Armstrong Avenue	Market Road	NE Corner	4320584E	5800	W	S	SCE
9	Armstrong Avenue	State Street	NW Corner	995215E	5800	W	S	SCE
10	Armstrong Avenue	Church Street	NW Corner	318547E	5800	W	S/E	SCE
11	Armstrong Avenue	Elm Road	NW Corner	1342466E	5800	W	S	SCE
12	Armstrong Avenue	Oak Road	NW Corner	1342467E	5800	W	S	SCE
13	Armstrong Avenue	Lane Avenue	NE Corner	1342471E	5800	W	S	SCE
14	At bend	Earlimart Avenue	West Side	2353355E	5800	O	N/E	SCE
15	Azalea Avenue	Thompson Road	NE Corner	4399513E	5800	C	W	SCE
16	Azalea Avenue	Vineyard Road	SE Corner	4381438E	5800	C	N	SCE
17	Azelia Court	Mariposa Road	SE Corner	N/A	5800	C	N/A	SCE
18	Bent Ranch Avenue	Spring Road	NW Corner	2353351E	5800	O	E	SCE
19	Bent Ranch Avenue	Dove Road	South Side	2353359E	5800	O	N/W	SCE
20	Bent Ranch Avenue	Thompson Road	NW Corner	4399515E	5800	C	E	SCE
21	Bent Ranch Avenue	Vineyard Road	SE Corner	4381436E	5800	C	N	SCE
22	Bent Ranch Avenue	Muscat Road	NE Corner	4381434E	5800	C	S	SCE
23	Bobbi Avenue	Molly Road	SE Corner	4381809E	5800	C	N	SCE
24	Bobbi Avenue	Diane Street	NW Corner	4227088E	5800	C	S	SCE
25	Bobbi Avenue	Earlimart Avenue	SE Corner	4381808E	5800	C	N	SCE
26	Bobbi Avenue	Church Street	SW Corner	4381807	5800	C	E	SCE
27	Camelia Drive	Vineyard Road	SE Corner	4381437E	5800	C	N	SCE
28	Camelia Drive	Thompson Road	SW Corner	4399514E	5800	C	E	SCE
29	Camelia Drive	Mariposa Road	NE Corner	N/A	5800	C	N/A	SCE
30	Cannon Avenue	Elm Road	SE Corner	1401017E	5800	W	W	SCE
31	Cardinal Avenue	Muscat Road	SE Corner	N/A	5800	C	N	SCE
32	Cardinal Avenue	Vineyard Road	NE Corner	4381439E	5800	C	S	SCE
33	Cardinal Avenue	Thompson Road	East Side	4399512E	5800	C	W	SCE
34	Cedar Avenue	Front Street	NE Corner	1761149E	5800	W	W	SCE
35	Center Alignment	Church Street	NW Corner	953_89E	5800	W	S/E	SCE

TABLE 4-6 (Continued)
Existing Street Lights in Earlimart

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
36	Center Avenue	Alfalfa Road	SE Corner	2236399E	5800	O	N	SCE
37	Center Avenue	Citrus Road	SE Corner	2296396E	5800	O	N	SCE
38	Center Avenue	State Street	NW Corner	4431T	5800	W	E	SCE
39	Center Avenue	Market Road	NW Corner	934921E	5800	W	E	SCE
40	Center Avenue	Valente Road	East Side	765316E	5800	W	W	SCE
41	Center Avenue	Front Street	West Side	496327E	5800	W	W	SCE
42	Clay Avenue	Market Road	SW Corner	2282350E	5800	W	E	SCE
43	Clay Avenue	Ash Street	South Side	2282307E	5800	O	N	SCE
44	Clay Avenue	Davis Street	SE Corner	2282350E	5800	O	N/W	SCE
45	Clay Avenue	Front Street	NE Corner	1193068E	5800	W	W	SCE
46	Clay Avenue	State Street	SE Corner	1955144E	5800	W	W	SCE
47	Clay Avenue	Spring Road	SW Corner	7440039E	5800	W	N	SCE
48	Clay Avenue	Church Street	SW Corner	599842E	5800	W	N/E	SCE
49	Franklin Avenue	Church Street	SW Corner	528902E	5800	W	E	SCE
50	Franklin Avenue	Elm Road	SE Corner	1401015E	5800	W	W	SCE
51	Franklin Avenue	Front Street	SE Corner	4067587E	5800	W	W	SCE
52	Franklin Avenue	State Street	SW Corner	3194T	5800	W	E	SCE
53	Franklin Avenue	Spring Road	South Side	527350E	5800	W	N	SCE
54	Franklin Avenue	Market Road	NW Corner	1293924E	5800	W	E	SCE
55	Kenneth Avenue	Elm Road	SE Corner	1401019E	5800	W	W	SCE
56	Kovacevich Street	Spring Road	West Side	2353353E	5800	O	E	SCE
57	Kovacevich Street	60' east of Earlimart Avenue	North Side	2353354E	5800	O	S	SCE
58	Kovacevich Street	Dove Road	NE Corner	2353357E	5800	O	S	SCE
59	Lincoln Avenue	Alfalfa Road	NE Corner	2296398E	5800	O	W	SCE
60	Lincoln Avenue	Citrus Road	East Side	2296395E	5800	O	W	SCE
61	Main Avenue	Market Road	East Side	2282348E	5800	W	W	SCE
62	Marin Avenue	Alila Street	NE Corner	2286997E	5800	C	N	SCE
63	Marin Avenue	Dove Road	NE Corner	2286996E	5800	C	N	SCE
64	Marin Avenue	Church Street	SW Corner	2286995E	5800	C	E	SCE
65	Marin Avenue	Earlimart Avenue	NW Corner	4261646E	5800	C	S	SCE
66	Marin Avenue	Diane Street	NW Corner	N/A	5800	C	S	SCE
67	Martin Avenue	Thompson Road	NW Corner	4509678	5800	C	E	SCE
68	Martin Avenue	Primavera Court	SW Corner	4509677E	5800	C	N	SCE
69	Martin Avenue	Muscat Road	NE Corner	4509676E	5800	C	W	SCE
70	Mary Ann Avenue	Elm Road	SE Corner	1401021E	5800	W	W	SCE
71	North of Franklin Avenue	Lane Avenue	West Side	1955143E	5800	W	E	SCE
72	Parade Avenue	Muscat Road	SE Corner	N/A	5800	C	W	SCE
73	Parade Avenue	Primavera Court	NW Corner	4483116E	5800	C	S	SCE
74	Parade Avenue	Vineyard Road	NE Corner	4483117E	5800	C	S	SCE
75	Parade Avenue	Thompson Road	SW Corner	4483118E	5800	C	E	SCE
76	Quail Avenue	Spring Road	West Side	2353352E	5800	O	E	SCE
77	Quail Avenue	Earlimart Avenue	SE Corner	2353356E	5800	O	N	SCE
78	Quail Avenue	Dove Road	NE Corner	2353358E	5800	O	W	SCE
79	Rhoden Court	Ash Street	SW Corner	4122708E	5800	N/A	E	SCE
80	School Avenue	Olive Road	North Side	2191757E	5800	W	S	SCE

TABLE 4-6 (Continued)
Existing Street Lights in Earlimart

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
81	School Avenue	Oak Road	SE Corner	2111468E	5800	W	N	SCE
82	School Avenue	State Street	NE Corner	2111469E	5800	W	W	SCE
83	School Avenue	Church Street	NW Corner	671032E	5800	W	S/E	SCE
84	School Avenue	Elm Road	NW Corner	1342599E	5800	W	S	SCE
85	School Avenue	Lane Avenue	NE Corner	1342452E	5800	W	S/W	SCE
86	Sierra Avenue	Front Street	SE Corner	1751125E	9500	W	N/W	SCE
87	Sierra Avenue	State Street	NW Corner	1401140E	9500	W	S	SCE
88	Sierra Avenue	Church Street	NW Corner	2277692E	9500	W	S	SCE
89	Sierra Avenue	Alila Street	NW Corner	2286999E	5800	C	S	SCE
90	Sierra Avenue	Dove Road	NW Corner	286998E	5800	C	S	SCE
91	Spruce Avenue	Church Street	SW Corner	995397E	5800	W	N/E	SCE
92	Spruce Avenue	Elm Road	NW Corner	2191523E	5800	W	S	SCE
93	Spruce Avenue	Olive Road	NW Corner	1342457E	5800	W	S/W	SCE
94	Spruce Avenue	Oak Road	NW Corner	1342459E	5800	W	S/W	SCE
95	Spruce Avenue	State Street	SE Corner	731519E	5800	W	N	SCE
96	Sutter Avenue	Market Road	NE Corner	670657E	5800	W	S/W	SCE
97	Sutter Avenue	State Street	NW Corner	744738E	5800	W	S/E	SCE
98	Sutter Avenue	Spring Road	NW Corner	4091697E	5800	W	S	SCE
99	Sutter Avenue	Mariposa Road	South Side	4342666	5800	C	N	SCE
100	Sutter Avenue	Primavera Court	SW Corner	4581433E	5800	C	N	SCE
101	Sutter Avenue	Vineyard Road	SE Corner	4581455	5800	C	N	SCE
102	Sutter Avenue	Church Street	NE Corner	N/A	5800	C	W	SCE
103	Tulare Avenue	Elm Road	NE Corner	2111470E	5800	W	W	SCE
104	Tulare Avenue	State Street	NW Corner	9720T	5800	W	E	SCE
105	Tulare Avenue	Church Street	NW Corner	533018E	5800	W	S/E	SCE
106	Tulare Avenue	Olive Road	NW Corner	1342454E	5800	W	S	SCE
107	Tulare Avenue	Oak Road	SE Corner	1342455E	5800	W	N	SCE
108	Washington Avenue	Alfalfa Road	NE Corner	2296397E	5800	O	S	SCE
109	Washington Avenue	Citrus Road	NW Corner	2296594E	5800	O	S	SCE
110	Washington Avenue	Ash Street	SE Corner	2282308E	5800	C	N	SCE
111	Washington Avenue	Davis Street	SE Corner	2282305E	5800	O	N	SCE
112	Washington Avenue	Spring Road	North Side	2191627E	5800	W	S	SCE
113	Washington Avenue	Market Road	SW Corner	2017639E	5800	W	N	SCE
114	Washington Avenue	Front Street	SE Corner	450866E	5800	W	W	SCE
115	Washington Avenue	State Street	SW Corner	2272788E	5800	W	E	SCE
116	Washington Avenue	Church Street	SW Corner	275779E	5800	W	N/E	SCE
117	Washington Avenue	Elm Road	NE Corner	1401024E	9500	W	S	SCE
118	Wilson Avenue	Front Street	NE Corner	1893094E	5800	W	W	SCE
119	Wilson Avenue	Market Road	NW Corner	2164999E	5800	W	S	SCE
120	Wilson Avenue	State Street	SW Corner	1342596E	5800	W	N/E	SCE
121	Wilson Avenue	Church Street	NW Corner	671036E	5800	W	E	SCE

(Source: Tulare County Public Works, March 2013)

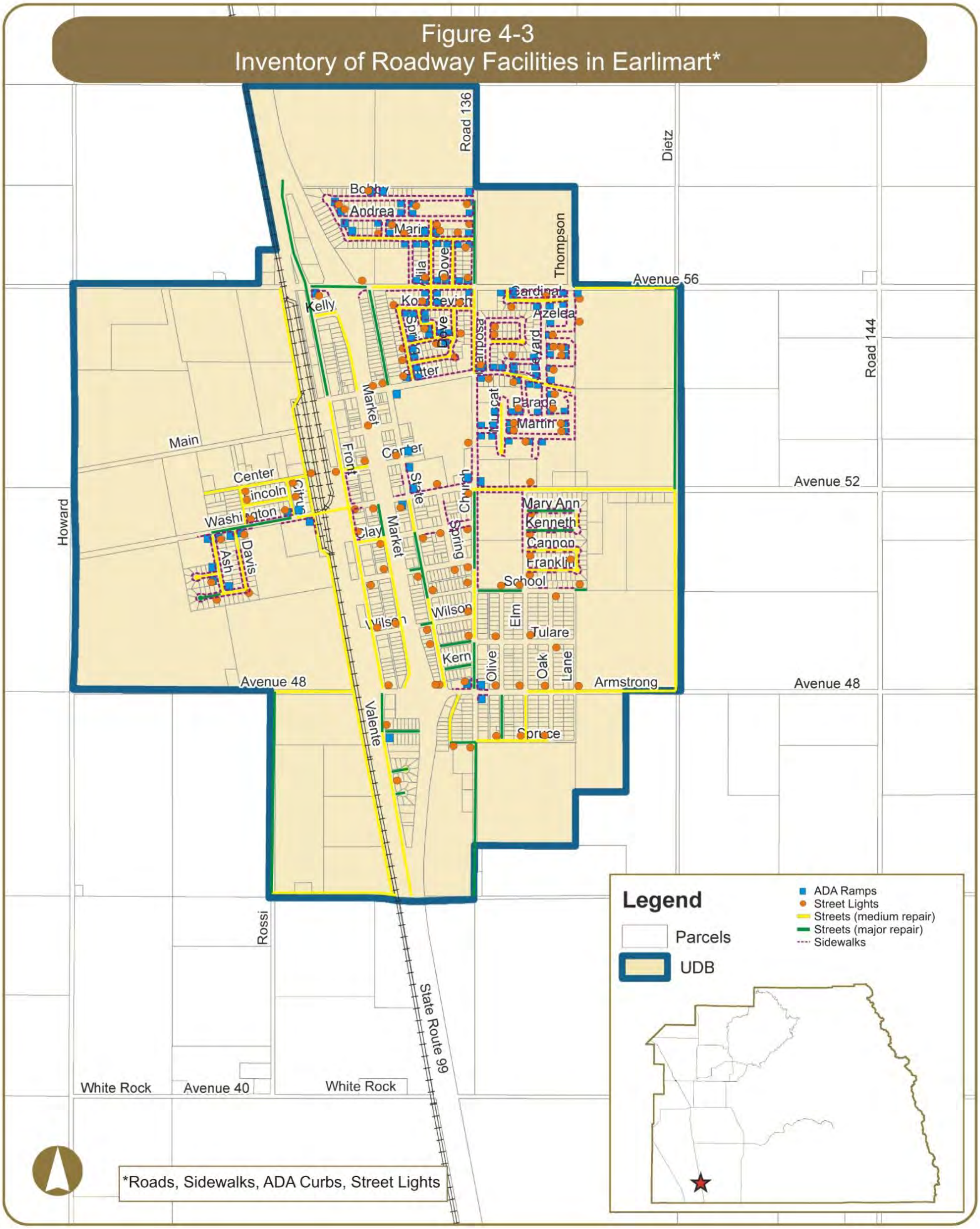


Figure 4-3
Inventory of Roadway Facilities in Earlimart*
Road 136
Dietz
Thompson
Avenue 56
Road 144
Avenue 52
Avenue 48
Armstrong
Howard
Main
Center
Lincoln
Washington
Ash
Davis
Kelly
Market
Front
State
Church
Spring
Clay
Wilson
Kern
Olive
Elm
Oak
Lane
Tulare
School
Mary Ann
Kenneth
Cannon
Franklin
Cardinal
Azelea
Parade
Martin
Bobby
Andrea
Dove
Valente
Spruce
Rossi
State Route 99
White Rock
Avenue 40
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

5. COMMUNITY OF EAST OROSI

5.1 General Information

East Orosi is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 416 in the south, Avenue 420 in the north, Alta East Branch Canal in the west, and Road 142 in the east and encompasses 0.2 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in East Orosi was 495. Similar to other communities in Tulare County, the population of Ducor is racially diverse with 42% White, 0% African American, 1% Native American, 1% Asian/Pacific Islander, 53% from other races, and 3% from 2 or more races. 94% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 116 housing units located within East Orosi, of which 41% are owner-occupied and 59% are renter-occupied.

5.2 Domestic Water & Wastewater

Domestic water and sewer service in East Orosi is provided by the East Orosi Community Service District (CSD). Table 5-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Maps of the sewer and water systems are currently unavailable.

According to the Municipal Service Review 2011 (MSR), the CSD community water system relies entirely on groundwater supplies pumped from the Kings River Sub Basin. The system consists of 2 drilled wells, which use 7.5 horse power (hp) submersible pumps to funnel water through a single check valve and into 2 corresponding pressure storage tanks. The distribution system further contains galvanized 4 inch mains and 1 inch laterals. Well 01, located at the eastern end of the District, acts as the primary source of water during the months of October through March. Well 02, located at the District's western boundary, acts as the primary source of water April through September. CSD's water system contains no method of treatment such as coagulation and flocculation, sedimentation, filtration or disinfection.

The District's Sanitary Survey conducted in January of 2011 by Tulare Environmental Health found that the CSD's source and distribution facility are capable of providing a reliable water supply and recommended that a water supply permit be issued subject to an ongoing water quality monitoring schedule, clearing of vegetation near Wells 01 and 02 and near their respective storage tanks and replacement of Well 01 vent pipe screen with fine mesh screen.

The CSD's December 2010 sample test results for bacteriological contaminates (required each month) resulted in a single positive sample for total Coliforms, one absent sample, and 3 positive repeat samples. A notice of violation was rendered to the CSD of the positive results. The notice directed the CSD management to provide the legally required notice to district customers advising them of this total Coliform violation. Proof of customer notice must be submitted to Tulare Environmental Health. The CSD's

Environmental Health File does not contain proof of customers notice. Lead and copper samples (required annually) must be collected in the months of June, July, August and September only; thus, no results are available for 2011.

Chemical sample test results, which determine Nitrate levels, are required to be submitted on an annual basis; however, once in violation, community water system operators must submit test results to Tulare County Environmental Health on a quarterly basis. In addition, water system operators must notify customers of the violation and submit proof of notice to Tulare Environmental Health. Records indicate May 2009 sample test results showed Nitrate levels exceeding the maximum level contaminants (MCL) allowed by law. A December 10, 2009 notice of violation for failure to provide quarterly sample test results was provided by Tulare Environmental Health requesting that management submit chemical Nitrate testing results for both Wells 01 and 02. A July 20, 2010 letter provided by Tulare Environmental Health indicates that the District was in violation of the aforementioned proof of notice requirement in the first 2 quarters of 2010; this notice seems to stem from the May 2009 Nitrate MCL violation. A July 20, 2010 notice of violation once again indicates sample test results exceeded Nitrate MCL and a subsequent January 27, 2011 notice of violation for failure to provide quarterly sample test results was also provided. Proof of customer notice for this specific violation was not found.

The California Safe Drinking Water Act requires each public water system operators to prepare a Consumer Confidence Report (CCR) on an annual basis and mail/deliver a copy to each customer by July 1 of the year following the year for which the CCR is prepared. Proof of CCR distribution must be provided to Tulare Environmental Health. The CCR contains a key defining the terms used in the report, list of common contaminants found in drinking water, tables listing raw sample test results followed by a brief description of common contaminant sources. The abovementioned Nitrate violations were not identified in the 2006-2009 CCRs. A July 15, 2010 notice of violation provided by Tulare Environmental Health to the CSD indicates that the CSD failed to provide proof that a CCR was prepared and distributed for the 2009 calendar year. A similar notice was also submitted on July 15, 2009 for the 2008 CCR. Proof of 2008 and 2009 distribution was found in the CSD's file, which signifies that these CCRs were not provided to customers in a timely manner.

A Compliance Order provided by Tulare Environmental Health, dated April 15, 2010, cites the following CSD violations of law: system operating a well that produces water not in compliance with primary drinking water standards (H & S Code Section 116555 (a) (1)), failure to ensure a pure, wholesome, healthful and potable supply of water (H & S 116555 (a) (3) and Nitrate levels exceeding the MCL allowed by law (CCR 64431 (a)). The order requests the CSD provide a plan to address the violations, complete with timeline, and sets forth compliance requirements, including the aforementioned quarterly submittal of chemical sample test results and notices of violation to District customers on a quarterly basis.

A January 2008 Tulare Environmental Health notice advises the District to continue to adhere to all reporting requirements, sustain efforts to address nitrate violations, and continue to provide customer notice requirements so long as violations continue. This notice indicates that the District has been in violation of Nitrate MCLs allowed by law since at least 2008.

In accordance with the State's Safe Drinking Water Act, each water supplier must have a certified operator on staff. A Tulare Environmental Health notice of violation indicates that as of 12-9-2009, the CSD is in violation of this provision and does not have a certified operator on staff.

CCR's were prepared for the years 2006, 2007, 2008 and 2009 (no further CCRs were found in the CSD Environmental Health file). Sample data is provided, but no explanation is provided regarding what raw data means.

The CSD office consists of a mobile home that sits on land donated by a local property owner. Both day-to-day operations and district public meetings are conducted in the mobile home. It is estimated that the mobile home can only accommodate approximately 5 people at one time.

Based on the records examined, it is determined that the CSD water system is chronically in violation of maximum Nitrate levels allowed by law. It is further determined, based on the multiple notices of violation for failure to provide sample test results, CCRs, and customer notices of violation, that it is very likely system customers are not even aware of the serious contamination issues facing their water system. Without being properly informed, district customers cannot safeguard against the health hazards posed by water contamination thereby putting their health and safety at risk.

Staffs determinations are further substantiated by a series of news reports that have recently examined potable water quality in small Tulare County communities, East Orosi included. A Fresno Bee article published March 16, 2011 details a recent study conducted by the Oakland think tank, Pacific Institute. The study found that it would cost approximately $150 million to address Valley-wide water contamination issues. The study also determined that low-income residents living within communities served by small water systems use approximately 4.6% of their income for water supplies (this includes both system user fees and bottled water); the federal standard for affordability is 1.5%. The study further found that regulatory agencies do not adequately inform customers when system contamination does occur. A news report that aired on KPMH Fox 26, a local Fox affiliate, also examined the issue of poor water quality within the Valley's small unincorporated communities. In timely fashion, the news report focused on the community of East Orosi. A CSD customer interviewed explained that she has been dealing with high Nitrate levels in her water since 2002 and must purchase bottled water for drinking and cooking, an expense that drastically drains her financial resources. Another CSD customer interviewed explained that there is no alternative for water used to shower and that system water commonly causes rashes and severe discomfort.

It is determined that a mobile home only able to accommodate 5 people at one time is an inadequate facility in which to hold public meetings, particularly for a district containing 386 customers.

It is also determined that the scenario described above, in which the District's exclusive reliance on outside funding sources creates an undue economic burden on district customers and/or exposes them to severe health risks, seems to already be taking place. State and federal grants/loans only offer short-term solutions and simply mask the larger structural forces behind continual service/infrastructure needs and deficiencies. This makes clear that a new approach must be pursued. Consolidation of the CSD with the various CSD's and Public Utilities Districts (PUDs) in the Cutler-Orosi region is a logical and highly feasible option.

TABLE 5-1
Existing Water & Wastewater Connections in East Orosi

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
108	108	0	108	108	0

* Data current as of May 2012

5.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

East Orosi does not currently have a storm drainage system.

5.4 Roads

There are various roadways in East Orosi that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 5-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 5-1 graphically displays this information on a map.

TABLE 5-2

Roads in Need of Major and Medium Repair in East Orosi

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 416	Fruitvale Road to Ione Road	OLAY
2	Avenue 417	Fruitvale Road to Road 139	CHIP
3	Avenue 419	Road 139 to Ione Road	GRX
4	Fruitvale Road	Idaho Avenue to Avenue 418	CHIP
5	Hollister Road	Idaho Avenue to Avenue 419	CHIP
6	Road 139	Avenue 417 west to Avenue 419	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

5.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within East Orosi.

5.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within East Orosi.

5.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 5-3 identifies the location of existing street lights that are maintained by Tulare County, in East Orosi, as well as their specifications. Figure 5-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 5-3
Existing Street Lights in East Orosi

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 417	Road 139	SE Corner	1612	5800	W	W	PG&E
2	Avenue 417	Ione Road	SE Corner	1622(3176)	5800	W	E	PG&E
3	Avenue 418	Hollister Road	SE Corner	1614	5800	W	S/W	PG&E
4	Avenue 419	Hollister Road	SE Corner	1616	5800	W	W	PG&E
5	Florida Avenue	Ione Road	NW Corner	N/A	5800	W	E	PG&E
6	Florida Avenue	Road 139	NE Corner	1626	5800	w	S	PG&E
7	Idaho Avenue	Hollister Road	NE Corner	2380	5800	W	S	PG&E
8	Idaho Avenue	Fruitvale Road	NW Corner	1619	5800	W	E	PG&E
9	Idaho Avenue	Road 139	NE Corner	1621	5800	W	S	PG&E
10	Idaho Avenue	Ione Road	NW Corner	1622	5800	W	E	PG&E

(Source: Tulare County Public Works, March 2013)

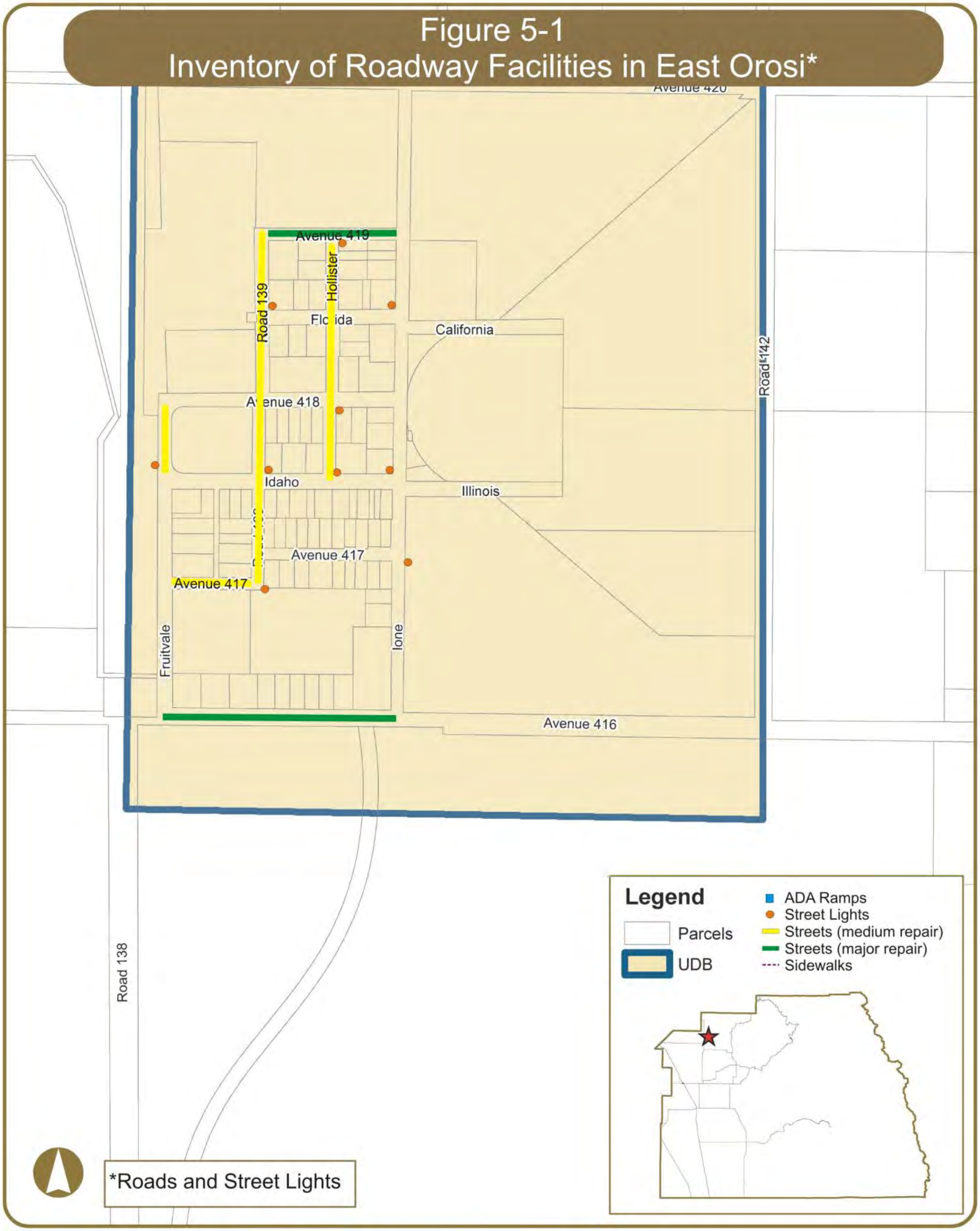


Figure 5-1
Inventory of Roadway Facilities in East Orosi*
Avenue 420
Avenue 419
Hollister
Road 139
Florida
California
Road 142
Avenue 418
Idaho
Illinois
Avenue 417
Avenue 417
Fruitvale
Ione
Avenue 416
Road 138
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

6. COMMUNITY OF GOSHEN

6.1 General Information

Goshen is a census-designated place located in the northwest portion of Tulare County and northwest of the City of Visalia. It is generally bounded by Goshen Avenue and Mill Creek Ditch in the south, Avenue 320 in the north, Road 64 in the west, and Road 76 in the east and encompasses 1.8 square miles of land. Goshen is located approximately 1 ½ miles north of the Visalia Municipal Airport, portions of which are situated within the approach and departure area of the airport. It lies one tenth of a mile northwest of the City Limits of Visalia, 6 ½ miles from the downtown shopping area of Visalia, and immediately west of the Visalia Industrial Park. The community is square in shape, and is bisected in a northwest-southeasterly direction by State Route (SR) 99 and the Southern Pacific Railroad tracks, which divides the community into three approximately equal sized areas. Goshen is an agriculturally oriented service community surrounded on the north, west and south by lands in agricultural production and on the east by scattered residential, light industrial, agricultural and vacant land. Although primarily an agriculturally related service center, Goshen's industrial base is rapidly increasing, providing new employment opportunities for residents of the community.

Based on the 2010 Census, the population in Goshen was 3,006. Similar to other communities in Tulare County, the population of Goshen is racially diverse with 40% White, 3% African American, 3% Native American, less than 1% Asian/Pacific Islander, 50% from other races, and 5% from 2 or more races. 83% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 840 housing units located within Goshen, of which 52% are owner-occupied and 48% are renter-occupied.

6.2 Domestic Water & Wastewater

Domestic water service in Goshen is provided by the California Water Service Company (Cal Water). Cal Water operates and maintains the overall Visalia District, which includes the City of Visalia, Community of Goshen, and other private water systems that have been annexed to the Visalia District in recent years. Table 6-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Goshen Municipal Water Supply Study, December 2005 and Municipal Service Review, March 2006). Figure 6-1 graphically displays the approximate location of water wells, wastewater treatment plants, and water lines.

California Water Service Company provides Domestic water service to the Goshen system with supply from 4 wells, 1-1MG Storage Tank and 3 Booster pumps along with a variety of wells and booster pumps attached via the Visalia system. The West side of Goshen (across Highway 99) is feed by two separate connections, in case of severance of one of these two connections we will be able to maintain adequate pressure and still have the capability of meeting Fire Flow demands.

Cal Water will be installing 1.2 miles of 12" pipe along with required Fire Hydrants in Ave 308 with an anticipated completion in April or early May 2014.

Listed below is the current system information: 2013

Services Connections	1,021
Consumption	265,684KGal
Wells	4- With the capability of producing 2950 GPM
Booster pumps	3-125 HP motors with the capability of 1000 GPM each into the system (these Booster pumps pull water from the 1MG tank)
Gen Set	1-200KW (At Tank site)
Tank	1-1MG Storage tank Filled by one well @ 1500GPM

According to the Cal Water (April 2014), the existing water system is adequate to meet the current flows and pressures of present maximum day demand conditions.

Sanitary sewer service in Goshen is provided by Goshen Community Service District (CSD), which was formed in January 1958 and has the authority to provide the following services: recreation and park services, street lighting, and collect, treat or dispose of sewerage and wastewater. Figure 6-2 graphically displays the location of the sewer system.

The main sewer system for the Goshen community is comprised of a collection system which was constructed in the mid to late 1990s. The construction of the CSD's sewer system was funded through a United States Department of Agriculture, Rural Economic and Community Development Grant, and Small Community Grant. Pursuant to obtaining funding for the Goshen Sewer Project, the Goshen CSD entered into a Wastewater Service Agreement with the City of Visalia for treatment of the CSD's wastewater.

The CSD's wastewater collection system dumps into a lift station (owned and operated by the CSD) near the intersection of Avenue 305 and Effie Drive, which in turn, pumps the wastewater into a 24-inch line in Camp Drive (that is owned and maintained by the City of Visalia). The sewer lift station operates with two pumps, and has a design capacity of 500,000 GPD. The Wastewater Service Agreement between City of Visalia and the Goshen CSD allows for a current contracted average daily discharge to the City's treatment plant of 335,000 GPD. The Wastewater Service Agreement does provide for the purchase of additional capacity which would be charged on a percentage increase basis.

As of November 2005, the CSD was contributing an average daily flow of approximately 315,000 GPD of raw sewage to the City's Wastewater Treatment Facility (WWTF). Assuming the CSD can accommodate up to 500,000 GPD based upon the limitations of the lift station, it can be concluded that the sewer system is operating at approximately 65% of its capacity.

TABLE 6-1
Existing Water & Wastewater Connections in Goshen

Description of Existing Infrastructure					
Drinking Water*			**Waste Water ****		
No. of Existing Connections	**Capacity**	**Available**	**No. of Existing Connections**	**Capacity**	**Available**
1,021	N/A [1]	N/A [1]	977	1,503	526

* Data current as of April 2014

** Data current as of March 2006

1. Cal Water determines there are no limitations to the connections in Goshen, as development progresses Cal Water will build infrastructure to meet the demand needed.
   The Visalia/Goshen system is one pressure zone, Cal Water has redundancy throughout the entire system and would be able to deliver the demand needed.
   Scott Baily, Cal Water, April 23, 2014

6.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 6-2 identifies the location of drainage inlets and sumps in Goshen. Figure 6-1 also displays this information graphically.

TABLE 6-2
Existing Storm Drainage Facilities in Goshen

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Avenue 304	Road 66	Sump
2	Avenue 304	east of Dollarhide Road	Sump
3	Avenue 304	west of Bradham Drive	Inlet
4	Avenue 305	west of Nutmeg Road	Sump
5	Avenue 305	Commercial Road	Inlet
6	Avenue 305	Camp Drive	Inlet
7	Avenue 305	Road 64	Sump
8	Avenue 306	Road 66	Inlet
9	Avenue 306	Road 68	Inlet
10	Avenue 306	Ivy Road	Inlet
11	Avenue 306	Camp Drive	Inlet
12	Avenue 308	Juniper Street	Inlet
13	Avenue 308	Effie Drive	Inlet
14	south of Avenue 308	Road 67 (at end)	Sump
15	south of Avenue 308	Dollarhide Road (at end)	Sump
16	south of Avenue 310	Road 72	Sump
17	Camp Drive	north of Road 69	Inlet
18	Camp Drive	south of Road 69	Inlet
19	Effie Drive	north of Road 68	Inlet
20	Kame Drive	Road 68	Inlet
21	Rasmussen Avenue	Road 72	Inlet
22	Woodbine Avenue	Road 72	Inlet

(Source: County of Tulare Public Works, 2014)

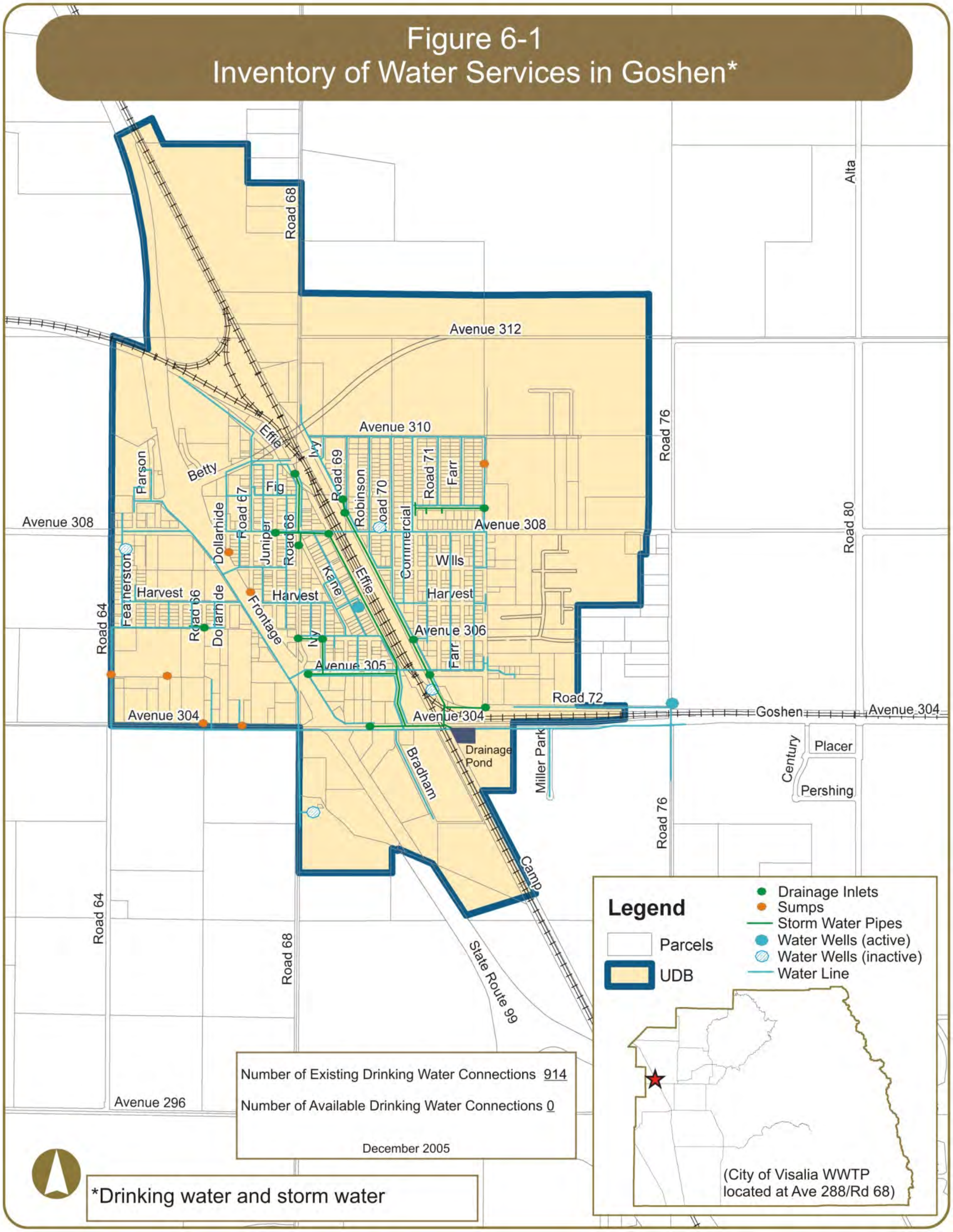
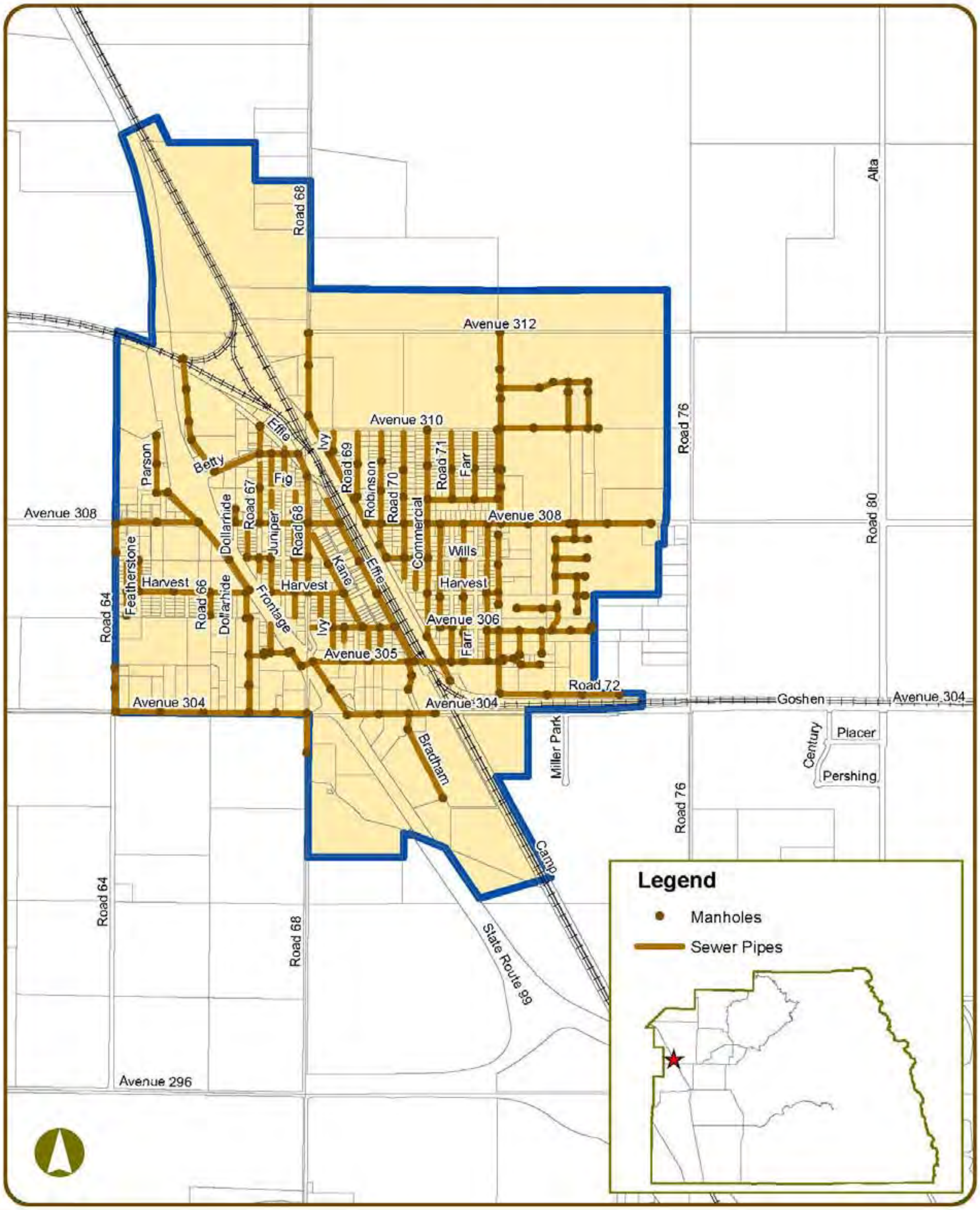


Figure 6-1
Inventory of Water Services in Goshen*
Avenue 312
Avenue 310
Avenue 308
Avenue 306
Avenue 305
Avenue 304
Avenue 296
Road 64
Road 66
Road 67
Road 68
Road 69
Road 70
Road 71
Road 72
Road 76
Road 80
Alta
Effie
Ivy
Betty
Fig
Parson
Dollarhide
Juniper
Robinson
Commercial
Farr
Wills
Harvest
Featherston
Frontage
Kane
Goshen
Placer
Century
Pershing
Miller Park
Bradham
Drainage Pond
Camp
State Route 99
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Wells (inactive)
Water Line
(City of Visalia WWTP located at Ave 288/Rd 68)
Number of Existing Drinking Water Connections 914
Number of Available Drinking Water Connections 0
December 2005
*Drinking water and storm water

Figure 6-2
Goshen Sewer Services Inventory



6.4 Roads

There are various roadways in Goshen that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 6-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 6-3 graphically displays this information on a map.

TABLE 6-3
Roads in Need of Major and Medium Repair in Goshen

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 304	Road 68 to SR 99	OLAY
2	Avenue 304	Commercial Road to Effie Drive	CHIP
3	Avenue 305	Camp Drive to Road 72	GRX
4	Avenue 308	SR 99 to Road 67	GRX
5	Avenue 308	Camp Drive to Road 72	CHIP
6	Avenue 310	Ivy Road to Road 70	CHIP
7	Bradham Drive	Avenue 304 to South Dead End	OLAY
8	Camp Drive	Elder Drive to Avenue 308	CHIP
9	Commercial Road	Avenue 304 to Road 68	ACST
10	Commercial Road	Avenue 308 to Avenue 310	CHIP
11	Effie Drive	Avenue 304 to Avenue 305	GRX
12	Effie Drive	Avenue 305 to Roy Drive	CHIP
13	Elder Drive	Road 67 to Effie Drive	CHIP
14	Farr Road	Avenue 305 to North End	CHIP
15	Farr Road	Avenue 310 to Woodbine Avenue	CHIP
16	Harvest Avenue	Road 66 to SR 99	OLAY
17	Harvest Avenue	Road 67 (End) to Road 68	CHIP
18	Harvest Avenue	Commercial Road to Road 72	CHIP
19	Ivy Road	Elder Avenue to Avenue 310	CHIP
20	Rasmussen Avenue	Road 72 to Goshen Eastern Limit	CHIP
21	Road 66	Harvest Avenue to South Dead End	CHIP
22	Road 67	Betty Drive to North End	ACST
23	Road 68	Commercial Road to Avenue 308	CHIP
24	Road 68	Avenue 308 to Betty Drive	OLAY
25	Road 68	Avenue 308 to Effie Drive	GRX
26	Road 70	Camp Drive to Avenue 308	CHIP
27	Road 71	Avenue 310 to Woodbine Avenue	CHIP
28	Road 72	Avenue 310 to Woodbine Avenue	CHIP
29	Robinson Road	Camp Drive to Avenue 308	CHIP
30	Robinson Road	Avenue 310 to South Dead End	CHIP
31	Roy Drive	Kame Drive to Effie Drive	CHIP
32	Woodbine Avenue	Commercial Road to Road 72	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
reconstruction
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix

(Source: County of Tulare Public Works, 2012)

6.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Goshen and are listed in Table 6-4 and displayed in Figure 6-3.

TABLE 6-4
Existing ADA Curb Ramps in Goshen

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Ashworth Avenue	Cottontail Street	NE Corner
2	Ashworth Avenue	Cottontail Street	NW Corner
3	Ashworth Avenue	Cottontail Street	SE Corner
4	Ashworth Avenue	Cottontail Street	SW Corner
5	Avenue 304	Frontage Road	NW Corner
6	Avenue 304	Frontage Road	NE Corner
7	Avenue 305	Ivy Road	NE Corner
8	Avenue 305	Kame Drive	NW Corner
9	Avenue 306	Effie Drive	SW Corner
10	Avenue 306	Camp Drive	SE Corner
11	Avenue 306	Farr Road	NE Corner
12	Avenue 306	Road 72	NE Corner
13	Avenue 306	Road 72	SE Corner
14	Avenue 306	Hawk Court	SW Corner
15	Avenue 306	Hawk Court	SE Corner
16	Avenue 306	Coyote Court	SW Corner
17	Avenue 306	Coyote Court	SE Corner
18	Avenue 306	Cottontail Street	NW Corner
19	Avenue 306	Cottontail Street	NE Corner
20	Avenue 308	Frontage Road	NW Corner
21	Avenue 308	Dollarhide Road	NW Corner
22	Avenue 308	Dollarhide Road	SW Corner
23	Avenue 308	Dollarhide Road	NE Corner
24	Avenue 308	Dollarhide Road	SE Corner
25	Avenue 308	Eagle Avenue	SW Corner

TABLE 6-4 (Continued)
Existing ADA Curb Ramps in Goshen

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
26	Avenue 308	Eagle Avenue	SE Corner
27	Avenue 308	Camp Drive	SE Corner
28	Avenue 310	Ivy Road	NE Corner
29	Avenue 310	Ivy Road	NW Corner
30	Avenue 310	Road 69	SW Corner
31	Avenue 310	Road 69	SE Corner
32	Avenue 310	Robinson Road	SE Corner
33	Avenue 310	Robinson Road	SW Corner
34	Avenue 310	Robinson Road	NW Corner
35	Avenue 310	Road 71	SE Corner
36	Avenue 310	Road 71	SW Corner
37	Avenue 310	Road 72	NE Corner
38	Avenue 310	Road 72	SE Corner
39	Avenue 310	Road 72	SW Corner
40	Avenue 310	Commercial Road	SE Corner
41	Avenue 310	Commercial Road	SW Corner
42	Avenue 310	Farr Road	SE Corner
43	Avenue 310	Farr Road	SW Corner
44	Avenue 310	Eagle Street	NE Corner
45	Avenue 310	Eagle Street	NW Corner
46	Avenue 310	Wolfe Street	NE Corner
47	Avenue 310	Wolfe Street	NW Corner
48	Avenue 312	Road 72	SE Corner
49	Betty Drive	SR 99 NB Off Ramp	SW Corner
50	Betty Drive	SR 99 NB Off Ramp	SE Corner
51	Betty Drive	SR 99 SB On Ramp	SW Corner
52	Betty Drive	SR 99 SB On Ramp	SE Corner
53	Betty Drive	Featherstone Road	SE Corner
54	Betty Drive	Road 67	NE Corner
55	Betty Drive	Road 67	NW Corner
56	Betty Drive	Parson Drive	NE Corner
57	Betty Drive	Parson Drive	NW Corner
58	Betty Drive	Road 67	SE Corner
59	Betty Drive	Road 67	SW Corner
60	Betty Drive	Robinson Road	NE Corner

TABLE 6-4 (Continued)
Existing ADA Curb Ramps in Goshen

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
61	Betty Drive	Robinson Road	NW Corner
62	Betty Drive	Robinson Road	SE Corner
63	Betty Drive	Robinson Road	SW Corner
64	Camp Drive	Robinson Road	NE Corner
65	Camp Drive	Robinson Road	SE Corner
66	Camp Drive	Road 69	NE Corner
67	Elder Avenue	Frontage Road	SE Corner
68	Elder Avenue	Frontage Road	SW Corner
69	Elder Avenue	Ivy Road	NE Corner
70	Elder Avenue	Juniper Street	SE Corner
71	Elder Avenue	Juniper Street	SW Corner
72	Elder Avenue	Effie Drive	SW Corner
73	Elm Avenue	Eagle Street	SE Corner
74	Elm Avenue	Eagle Street	SW Corner
75	Elm Avenue	Wolfe Street	SW Corner
76	Ensminger Avenue	Eagle Avenue	NW Corner
77	Ensminger Avenue	Eagle Avenue	NE Corner
78	Ensminger Avenue	Cottontail Street	SE Corner
79	Gadbury Court	Kit Fox Court	NE Corner
80	Gadbury Court	Kit Fox Court	SE Corner
81	Goshen Village II Entrance N	Road 72	NE Corner
82	Goshen Village II Entrance N	Road 72	SE Corner
83	Goshen Village II Entrance S	Road 72	NE Corner
84	Goshen Village II Entrance S	Road 72	SE Corner
85	Harvest Avenue	Frontage Road	NW Corner
86	Harvest Avenue	Road 68	NW Corner
87	Lickey Court	Cottontail Street	NW Corner
88	Lickey Court	Cottontail Street	SW Corner
89	Nutmeg Road	Road 67	SW Corner
90	Nutmeg Road	Road 67	SE Corner
91	Wellman Avenue	Cottontail Street	NE Corner
92	Wellman Avenue	Cottontail Street	SE Corner
93	Wellman Avenue	Kit Fox Court	SW Corner
94	Wellman Avenue	Kit Fox Court	SE Corner
95	Alley	Road 68	NW Corner

TABLE 6-4 (Continued)
Existing ADA Curb Ramps in Goshen

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
96	Alley	Road 68	SW Corner
97	Wills Avenue	Camp Drive	NE Corner
98	Woodbine Avenue	Road 71	NE Corner
99	Woodbine Avenue	Road 71	NW Corner
100	Woodbine Avenue	Farr Road	NE Corner
101	Woodbine Avenue	Farr Road	NW Corner
102	Woodbine Avenue	Road 72	NW Corner
103	Woodbine Avenue	Road 72	SW Corner

(Source: County of Tulare Public Works, August 2013)

6.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 6-5 identifies the location of existing sidewalks in Goshen. Figure 6-3 also displays this information graphically. The sidewalks represented in Table 6-5 and Figure 6-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 6-5
Existing Sidewalks in Goshen

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Ashworth Avenue	East end to west end	North side
2	Ashworth Avenue	East end to west end	South side
3	Avenue 305	Commercial Road to Kame Drive	South side
4	Avenue 305	Ivy Road to Kame Drive	North side
5	Avenue 306	Road 72 to east end	North side
6	Avenue 306	Road 72 to east end	South side
7	Avenue 308	West end to 175' east of Dollarhide Road	North side
8	Avenue 308	West end to 175' east of Dollarhide Road	South side
9	Avenue 308	200' west of Road 70 to Commercial Road	North side
10	Avenue 310	Camp Drive to 500' east of Road 72	South side
11	Avenue 310	Road 72 to east end	North side
12	Betty Drive	Featherstone Road to SR 99 SB Off Ramp	North side
13	Betty Drive	Nutmeg Road to Robinson Road	North side
14	Betty Drive	Nutmeg Road to Robinson Road	South side
15	Camp Drive	Avenue 310 to Road 69	East side
16	Camp Drive	Avenue 308 to Wills Avenue	East side
17	Camp Drive	Avenue 306 to Avenue 305	East side
18	Commercial Road	Avenue 305 to 450' south	East side
19	Commercial Road	Avenue 310 to Woodbine Avenue	East side
20	Commercial Road	Avenue 310 to Woodbine Avenue	West side
21	Commercial Road	Avenue 308 to 150' south	East side
22	Cottontail Street	Avenue 306 to Ensminger Avenue	East side
23	Cottontail Street	Avenue 306 to Ensminger Avenue	West side
24	Coyote Court	Avenue 306 to south end	East side
25	Coyote Court	Avenue 306 to south end	West side
26	Eagle Street	Avenue 310 to Elm Avenue	East side
27	Eagle Street	Avenue 310 to Elm Avenue	West side
28	Eagle Street	Avenue 308 to Ensminger Avenue	East side
29	Eagle Street	Avenue 308 to Ensminger Avenue	West side
30	Effie Drive	Avenue 304 to 250' north	East side
31	Elder Avenue	Ivy Road to Road 69	North side
32	Elder Drive	Betty Drive to Effie Drive	South side
33	Elm Avenue	West end to Wolfe Street	North side
34	Elm Avenue	West end to Wolfe Street	South side
35	Ensminger Avenue	Cottontail Street to east end	North side

TABLE 6-5 (Continued)
Existing Sidewalks in Goshen

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
36	Ensminger Avenue	Cottontail Street to east end	South side
37	Farr Road	Avenue 310 to Woodbine Avenue	East side
38	Farr Road	Avenue 310 to Woodbine Avenue	West side
39	Frontage Road	Harvest Avenue to 350' north	West side
40	Gadbury Avenue	Kit Fox Court to east end	North side
41	Gadbury Avenue	Kit Fox Court to east end	South side
42	Goshen Village Community II	Entire development	Entire development
43	Harvest Avenue	Road 66 to Frontage Road	North side
44	Hawk Court	Avenue 306 to south end	East side
45	Hawk Court	Avenue 306 to south end	West side
46	Ivy Road	Avenue 310 to Camp Drive	East side
47	Kit Fox Court	Wellman Avenue to south end	East side
48	Kit Fox Court	Wellman Avenue to south end	West side
49	Lickey Court	Cottontail Street to west end	North side
50	Lickey Court	Cottontail Street to west end	South side
51	Parson Drive	Betty Drive to north end	East side
52	Parson Drive	Betty Drive to north end	West side
53	Road 67	Betty Drive to north end	East side
54	Road 67	Betty Drive to north end	West side
55	Road 68	Harvest Avenue to 300' north	East side
56	Road 68	Wills Avenue to 150' south	West side
57	Road 69	Avenue 310 to Elder Avenue	West side
58	Road 69	Avenue 310 to Camp Drive	East side
59	Road 70	Avenue 310 to Avenue 308	East side
60	Road 70	Avenue 310 to Avenue 308	West side
61	Road 71	Avenue 310 to Woodbine Avenue	East side
62	Road 71	Avenue 310 to Woodbine Avenue	West side
63	Road 72	Avenue 312 to 350' north of Woodbine Avenue	East side
64	Road 72	Avenue 310 to Avenue 308	West side
65	Robinson Road	Road 68 to Avenue 310	South side
66	Robinson Road	250' south of Avenue 310 to south end	East side
67	Robinson Road	250' south of Avenue 310 to south end	West side
68	Wellman Avenue	Cottontail Street to east end	North side
69	Wellman Avenue	Cottontail Street to east end	South side
70	Wolfe Street	Avenue 310 to Elm Avenue	East side
71	Wolfe Street	Avenue 310 to Elm Avenue	West side
72	Woodbine Avenue	Commercial Road to Road 72	North side
73	Woodbine Avenue	75' east of Road 71 to Road 72	South side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

6.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 6-6 identifies the location of existing street lights that are maintained by Tulare County, in Goshen, as well as their specifications. Figure 6-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider.

TABLE 6-6
Existing Street Lights in Goshen

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 304	Camp Drive	NE Corner	827553E	9500	W	S	SCE
2	Avenue 304	Road 68	SW Corner	141080E	9500	W	E	SCE
3	Avenue 304	SR 99 SB Ramps	West of ramps (S side)	N/A	N/A	N/A	N	N/A
4	Avenue 304	SR 99 NB Off Ramp	West side	827558E	9500	W	E	SCE
5	Avenue 305	Camp Drive	NE Corner	870946E	9500	W	W	SCE
6	Avenue 306	Camp Drive	SE Corner	N/A	N/A	N/A	W	N/A
7	Avenue 306	Road 71	NW Corner	2281683E	5800	W	S	SCE
8	Avenue 306	Farr Road	NW Corner	2281682E	5800	W	S	SCE
9	Avenue 306	Road 68	North of Avenue 306 (W side)	1100329E	5800	W	E	SCE
10	Avenue 306	Kame Drive	NW Corner	148595E	5800	W	S	SCE
11	Avenue 308	Road 64	NW Corner	977121E	5800	W	S	SCE
12	Avenue 308	Parson Drive	East of Parson (N side)	977463E	9500	W	S	SCE
13	Avenue 308	Road 67	NW Corner	732037E	5800	W	S	SCE
14	Avenue 308	Juniper St	NW Corner	286076E	5800	W	E	SCE
15	Avenue 308	Road 68	NW Corner	388598E	5800	W	E	SCE
16	Avenue 308	Frontage Road	SW Corner	388598E	5800	W	E	SCE
17	Avenue 308	Camp Drive	NE Corner	1338049E	9500	W	S	SCE
18	Avenue 308	Road 70	NW Corner	1359851E	5800	W	S	SCE
19	Avenue 308	Road 76	SW Corner	722523E	5800	W	E	SCE
20	Avenue 310	Camp Drive	NE Corner	N/A	N/A	N/A	S	N/A
21	Avenue 310	Ivy Road	NE Corner	N/A	N/A	N/A	S	N/A
22	Avenue 310	Road 69	NW Corner	N/A	N/A	N/A	S	N/A
23	Avenue 310	Road 69	NE Corner	N/A	N/A	N/A	S	N/A
24	Avenue 312	Road 68	SW Corner	2041846E	9500	W	E	SCE
25	Betty Drive	Frontage Road	SW Corner	4167077E	5800	M	N	SCE
26	Betty Drive	Parson Drive	NW Corner	4167079E	5800	M	S	SCE
27	Betty Drive	Parson Drive	50' north of Betty (E side)	4167080E	5800	M	W	SCE
28	Betty Drive	Parson Drive	100' north of Betty (E side)	4167081E	5800	M	W	SCE
29	Betty Drive	Parson Drive	150' north of Betty (E side)	4167082E	5800	M	W	SCE
30	Betty Drive	Featherstone Dr	SE Corner	4368514	5800	C	N	SCE
31	Betty Drive	Road 67	NE Corner	N/A	N/A	N/A	W	N/A
32	Betty Drive	Road 67	NW Corner	N/A	N/A	N/A	S	N/A
33	Betty Drive	Road 67	SE Corner	N/A	N/A	N/A	N	N/A
34	Betty Drive	Road 67	SW Corner	N/A	N/A	N/A	E	N/A
35	Betty Drive	Robinson Rd	NE Corner	N/A	N/A	N/A	W	N/A

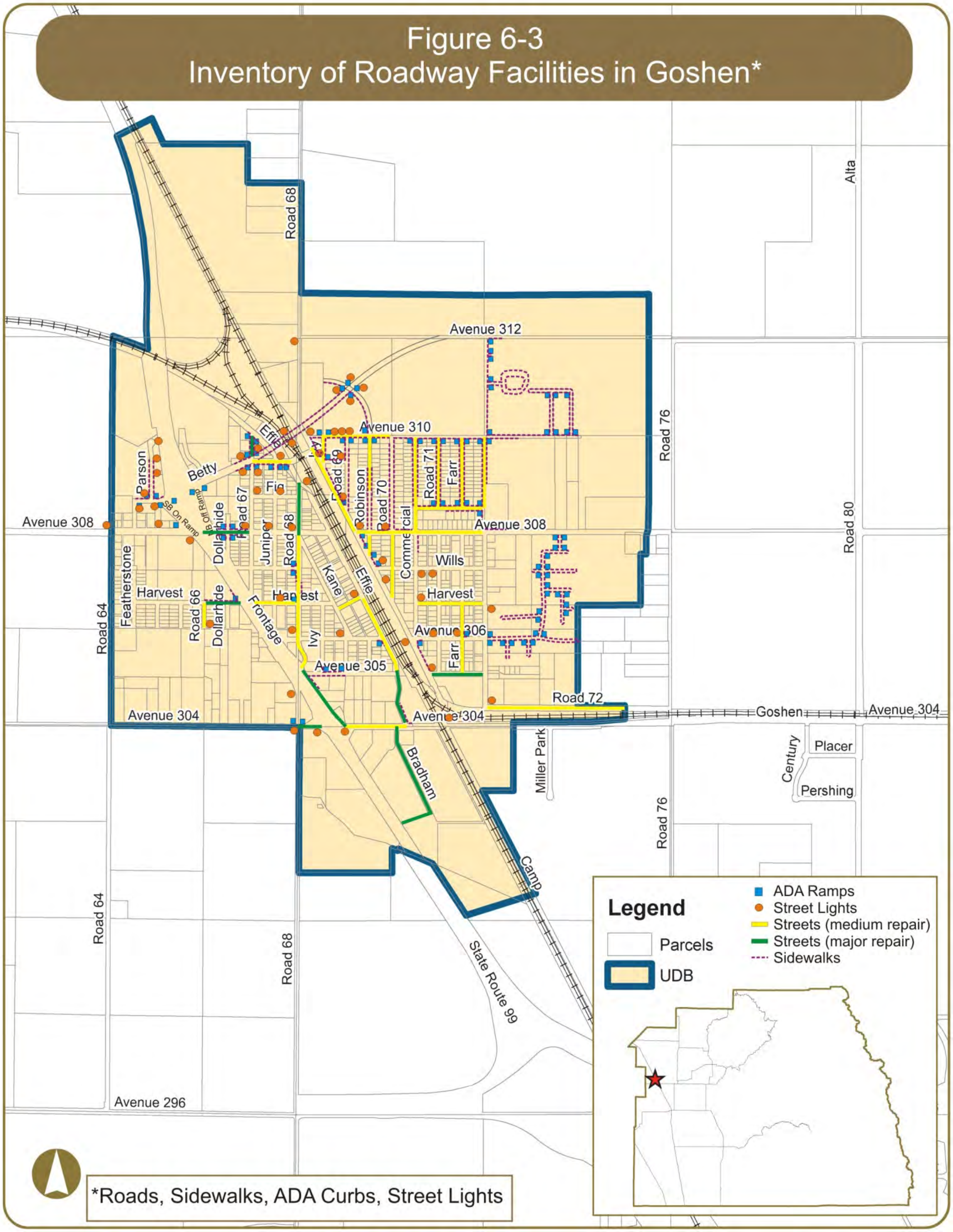
TABLE 6-6 (Continued)
Existing Street Lights in Goshen

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
36	Betty Drive	Robinson Rd	NW Corner	N/A	N/A	N/A	S	N/A
37	Betty Drive	Robinson Rd	SE Corner	N/A	N/A	N/A	N	N/A
38	Betty Drive	Robinson Rd	SW Corner	N/A	N/A	N/A	E	N/A
39	Betty Drive	RR	On overpass (N side)	N/A	N/A	N/A	S	N/A
40	Betty Drive	RR	On overpass (S side)	N/A	N/A	N/A	N	N/A
41	Camp Drive	Road 69	NE Corner	1504129E	9500	W	W	SCE
42	Camp Drive	Road 70	NW Corner	1338042E	9500	W	W	SCE
43	Effie Drive	Road 68	East side	85827	9500	W	W	SCE
44	Elder Drive	Road 67	SE Corner	1374818E	9500	W	N	SCE
45	Elder Drive	Camp Drive	North of Elder (E side)	1391519E	9500	W	W	SCE
46	Elder Drive	Road 69	NW Corner	N/A	5800	W	E	SCE
47	Elder Drive	Effie Drive	NW Corner	121523E	9500	W	S	SCE
48	Fig Avenue	Road 67	NE Corner	1343195E	5800	W	W	SCE
49	Fig Avenue	Juniper St	NE Corner	1338045E	5800	W	W	SCE
50	Frontage Road	Road 68	On curve (W side)	1100317E	9500	W	N/E	SCE
51	Harvest Avenue	Road 72	40' south of Road 72 (E side)	0064879E	5800	W	W	SCE
52	Harvest Avenue	Juniper St	NE Corner	N/A	5800	W	W	SCE
53	Harvest Avenue	Commercial Rd	NE Corner	N/A	5800	W	W	SCE
54	Harvest Avenue	Road 66	South dead end (E side)	1620425E	5800	W	W	SCE
55	Rasmussen Avenue	Road 72	NE Corner	3732T	5800	W	S/W	SCE
56	Roy Drive	Effie Drive	NW Corner	1338046	9500	W	E	SCE
57	Wills Ave	Road 71	SW Corner	2031955E	5800	W	E	SCE
58	Wills Ave	Commercial Rd	SE Corner	4098876E	5800	W	N	SCE
59	Wills Ave	Camp Drive	NE Corner	N/A	9500	W	SW	SCE

(Source: Tulare County Public Works, March 2013)

Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

Figure 6-3
Inventory of Roadway Facilities in Goshen*



*Roads, Sidewalks, ADA Curbs, Street Lights

7. COMMUNITY OF IVANHOE

7.1 General Information

Ivanhoe is a census-designated place located in the northwest portion of Tulare County, northeast of Visalia. It is generally bounded by Avenue 320 in the south, Avenue 336 in the north, Road 152 in the west, and Road 164 in the east and encompasses 2 square miles of land. Ivanhoe is located along State Route (SR) 216 approximately 7 ½ miles northeast of downtown Visalia. The community is rectangular in shape and is bisected in a northwest-southeasterly direction by the San Joaquin Valley railroad tracks. North-south railroad crossings exist along Road 156, Road 159, and Road 160 (Depot Drive). East-west railroad crossing exist along Avenue 332, Avenue 330, and SR 216. Ivanhoe is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses and vacant land. Cities and communities surrounding Ivanhoe include Visalia to the southwest, Woodlake to the northeast, and the communities of Yettem and Seville to the north.

Based on the 2010 Census, the population in Ivanhoe was 4,495. Similar to other communities in Tulare County, the population of Ivanhoe is racially diverse with 45% White, less than 1% African American, 2% Native American, 1% Asian/Pacific Islander, 49% from other races, and 3% from 2 or more races. 84% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 1,217 housing units located within Ivanhoe, of which 61% are owner-occupied and 39% are renter-occupied.

7.2 Domestic Water & Wastewater

Domestic water and sanitary sewer service in Ivanhoe is provided by the Ivanhoe Public Utilities District (PUD), which was formed in October 1951. Table 7-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012 and Municipal Service Review, March 2006). Figure 7-1 graphically displays the approximate location of water wells and water lines. Figure 7-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), Ivanhoe's water supply is derived from six existing deep underground wells that provide an ample, excellent water supply requiring no chlorination or treatment. The six wells have a total maximum production efficiency of approximately 3,600 gallons per minute (GPM). In 1990, the PUD lost one of its seven wells due to Dibromochloropropane (DBCP) contamination, which resulted in an $800,000 settlement being awarded to the PUD.

Well production data indicates that three of the six wells had comparably lower productions indicating that they are used as needed to meet fire flow and/or peak flow demands. The PUD's wells produced 287.611 million gallons in 2003, with a maximum monthly production of 38.181 million gallons occurring in June, corresponding to a maximum day demand of 1.28 million gallons per day (MGD).

Assuming 1,200 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Ivanhoe PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,800 GPM (1,500 GPM fire flow, and 1,600 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The PUD’s water system is capable of delivering a source flow of 3,600 GPM, and includes pneumatic pressure tanks for storage, indicating the system currently meets the requirements of the Tulare County Improvement Standards. Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is estimated that the PUD’s current water system could support approximately 1,200 additional EDUs.

In 2004, the PUD received a $2 million State Revolving Fund (SRF) loan, a portion of which was used to replace old water lines with new water lines and relocate the lines from alleys to streets. Approximately $1.4 million in water line replacements has been completed. The remaining $600,000 was to be used to bring one new well online. Since the PUD’s water system has sufficient capacity, the Board voted not to drill a new well at this time. It is anticipated that the $600,000 that was to be used for a new well will be returned to the State.

The PUD operates a Wastewater Treatment Facility (WWTF) that provides secondary treatment of wastewater and is located southwest of the community. The WWTF is operated under the provisions of Order No. 98-090 issued by the California Regional Water Quality Control Board (RWQCB), which prescribes that the monthly average daily discharge shall not exceed 0.56 MGD. Treated effluent from the WWTF is recycled on 61.2 acres of pasture land south of the plant, which is leased by the PUD for grazing of non-milking cattle.

The average dry weather flow at the WWTF is approximately 0.36 MGD resulting in an excess capacity of approximately 200,000 GPD. Based upon the available capacity at the WWTF (200,000 GPD), it is estimated that approximately 650 additional connections (EDUs) to the system could be supported.

Based upon a review of monthly monitoring reports submitted to the RWQCB, the PUD’s wastewater inflows are typically higher during summer months than during winter months indicating that there is no significant inflow and infiltration into the collection system during the winter months. This is an indication that the collection system is in adequate operating condition. The PUD will need to increase the capacity of its WWTF to support projected growth through year 2025. It is recommended that the PUD research State and Federal grants and/or loans that may be available to help finance improvements to the PUD’s WWTF. Clean Water Grants, State Revolving Fund Loans, and Small Community Grants are examples.

TABLE 7-1
Existing Water & Wastewater Connections in Ivanhoe

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
1,200	2,400	1,200	1,200	1,850	650

* Data current as of May 2012

** Data current as of March 2006

7.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 7-2 identifies the location of drainage inlets and sumps in Ivanhoe. Figure 7-1 also displays this information graphically.

TABLE 7-2
Existing Storm Drainage Facilities in Ivanhoe

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Aspen Avenue	Road 156	Inlet
2	Aspen Avenue	Road 158	Inlet
3	Avenue 327	Road 159	Inlet
4	Avenue 330	East of Hawthorne Road	Inlet
5	Avenue 332	East of Road 156	Inlet
6	Avenue 332	East of Road 159	Inlet
7	Avenue 332	West of Road 159	Inlet
8	Azalea Avenue	East of Hawthorne Road	Inlet
9	Azalea Avenue	West of Manzanita Road	Inlet
10	Azalea Avenue	West of Road 159	Inlet
11	Beechwood Avenue	Road 156	Inlet
12	Beechwood Avenue	East of Road 158	Inlet
13	Between Avenue 328 and Avenue 330	Road 156	Inlet
14	Citrus Avenue	East of Manzanita Road	Inlet
15	Depot Drive	West of Manzanita Road	Inlet

TABLE 7-2
Existing Storm Drainage Facilities in Ivanhoe

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
16	Depot Drive	East of Road 159	Inlet
17	Depot Drive	East of Hawthorne Road	Inlet
18	Depot Drive	Road 160	Inlet
19	Edmiston Avenue	East of Manzanita Road	Inlet
20	Fuchsia Avenue	Road 157	Inlet
21	Heather Avenue	East of Road 159	Inlet
22	Heather Avenue	West of Road 159	Inlet
23	Jasmine Avenue	Road 156	Inlet
24	Jasmine Avenue	West of Road 158	Inlet
25	Lantana Avenue	East of Hawthorne Road	Inlet
26	North of Aspen Avenue	Road 156	Inlet
27	North of Avenue 328	Road 158	Inlet
28	North of Avenue 328	Manzanita Road	Inlet
29	North of Avenue 328	Road 159	Inlet
30	North of Avenue 330	Road 156	Inlet
31	North of Avenue 332	Road 156	Inlet
32	North of Heather Avenue	Road 158	Inlet
33	Rosaline Road	Road 160	Inlet
34	South of Heather Avenue	Road 158	Inlet

(Source: County of Tulare Public Works, 2014)

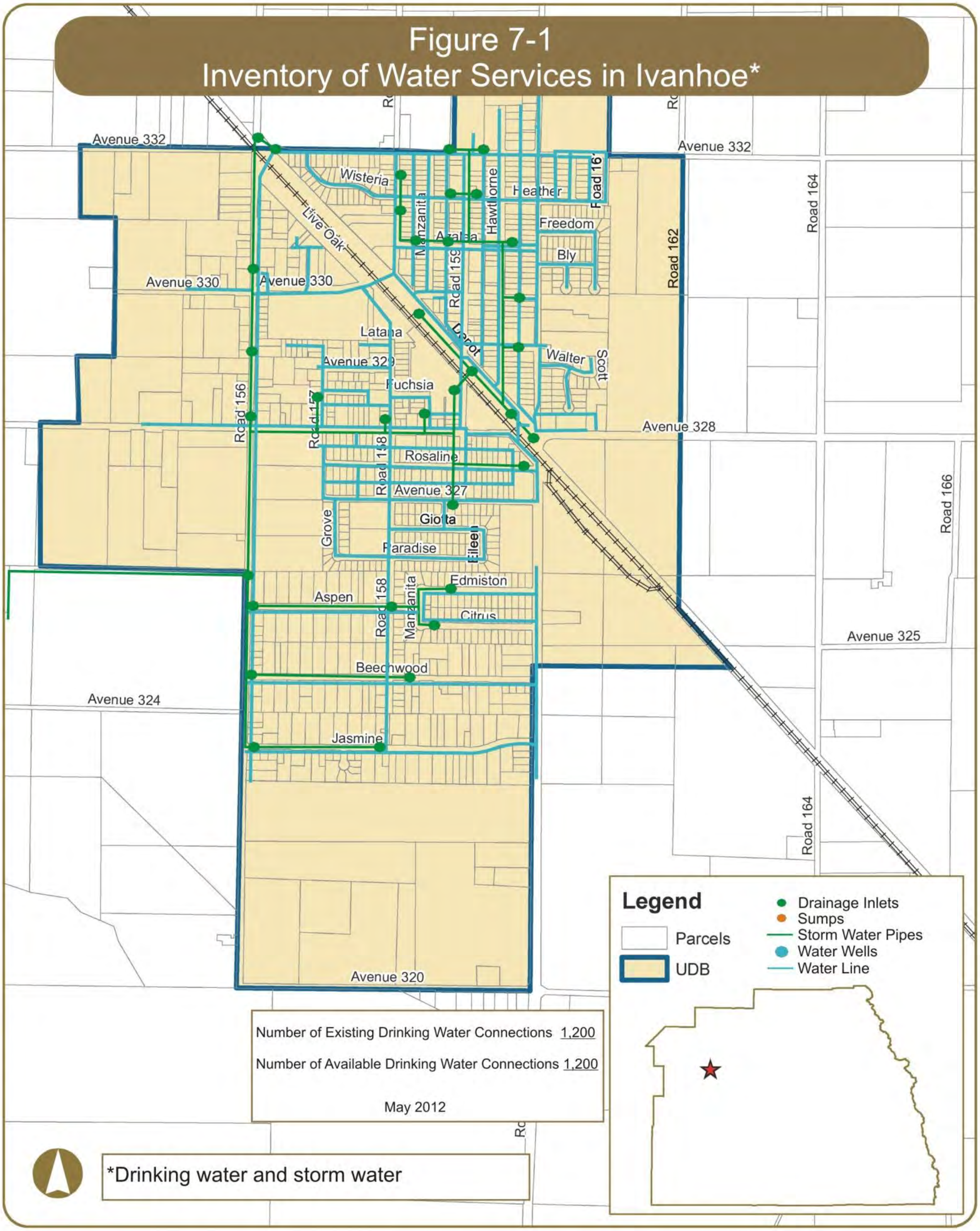


Figure 7-1
Inventory of Water Services in Ivanhoe*
Avenue 332
Avenue 330
Avenue 329
Avenue 328
Avenue 327
Avenue 325
Avenue 324
Avenue 320
Road 156
Road 158
Road 159
Road 162
Road 164
Road 166
Wisteria
Heather
Freedom
Azalea
Bly
Manzanita
Hawthorne
Live Oak
Latana
Fuchsia
Walter
Scott
Depot
Rosaline
Giotta
Grove
Paradise
Eileen
Edmiston
Aspen
Citrus
Beechwood
Jasmine
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells
Water Line
Number of Existing Drinking Water Connections 1,200
Number of Available Drinking Water Connections 1,200
May 2012
*Drinking water and storm water

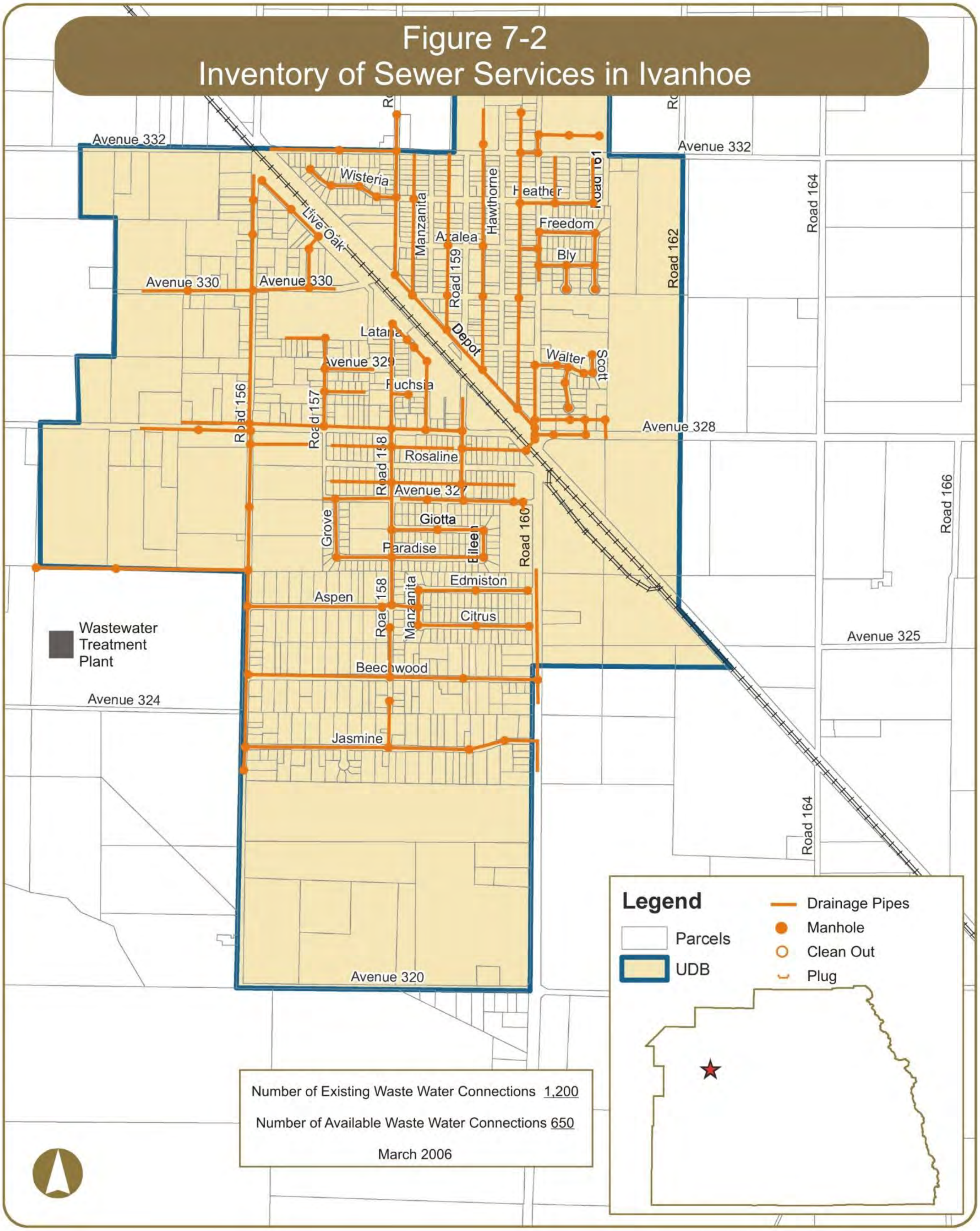


Figure 7-2
Inventory of Sewer Services in Ivanhoe
Avenue 332
Wisteria
Live Oak
Manzanita
Azalea
Road 159
Hawthorne
Heather
Freedom
Bly
Road 161
Road 162
Road 164
Avenue 330
Latana
Avenue 329
Fuchsia
Depot
Walter
Scott
Avenue 328
Road 156
Road 157
Road 158
Rosaline
Avenue 327
Giotta
Grove
Paradise
Eileen
Road 160
Road 166
Edmiston
Aspen
Citrus
Avenue 325
Wastewater Treatment Plant
Beechwood
Avenue 324
Jasmine
Avenue 320
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Number of Existing Waste Water Connections 1,200
Number of Available Waste Water Connections 650
March 2006

7.4 Roads

There are various roadways in Ivanhoe that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 7-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 7-3 graphically displays this information on a map.

TABLE 7-3
Roads in Need of Major and Medium Repair in Ivanhoe

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Aspen Avenue	Road 158 to Manzanita Road	OLAY
2	Avenue 327	Manzanita Road to Road 159	CHIP
3	Avenue 328	Road 152 to Manzanita Road	CHIP
4	Avenue 329	Road 157 to Road 158	CHIP
5	Avenue 330	Road 154 to Road 156	CHIP
6	Avenue 332	Road 152 to Road 156	GRX
7	Avenue 332	Road 156 to Road 162	CHIP
8	Azalea Avenue	Road 158 to Road 160	CHIP
9	Beechwood Avenue	Road 156 to Road 160	CHIP
10	Citrus Avenue	Manzanita Road to Road 160	OLAY

TABLE 7-3 (Continued)
Roads in Need of Major and Medium Repair in Ivanhoe

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Depot Drive	Avenue 328 to Road 158	CHIP
12	Edmiston Avenue	Manzanita Road to Road 160	OLAY
13	Eileen Road	Paradise Avenue to Giotta Avenue	CHIP
14	Fuchsia Avenue	Road 157 to east end	CHIP
15	Fuchsia Avenue	Road 158 to Manzanita Road	CHIP
16	Giotta Avenue	Road 158 to Eileen Road	CHIP
17	Grove Street	Paradise Avenue to Avenue 327	CHIP
18	Hawthorne Road	Depot Drive to Avenue 332	CHIP
19	Heather Avenue	Road 158 to Road 160	GRX
20	Heather Avenue	Road 160 to Road 161	CHIP
21	Ivanhoe Drive	Avenue 328 to Road 160	CHIP
22	Live Oak Drive	Avenue 330 to Road 156	CHIP
23	Manzanita Road	Citrus Avenue to Edmiston Avenue	OLAY
24	Manzanita Road	Avenue 328 to Fuchsia Avenue	CHIP
25	Paradise Avenue	Grove Street to Eileen Road	CHIP
26	Road 156	Avenue 320 to Aspen Avenue	CHIP
27	Road 156	Aspen Avenue to Avenue 328	GRX
28	Road 156	Avenue 328 to Avenue 332	OLAY
29	Road 157	Avenue 327 to Avenue 328	OLAY
30	Road 158	Beechwood Avenue to Avenue 327	CHIP
31	Road 158	Avenue 328 to Latana Avenue	CHIP
32	Road 158	Azalea Avenue to Heather Avenue	CHIP
33	Road 159	Avenue 327 to Rosaline Road	CHIP
34	Road 159	Avenue 328 to Azalea Avenue	CHIP
35	Road 160	Avenue 328 to Avenue 332	CHIP
36	Rosaline Avenue	Road 157 to Road 158	OLAY
37	Rosaline Avenue	Road 159 to Road 160	OLAY
38	Scott Lane	Walter Avenue to north end	CHIP
39	Scott Road	Freedom Avenue to south end	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

7.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Ivanhoe and are listed in Table 7-4 and displayed in Figure 7-3.

TABLE 7-4
Existing ADA Curb Ramps in Ivanhoe

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 327	Grove Street	SE Corner
2	Avenue 327	Grove Street	SW Corner
3	Avenue 327	Road 158	SE Corner
4	Avenue 327	Road 158	SW Corner
5	Avenue 327	Carmaline Road	SE Corner
6	Avenue 327	Carmaline Road	SW Corner
7	Avenue 328	Road 158	SW Corner
8	Avenue 328	Manzanita Road	NE Corner
9	Avenue 328	Manzanita Road	NW Corner
10	Avenue 328	Road 159	NE Corner
11	Avenue 328	Road 160	NE Corner
12	Avenue 330	Road 159	NE Corner
13	Avenue 330	Road 159	NW Corner
14	Avenue 330	Road 159	SE Corner
15	Avenue 330	Road 159	SW Corner
16	Avenue 332	Road 160	NE Corner
17	Avenue 332	Road 160	NW Corner
18	Avenue 332	Road 160	SE Corner
19	Avenue 332	Road 160	SW Corner
20	Avenue 332	Buckeye Road	NE Corner
21	Avenue 332	Buckeye Road	NW Corner
22	Avenue 332	Buckeye Road	SE Corner
23	Avenue 332	Buckeye Road	SW Corner
24	Azalea Avenue	Road 158	SE Corner
25	Azalea Avenue	Manzanita Road	SE Corner

TABLE 7-4 (Continued)
Existing ADA Curb Ramps in Ivanhoe

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
26	Azalea Avenue	Road 159	SE Corner
27	Azalea Avenue	Road 159	SW Corner
28	Bly Avenue	Waverly Court	SW Corner
29	Bly Avenue	Scott Road	NW Corner
30	Bly Avenue	Scott Road	SW Corner
31	Freedom Avenue	Road 160	NE Corner
32	Freedom Avenue	Road 160	SE Corner
33	Freedom Avenue	Scott Road	SW Corner
34	Giotta Avenue	Road 158	NE Corner
35	Giotta Avenue	Road 158	SE Corner
36	Giotta Avenue	Carmaline Road	NE Corner
37	Giotta Avenue	Carmaline Road	NW Corner
38	Giotta Avenue	Eileen Road	SW Corner
39	Heather Avenue	Hawthorne Road	NE Corner
40	Heather Avenue	Road 160	NE Corner
41	Heather Avenue	Road 160	NW Corner
42	Heather Avenue	Road 160	SE Corner
43	Lantana Avenue	Road 159	NE Corner
44	Lantana Avenue	Road 159	NW Corner
45	Paradise Avenue	Grove Street	NE Corner
46	Paradise Avenue	Road 158	NE Corner
47	Paradise Avenue	Road 158	NW Corner
48	Paradise Avenue	Road 158	SE Corner
49	Paradise Avenue	Road 158	SW Corner
50	Paradise Avenue	Eileen Road	NW Corner
51	Walter Avenue	Road 160	NE Corner
52	Walter Avenue	Road 160	SE Corner
53	Walter Avenue	Waverly Court	SE Corner
54	Walter Avenue	Waverly Court	SW Corner

(Source: County of Tulare Public Works, August 2013)

7.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 7-5 identifies the location of existing sidewalks in Ivanhoe. Figure 7-3 also displays this information graphically. The sidewalks represented in Table 7-5 and Figure 7-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 7-5
Existing Sidewalks in Ivanhoe

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Aspen Avenue	Road 158 to Manzanita Road	North side
2	Avenue 327	Road 159 to Road 160	North side
3	Avenue 327	Road 157 to Road 160	South side
4	Avenue 328	Road 159 to Live Oak Drive	North side
5	Avenue 332	Road 160 to Buckeye Road	North side
6	Avenue 332	Road 160 to Buckeye Road	South side
7	Azalea Avenue	175' west of Road 159 to 150' east of Road 159	North side
8	Bly Avenue	Road 160 to Scott Road	North side
9	Bly Avenue	Road 160 to Scott Road	South side
10	Buckeye Road	Avenue 332 to 225' south	East side
11	Carmaline Road	Avenue 327 to Giotta Avenue	East side
12	Carmaline Road	Avenue 327 to Giotta Avenue	West side
13	Depot Drive	Hawthorne Road to 225' east	North side
14	Eileen Road	Giotta Avenue to Paradise Avenue	East side
15	Eileen Road	Giotta Avenue to Paradise Avenue	West side
16	Freedom Avenue	Road 160 to Scott Road	North side
17	Freedom Avenue	Road 160 to Scott Road	South side
18	Giotta Avenue	Road 158 to Eileen Road	North side
19	Giotta Avenue	Road 158 to Eileen Road	South side
20	Grove Street	Avenue 327 to Paradise Avenue	East side
21	Grove Street	Avenue 327 to Paradise Avenue	West side
22	Heather Avenue	Hawthorne Road to Buckeye Road	North side
23	Heather Avenue	Road 160 to Road 161	South side
24	Manzanita Road	Fuchsia Avenue to Avenue 328	West side
25	Paradise Avenue	Grove Street to Eileen Road	North side

TABLE 7-5 (Continued)
Existing Sidewalks in Ivanhoe

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
26	Paradise Avenue	Grove Street to Eileen Road	South side
27	Road 158	125' south of Paradise Avenue to Giotta Avenue	West side
28	Road 158	Aspen Avenue to Avenue 327	East side
29	Road 159	Avenue 328 to RR tracks	East side
30	Road 159	Depot Drive to Heather Avenue	West side
31	Road 159	Depot Drive to Azalea Avenue	East side
32	Road 160	Avenue 327 to Edmiston Avenue	West side
33	Road 160	Avenue 332 to Heather Avenue	West side
34	Road 160	Heather Avenue to 275' south of Bly Avenue	East side
35	Rosaline Road	Road 159 to Road 160	North side
36	Rosaline Road	200' west of Road 159 to 250' west of Road 160	South side
37	Scott Road	Walter Avenue to north end	East side
38	Scott Road	Walter Avenue to north end	West side
39	Scott Road	Freedom Avenue to south end	East side
40	Scott Road	Freedom Avenue to south end	West side
41	Walter Avenue	Road 160 to Scott Road	North side
42	Walter Avenue	Road 160 to Scott Road	South side
43	Waverly Court	Walter Avenue to south end	East side
44	Waverly Court	Walter Avenue to south end	West side
45	Waverly Court	Bly Avenue to south end	East side
46	Waverly Court	Bly Avenue to south end	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

7.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 7-6 identifies the location of existing street lights that are maintained by Tulare County, in Ivanhoe, as well as their specifications. Figure 7-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 7-6
Existing Street Lights in Ivanhoe

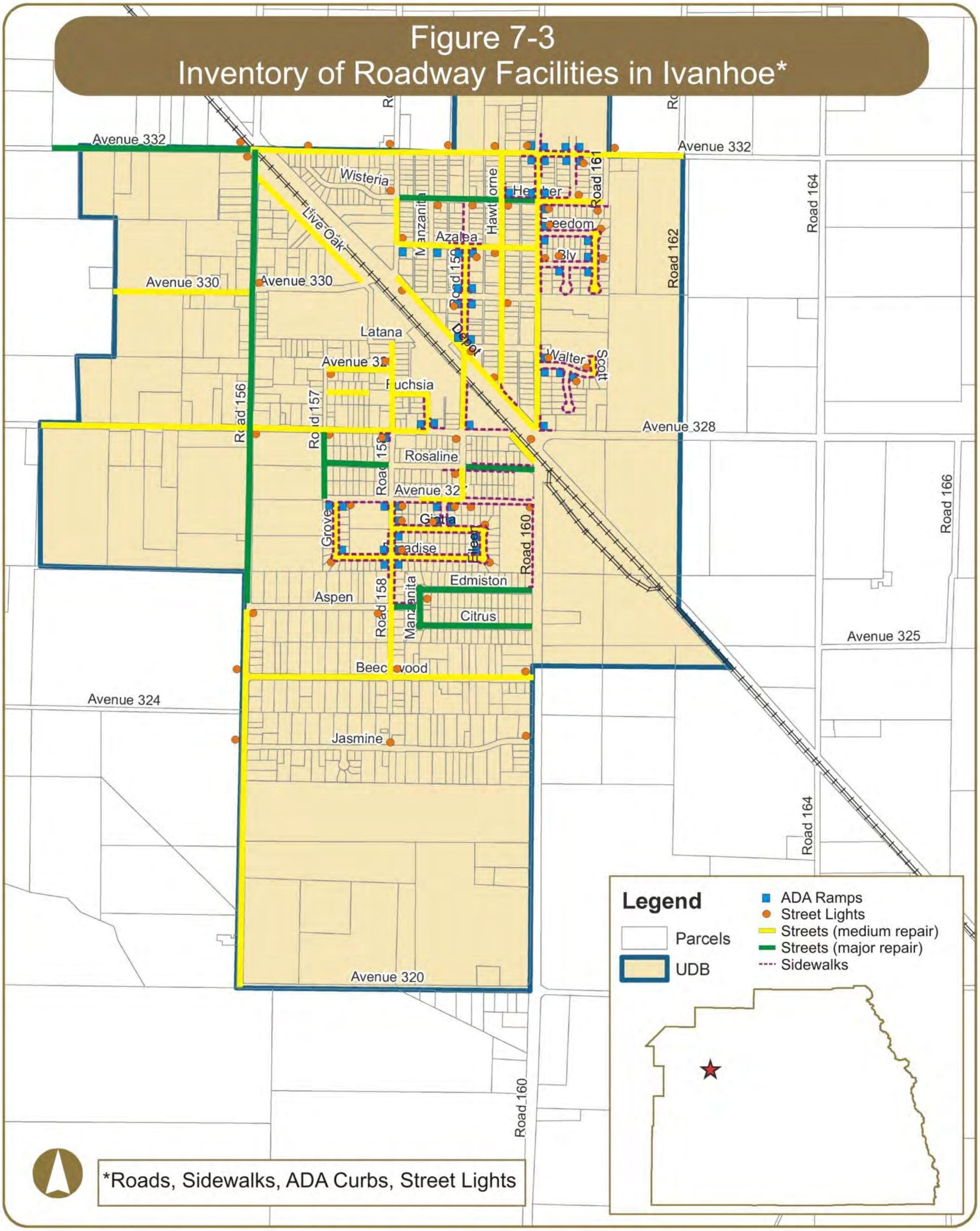
Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Aspen Avenue	Road 156	SE Corner	4224613E	5800	W	W	SCE
2	Aspen Avenue	Road 158	SW Corner	2109772E	5800	W	E	SCE
3	Aspen Avenue	Manzanita Road	NE Corner	N/A	5800	W	W	SCE
4	Avenue 327	Road 160	SW Corner	1413755E	5800	W	E	SCE
5	Avenue 327	Grove Street	SE Corner	4226603E	5800	C	N	SCE
6	Avenue 327	Road 158	SE Corner	4226471E	5800	C	N	SCE
7	Avenue 327	Carmaline Road	SE Corner	4226472E	5800	C	N	SCE
8	Avenue 327	Road 159	SE Corner	4226473E	5800	C	N	SCE
9	Avenue 328	Road 156	SE Corner	1011970E	9500	W	N	SCE
10	Avenue 328	Road 157	SE Corner	2123342E	5800	W	N	SCE
11	Avenue 328	Road 158	SW Corner	2366349E	5800	W	N	SCE
12	Avenue 328	Road 159	SW Corner	1011983E	5800	W	N	SCE
13	Avenue 328	Road 160	SW Corner	1011987E	16000	W	E	SCE
14	Avenue 329	Road 158	NW Corner	12256T	5800	W	E	SCE
15	Avenue 329	Road 157	SE Corner	4520353E	5800	W	N	SCE
16	Avenue 330	Road 156	NE Corner	1432817E	9500	W	W	SCE
17	Avenue 330	Depot Drive	NW Corner	1382878E	5800	W	E	SCE
18	Avenue 330	Road 159	SW Corner	571392E	5800	W	E	SCE
19	Avenue 330	Hawthorne Road	SE Corner	4013376E	5800	W	N	SCE
20	Avenue 332	Wisteria Drive	NW Corner	4193133E	5800	W	S	SCE
21	Avenue 332	Road 158	NW Corner	590806E	5800	W	S	SCE
22	Avenue 332	Hawthorne Road	NW Corner	1304742E	5800	W	S	SCE
23	Avenue 332	Road 160	NW Corner	1842838E	5800	W	S	SCE
24	Avenue 332	Road 161	NE Corner	723235E	5800	W	S	SCE
25	Avenue 332	Road 156	NW Corner	2000604E	5800	W	E	SCE
26	Avenue 332	Road 156	SW Corner	2000605E	5800	W	E	SCE
27	Avenue 332	160' west of Road 159	North Side	209384E	5800	W	S	SCE
28	Avenue 332	Buckeye Road	SE Corner	4354625E	5800	W	NW	SCE
29	Azalea Avenue	Hawthorne Road	SW Corner	N/A	5800	W	E	SCE
30	Azalea Avenue	Road 159	SE Corner	N/A	5800	W	W	SCE
31	Beechwood Avenue	Road 156	NW Corner	1722374E	5800	W	S	SCE
32	Beechwood Avenue	Road 158	NE Corner	1382870E	5800	W	W	SCE
33	Beechwood Avenue	Road 160	NW Corner	N/A	5800	W	E	SCE
34	Bly Avenue	Road 160	NE Corner	4274837E	5800	C	S	SCE
35	Bly Avenue	Waverly Court	NW Corner	4274824E	5800	C	S	SCE
36	Bly Avenue	Scott Road	NE Corner	4274823E	5800	C	W	SCE
37	Depot Drive	Hawthorne Road	NW Corner	2001151E	5800	W	W	SCE
38	Freedom Avenue	Road 160	NE Corner	4263630E	5800	C	S	SCE
39	Freedom Avenue	Scott Road	NE Corner	4263631E	5800	C	S	SCE
40	Giotta Avenue	Road 158	NE Corner	4226476E	5800	C	W	SCE
41	Giotta Avenue	Carmaline Road	NW Corner	4226475E	5800	C	S	SCE
42	Giotta Avenue	Eileen Road	NE Corner	4226474E	5800	C	SW	SCE
43	Heather Avenue	Road 158	NW Corner	3452T	5800	W	E	SCE
44	Heather Avenue	Manzanita Road	SE Corner	N/A	5800	W	W	SCE
45	Heather Avenue	Road 159	SE Corner	449638E	5800	W	W	SCE

TABLE 7-6 (Continued)
Existing Street Lights in Ivanhoe

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
46	Heather Avenue	Hawthorne Road	SE Corner	N/A	5800	W	N	SCE
47	Heather Avenue	Road 160	SE Corner	4263629E	5800	C	N	SCE
48	Heather Avenue	Buckeye Road	North Side	4263633E	5800	C	S	SCE
49	Heather Avenue	Road 161	SW Corner	4263632E	5800	C	N	SCE
50	Jasmine Avenue	Road 156	NW Corner	4430776	5800	W	E	SCE
51	Jasmine Avenue	Road 160	NW Corner	1391547E	5800	W	E	SCE
52	Jasmine Avenue	Between Road 156 and Road 160	North Side	N/A	5800	W	S	SCE
53	Lantana Avenue	Road 159	SE Corner	959844E	5800	W	W	SCE
54	Paradise Avenue	Grove Street	SW Corner	4226602E	5800	C	N	SCE
55	Paradise Avenue	Road 158	NE Corner	4262602E	5800	W	W	SCE
56	Paradise Avenue	Eileen Road	SE Corner	4262601E	5800	C	W	SCE
57	Rosaline Road	Road 159	SW Corner	660718E	5800	W	E	SCE
58	Walter Avenue	Road 160	NE Corner	4226767E	5800	C	W	SCE
59	Walter Avenue	Waverly Court	SE Corner	4226766E	5800	C	W	SCE
60	Walter Avenue	Scott Lane	NW Corner	4226768E	5800	C	E	SCE

(Source: Tulare County Public Works, March 2013)

Figure 7-3
Inventory of Roadway Facilities in Ivanhoe*



*Roads, Sidewalks, ADA Curbs, Street Lights

8. COMMUNITY OF LEMON COVE

8.1 General Information

Lemon Cove is a census-designated place located in the northern portion of Tulare County, approximately four miles southeast of Woodlake and eleven miles northeast of Visalia. It is generally bounded by Avenue 319 in the south, Goodale Lane in the north, Road 236 in the west, and Road 248 in the east and encompasses 0.8 square miles of land. Lemon Cove is an agriculturally oriented service community surrounded by lands in agricultural production, vacant lands, and scattered residential homes. State Route (SR) 198 and SR 216 provide primary access to the cities of Visalia and Woodlake, respectively. Cities and communities surrounding Lemon Cove include Visalia to the southwest; Woodlake to the northwest; and the community of Three Rivers to the northeast. The Tulare County/Fresno County Line is located approximately 10.5 miles north of Lemon Cove.

Based on the 2010 Census, the population in Lemon Cove was 308. Similar to other communities in Tulare County, the population of Lemon Cove is racially diverse with 85% White, 0% African American, 2% Native American, 2% Asian/Pacific Islander, 4% from other races, and 8% from 2 or more races. 25% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 153 housing units located within Lemon Cove, of which 64% are owner-occupied and 36% are renter-occupied.

8.2 Domestic Water & Wastewater

Domestic water and sewer service in Lemon Cove is provided by the Lemon Cove Sanitary Sewer District, formed in December 1950. Table 8-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012 and Municipal Service Review, May 2006). Maps of the sewer and water systems are currently unavailable.

According to the Municipal Service Review 2006 (MSR), the Lemon Cove Sanitary District operates a water supply and distribution system under the jurisdiction of the Tulare County Environmental Health Services Division, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in Tulare County with less than 200 connections. The District's water supply and distribution system, which includes a 30,000 gallon storage tank, booster pump, and a 4,000 gallon pressure tank, supports approximately 50 active connections.

The water system has no permanently installed treatment at this time, and there is no backup water supply on the District's system. The District's water system is fully metered, which is indicative of the District's desire to promote water conservation, and continue to provide effective water service to its residents.

According to the District's 2004 Consumer Confidence Report, water samples taken in December 2004 contained nitrate levels of 55 mg/L, which exceeds the maximum contaminant level (MCL) of 45 mg/L. The Lemon Cove Sanitary District has been issued a compliance order (No. 04-95) to address the elevated nitrate levels.

Assuming 50 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Lemon Cove Sanitary District water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 780 gallons per minute (GPM) (500 GPM fire flow, and 280 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served; The water system storage volume of 34,000 gallons would be capable of delivering a source flow of approximately 280 GPM for a period of two hours, indicating that the pumping efficiency of the District's only well would need to be 500 GPM in order to meet the requirements of the Tulare County Improvement Standards. Prior to granting any sphere of influence (SOI) expansions, it is recommended that the Local Agency Formation Commission (LAFCO) verify that there is adequate water system capacity to meet any anticipated increased demands. It is also recommended that the District work to develop a backup water supply. The District would need to expand its water supply and distribution system to support any significant development projects proposed within its SOI.

The Lemon Cove Sanitary District is also responsible for providing sanitary sewer service to residents within its Boundary. It is assumed that there are 50 connections to the District's sewer system, the same number of connections to their water system. The District owns and operates a Wastewater Treatment Facility (WWTF) located approximately 0.7 miles north of the community. The WWTF is operated under the provisions of Waste Discharge Requirements Order No. 94-348, issued by the Regional Water Quality Control Board (RWQCB).

Order No. 94-348 prescribes that the monthly average dry weather discharge flow shall not exceed 20,000 gallons per day (GPD). According to the Wastewater User Charge Survey Report FY 2004-05 (Cal EPA-State Water Resources Control Board, May 2005), the average dry weather flow at the WWTF is approximately 12,000 GPD. Using a demand of 310 GPD per connection, it is estimated that the District's sanitary sewer treatment and disposal capabilities would allow for approximately 25 additional connections (equivalent dwelling units) to the system. The District would need to expand the capacity of its WWTF to support any significant development projects proposed within its SOI.

TABLE 8-1

Existing Water & Wastewater Connections in Lemon Cove

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
50	50	0	50	75	25

* Data current as of May 2012

** Data current as of May 2006

8.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself

typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Lemon Cove does not currently have a storm drainage system.

8.4 Roads

There are various roadways in Lemon Cove that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 8-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 8-1 graphically displays this information on a map.

TABLE 8-2
Roads in Need of Major and Medium Repair in Lemon Cove

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 324	Road 236 to Road 248	GRX
2	Avenue 328	SR 198 to Road 248	GRX
3	Avenue 330	SR 198 to east end	CHIP
4	Lemon Road	SR 198 to Avenue 330	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

8.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Lemon Cove.

8.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk

width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 8-3 identifies the location of existing sidewalks in Lemon Cove. Figure 8-1 also displays this information graphically. The sidewalks represented in Table 8-3 and Figure 8-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 8-3

Existing Sidewalks in Lemon Cove

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 328	SR 198 to 200' west	North side
2	Avenue 328	SR 198 to 200' west	South side
3	Douglas Drive	SR 198 to 200' west	South side
4	SR 198	Douglas Drive to Avenue 328	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

8.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 8-4 identifies the location of existing street lights that are maintained by Tulare County, in Lemon Cove, as well as their specifications. Figure 8-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 8-4
Existing Street Lights in Lemon Cove

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 328	Road 244	NE Corner	1557370E	5800	W	W	SCE
2	Avenue 328	SR 198	NW Corner	1843145E	5800	W	S	SCE
3	Avenue 330	Lemon Road	NW Corner	1666526E	5800	W	S	SCE
4	Douglas Drive	Road 244	NE Corner	133650E	5800	W	S	SCE
5	Pogue Avenue	Road 244	NE Corner	2281867E	5800	W	W	SCE
6	Summit Drive	Road 244	SE Corner	600579E	5800	W	N	SCE
7	Summit Drive	Lemon Road/SR 198	SW Corner	2045421E	5800	W	E	SCE

(Source: Tulare County Public Works, March 2013)

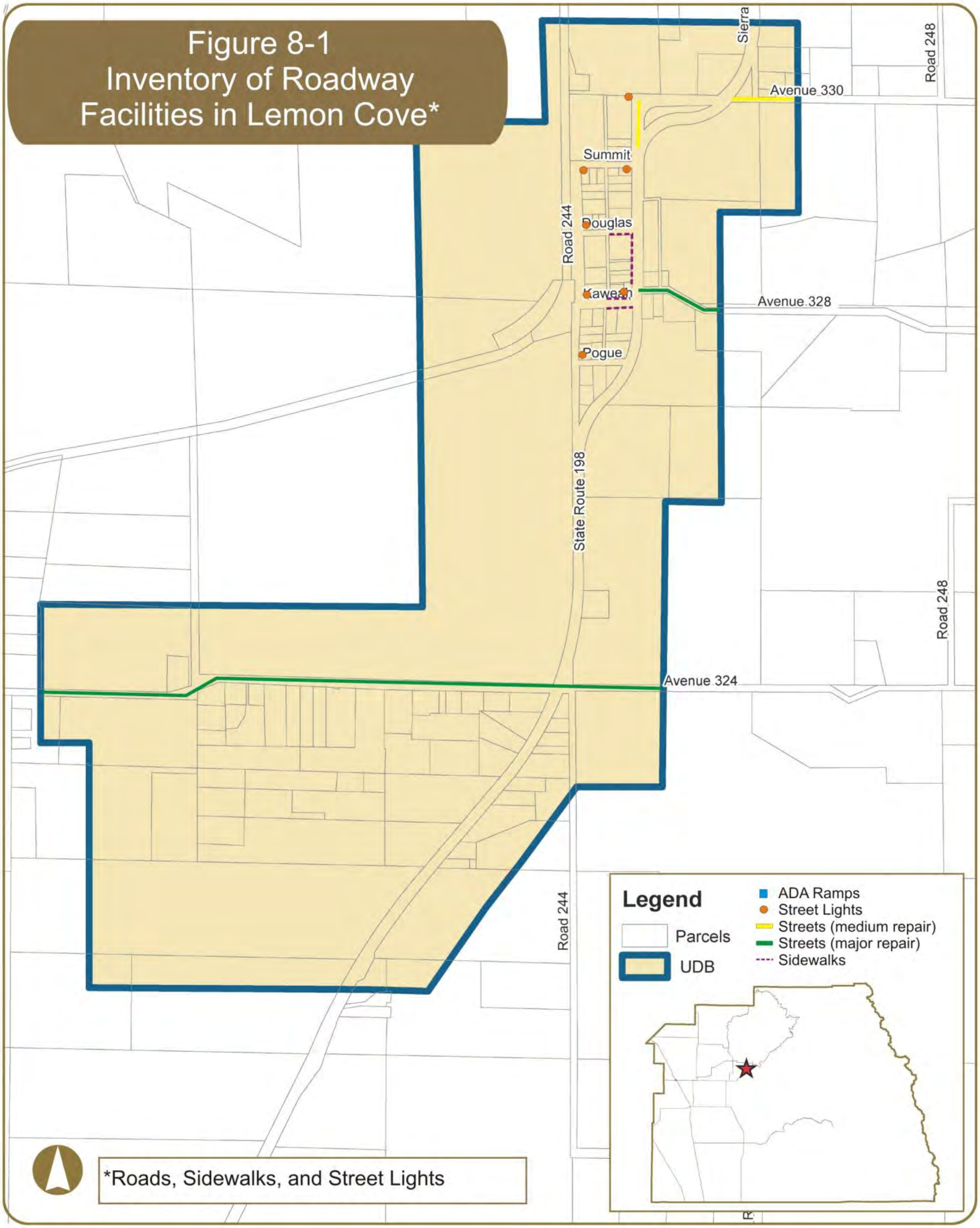


Figure 8-1
Inventory of Roadway Facilities in Lemon Cove*
Sierra
Road 248
Avenue 330
Summit
Douglas
Road 244
Kaweah
Avenue 328
Pogue
State Route 198
Road 248
Avenue 324
Road 244
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, and Street Lights

9. COMMUNITY OF LONDON

9.1 General Information

London is a census-designated place located in the northern portion of the County, approximately three miles southwest of Dinuba and ten miles northwest of Visalia. It is generally bounded by Avenue 376 in the south, Avenue 384 in the north, Kennedy School House Ditch in the west, and Road 60 in the east and encompasses 0.6 square miles of land. London is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, vacant lands, and scattered rural residential homes. Cities and communities surrounding London include Visalia to the southeast; Dinuba to the northeast; and the community of Traver to the southwest. The Tulare County/Fresno County Line is located approximately 4.8 miles west of London.

Based on the 2010 Census, the population in London was 1,869. Similar to other communities in Tulare County, the population of London is racially diverse with 41% White, less than 1% African American, 3% Native American, 0% Asian/Pacific Islander, 52% from other races, and 4% from 2 or more races. 93% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 408 housing units located within London, of which 40% are owner-occupied and 60% are renter-occupied.

9.2 Domestic Water & Wastewater

Domestic water and sewer service in London is provided by the London Community Service District (CSD), formed in March 1952. Table 9-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 9-1 graphically displays the approximate location of water wells and water lines. Figure 9-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), the London CSD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. London CSD staff has indicated that there are approximately 430 connections to the District's water system, which consists of three active wells and one hydro-pneumatic pressure tank. The water system has no permanently installed treatment at this time.

CSD staff has indicated that the water system was constructed in 1952 and experiences minor leaks. Water system leaks have the potential for causing cross contamination problems. The London CSD received Proposition 13 funding in the amount of $98,156 to prepare an infrastructure rehabilitation feasibility study to detect and evaluate leaks and determine the feasibility of replacing the distribution system. The CSD is currently pursuing funding through the State Revolving Fund Program for construction of a new domestic water well and hydro-pneumatic tank, along with distribution system improvements.

The London CSD water system is currently un-metered, which does not promote water conservation. The CSD should consider evaluating the potential water savings and the projected total cost to water users in the community resulting from the installation of water meters. The CSD would likely need funding assistance through state and/or federal grant/loan programs to install water meters. User fees would also likely need to be increased. A fully metered water system could serve as a water conservation measure by minimizing over usage and/or wasting of water.

Assuming 430 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the London CSD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,120 gallons per minute (GPM) (500 GPM fire flow, and 620 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served; The total pumping efficiency of the CSD's water supply sources is unknown. Prior to granting any sphere of influence (SOI) expansions, it is recommended that Local Agency Formation Commission (LAFCO) verify that there is adequate water system capacity to meet any anticipated increased demands. It is likely that the CSD would need to expand its water supply and improve the distribution system to support any significant development projects proposed within its SOI.

The London CSD is also responsible for providing sanitary sewer service to residents within its Boundary. London CSD staff has indicated that there are approximately 430 connections to their sewer system. The District owns and operates a Wastewater Treatment Facility (WWTF) southeast of the community, which is operated under the provisions of Waste Discharge Requirements Order No. 96-172, issued by the Regional Water Quality Control Board (RWQCB).

Order No. 96-172 prescribes that the monthly average discharge flow shall not exceed 0.3 million gallons per day (MGD). Available data indicates that the current flow at the WWTF is 0.20 MGD. The CSD's Engineer noted that improvements completed in 2000 with US Department of Agriculture (USDA) Rural Development funding increased the plant's capacity to 0.50 MGD. The London CSD should work with the RWQCB to get the CSD's Waste Discharge Requirements (WDR) Order updated. According to WDR Order No. 96-172, the London CSD has not assessed growth in the community and has not predicted future flows. As such, the London CSD has not made any plans on increasing the capacity of the WWTF for future flows.

TABLE 9-1

Existing Water & Wastewater Connections in London

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
430	430	0	430	1,075	645

* Data current as of May 2012

9.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

London does not currently have a storm drainage system.

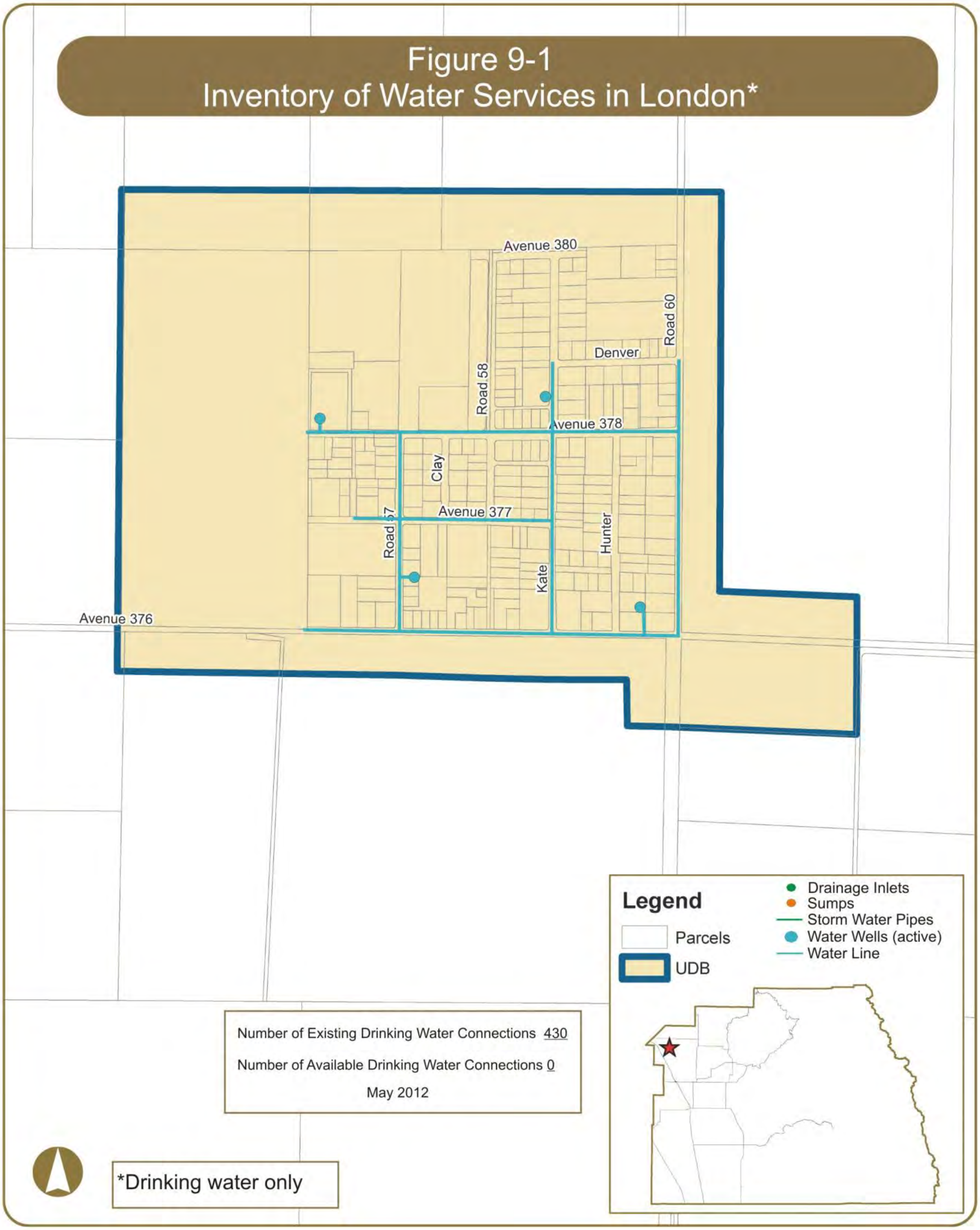


Figure 9-1
Inventory of Water Services in London*
Avenue 380
Road 60
Denver
Road 58
Avenue 378
Clay
Avenue 377
Road 57
Hunter
Kate
Avenue 376
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 430
Number of Available Drinking Water Connections 0
May 2012
*Drinking water only

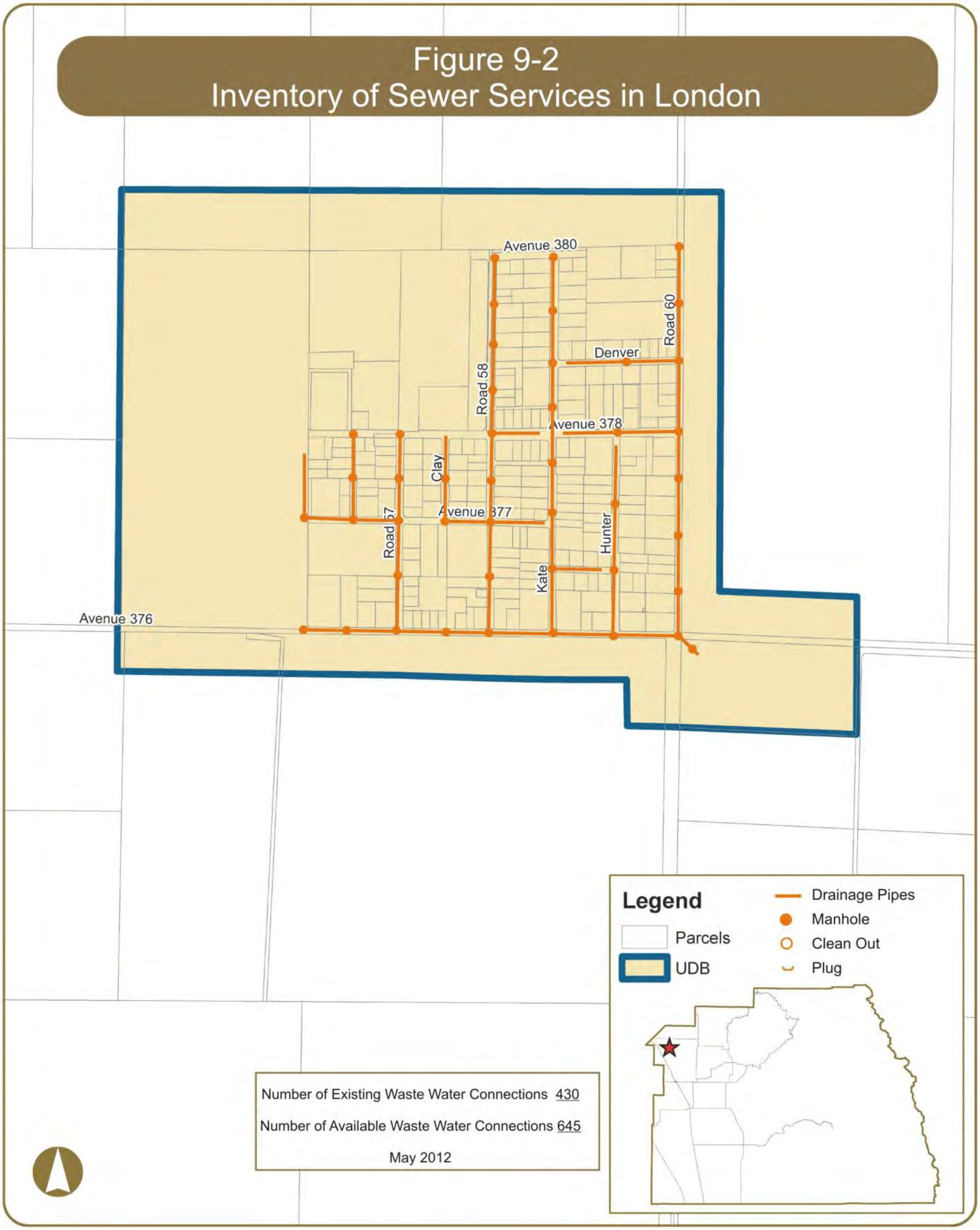


Figure 9-2
Inventory of Sewer Services in London
Avenue 380
Road 60
Denver
Road 58
Avenue 378
Clay
Avenue 377
Road 57
Hunter
Kate
Avenue 376
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Number of Existing Waste Water Connections 430
Number of Available Waste Water Connections 645
May 2012

9.4 Roads

There are various roadways in London that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 9-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 9-3 graphically displays this information on a map.

TABLE 9-2
Roads in Need of Major and Medium Repair in London

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 376	Road 57 to Hunter Road	CHIP
2	Avenue 378	Kate Road to west end	GRX
3	Avenue 378	Kate Road to Road 60	CHIP
4	Avenue 380	Road 58 to Kate Road	GRX
5	Kate Road	Avenue 376 to Avenue 378	GRX
6	Kate Road	Avenue 378 to Avenue 380	CHIP
7	Road 60	Avenue 376 to Avenue 378	CHIP

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix
reconstruction	
GRX – grind and remix	

9.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within London.

9.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 9-3 identifies the location of existing sidewalks in London. Figure 9-3 also displays this information graphically. The sidewalks represented in Table 9-3 and Figure 9-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 9-3

Existing Sidewalks in London

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Road 58	Avenue 378 to Avenue 380	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

9.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 9-4 identifies the location of existing street lights that are maintained by Tulare County, in London, as well as their specifications. Figure 9-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

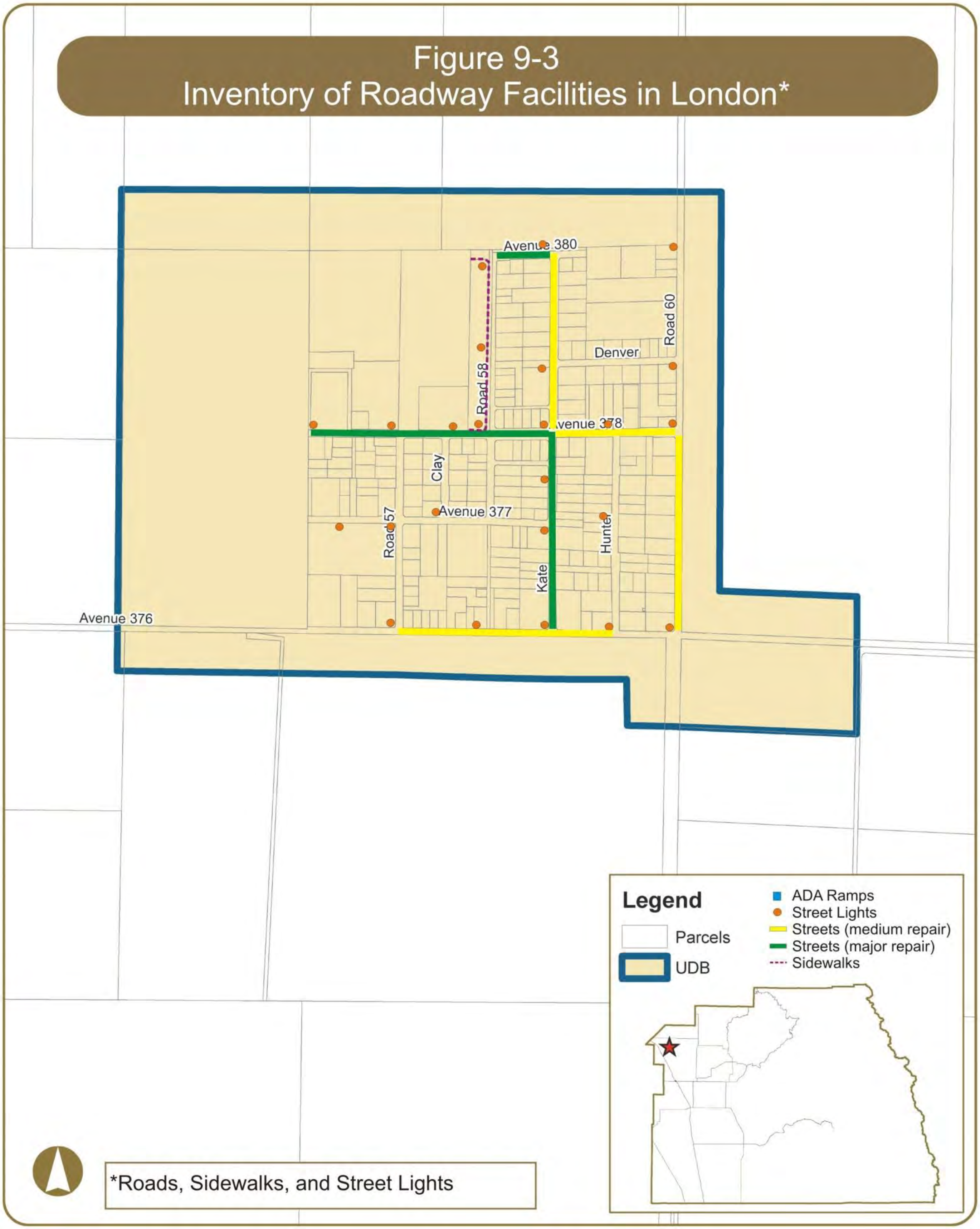
TABLE 9-4

Existing Street Lights in London

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 376	Road 57	NW Corner	1474	5800	W	S	PG&E
2	Avenue 376	Between Road 57 and	North Side	1475	5800	W	S	PG&E
3	Avenue 376	Kate Road	NW Corner	1464	5800	W	S	PG&E
4	Avenue 376	Road 60	NW Corner	1465	5800	W	S	PG&E
5	Avenue 376	Hunter Road	NW Corner	3635	5800	W	S	PG&E
6	Avenue 377	Hunter Road	West Side	1455	5800	W	E	PG&E
7	Avenue 377	Road 57	SW Corner	1472	5800	W	E	PG&E
8	Avenue 377	Between Road 57 and	South Side	54	5800	W	N	PG&E
9	Avenue 377	Road 58	SW Corner	1469	5800	W	N	PG&E
10	Avenue 377	Kate Road	SW Corner	1463	5800	W	E	PG&E
11	Avenue 377	Clay Road	West Side	3325	5800	W	N	PG&E
12	Avenue 378	West end	North Side	1473	5800	W	S	PG&E
13	Avenue 378	Road 57	NW Corner	1471	5800	W	S	PG&E
14	Avenue 378	Road 58	NW Corner	1468	5800	W	S	PG&E
15	Avenue 378	Kate Road	NW Corner	1461	5800	W	S	PG&E
16	Avenue 378	Hunter Road	NW Corner	1478	5800	W	S	PG&E
17	Avenue 378	Road 60	NW Corner	1466	5800	W	E	PG&E
18	Avenue 378	Clay Road	NE Corner	3324	5800	W	S	PG&E
19	Avenue 380	Road 58	SW Corner	1477	5800	W	E	PG&E
20	Avenue 380	Kate Road	NW Corner	1476	5800	W	S	PG&E
21	Avenue 380	Road 60	West Side	1479	5800	W	E	PG&E
22	Between Avenue 377 and Avenue 378	Kate Road	West Side	1480	5800	W	E	PG&E
23	Between Avenue 378 and Avenue 380	Road 58	West Side	1470	5800	W	E	PG&E
24	Denver Avenue	Kate Road	SW Corner	1462	5800	W	E	PG&E
25	Denver Avenue	Road 60	SW Corner	1467	5800	W	E	PG&E

(Source: Tulare County Public Works, March 2013)

Figure 9-3
Inventory of Roadway Facilities in London*



*Roads, Sidewalks, and Street Lights

10. COMMUNITY OF PIXLEY

10.1 General Information

Pixley is a census-designated place is located in the southwest portion of Tulare County between the communities of Tipton and Earlimart along State Route (SR) 99. It is generally bounded by Terra Bella Avenue in the south, Stanford Avenue in the north, Airport Street in the west, and Palm Street in the east and encompasses 3.1 square miles of land. Pixley is square in shape and is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue. Pixley is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land. There is also a public airport southwest of the community. Industrial development is present north and south of the community. Most of the commercial development within Pixley is located between the S.P.R.R. tracks and SR 99. Cities and communities surrounding Pixley include Porterville and Poplar to the northeast, Tulare and Tipton to the north, and Earlimart to the south.

Based on the 2010 Census, the population in Pixley was 3,310. Similar to other communities in Tulare County, the population of Pixley is racially diverse with 45% White, 3% African American, 1% Native American, less than 1% Asian/Pacific Islander, 48% from other races, and 4% from 2 or more races. 81% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 875 housing units located within Pixley, of which 54% are owner-occupied and 46% are renter-occupied.

10.2 Domestic Water & Wastewater

Domestic water and sewer service in Pixley is provided by the Pixley Public Utilities District (PUD), which was formed in December 1946. Table 10-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 10-1 graphically displays the approximate location of water wells and water lines. Figure 10-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), Pixley's water supply is derived from four existing deep underground wells. The four wells have a maximum production efficiency of approximately 2,700 gallons per minute (GPM). As indicated by the PUD's Engineer, three of the existing four wells exceed the acceptable arsenic level for drinking water that became effective January 2006, and the water supply system will require treatment or replacement of wells to meet current water quality standards.

Assuming 800 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Pixley PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,400 GPM (1,500 GPM fire flow, and 900 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served.

The PUD's water system is capable of delivering a source flow of 2,700 GPM, and includes pneumatic pressure tanks for storage, indicating that the system currently meets the requirements of the Tulare County Improvement Standards. According to the PUD Engineer, there is only sufficient capacity in the water system to meet existing domestic demands without considering fire flow requirements. The PUD Engineer indicated that no additional connections could be supported by the water system when considering fire flows and the possibility of the maximum producing well being out of service.

As indicated by the PUD Engineer, a water master plan that includes a capital facilities plan needs to be developed to address current and future needs. The PUD Engineer noted that the existing water system includes many 4-inch and 6-inch diameter lines, which may not be suitable for peak and fire flows. Since land within the PUD's sphere of influence (SOI) that is zoned for development (by the Tulare County General Plan) will rely on domestic water service from the Pixley PUD, the master planning boundary should be consistent with the PUD's SOI.

The PUD operates a Wastewater Treatment Facility (WWTF) located southwest of the community, just west of the Pixley airport. The WWTF is operated under the provisions of Order No. 5-00-096 issued by the Central Valley Regional Water Quality Control Board (RWQCB). The PUD indicated that the WWTF is currently operating at or near its capacity, and is operating under a Cease and Desist Order. The permitted capacity is 0.29 million gallons per day (MGD), and the current flow is approximately 0.284 MGD. *The Wastewater Treatment Facility Upgrade and Expansion Project – Project Feasibility Report* (Provost & Pritchard, February 2005) outlines a major reconstruction proposal for the PUD's WWTF. The improved WWTF would be capable of treating 0.5 MGD. A 0.5 MGD WWTF may provide sufficient capacity for a 20-year planning period with reserve capacity for industrial/commercial growth.

As indicated by the District Engineer, a sewer master plan that includes a capital facilities plan needs to be developed to address current and future needs. The District Engineer noted that the adequacy of the existing sewer system to accept additional flows is not known. Since land within the District's SOI that is zoned for development (by the Tulare County General Plan) will rely on sanitary sewer service from the Pixley PUD, the master planning boundary should be consistent with the District's SOI.

TABLE 10-1

Existing Water & Wastewater Connections in Pixley

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
800	800	0	800	800	0

* Data current as of May 2012

10.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself

typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 10-2 identifies the location of drainage inlets and sumps in Pixley. Figure 10-1 also displays this information graphically.

TABLE 10-2
Existing Storm Drainage Facilities in Pixley

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Allen Avenue	Market Street	Inlet
2	Between Court Avenue and Howard Avenue	Pine Street	Inlet
3	Bradbury Avenue	Cedar Street	Inlet
4	Bradbury Avenue	Ash Street	Inlet
5	Bradbury Avenue	Market Street	Inlet
6	Carol Avenue	Walnut Street	Sump
7	Compton Avenue	Cedar Street	Inlet
8	Compton Avenue	Ash Street	Inlet
9	Court Avenue	Ash Street	Sump
10	Court Avenue	Park Drive	Inlet
11	Court Avenue	Pine Street	Inlet
12	Davis Avenue	Ash Street	Inlet
13	Davis Avenue	Maple Street	Inlet
14	Ellsworth Avenue	Park Drive	Inlet
15	Ellsworth Avenue	Pine Street	Inlet

TABLE 10-2 (Continued)
Existing Storm Drainage Facilities in Pixley

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
16	Ellsworth Avenue	Maple Street	Inlet
17	Ellsworth Avenue	Elm Street	Inlet
18	Ellsworth Avenue	Walnut Street	Inlet
19	Ellsworth Street	Ash Street	Inlet
20	Franklin Avenue	Center Street	Inlet
21	Franklin Avenue	Park Drive	Inlet
22	Howard Avenue	Pine Street	Inlet
23	Joanne Avenue	Walnut Street	Sump
24	Joanne Avenue	Maple Street	Sump
25	Joanne Avenue	Park Drive	Inlet
26	South of Compton Avenue	Cedar Street	Inlet
27	Terra Bella Avenue	Park Drive	Inlet
28	Terra Bella Avenue	Maple Street	Sump
29	Terra Bella Avenue	Elm Street	Sump
30	Terra Bella Avenue	Walnut Street	Sump
31	Terra Bella Street	Cedar Street	Inlet

(Source: County of Tulare Public Works, 2014)

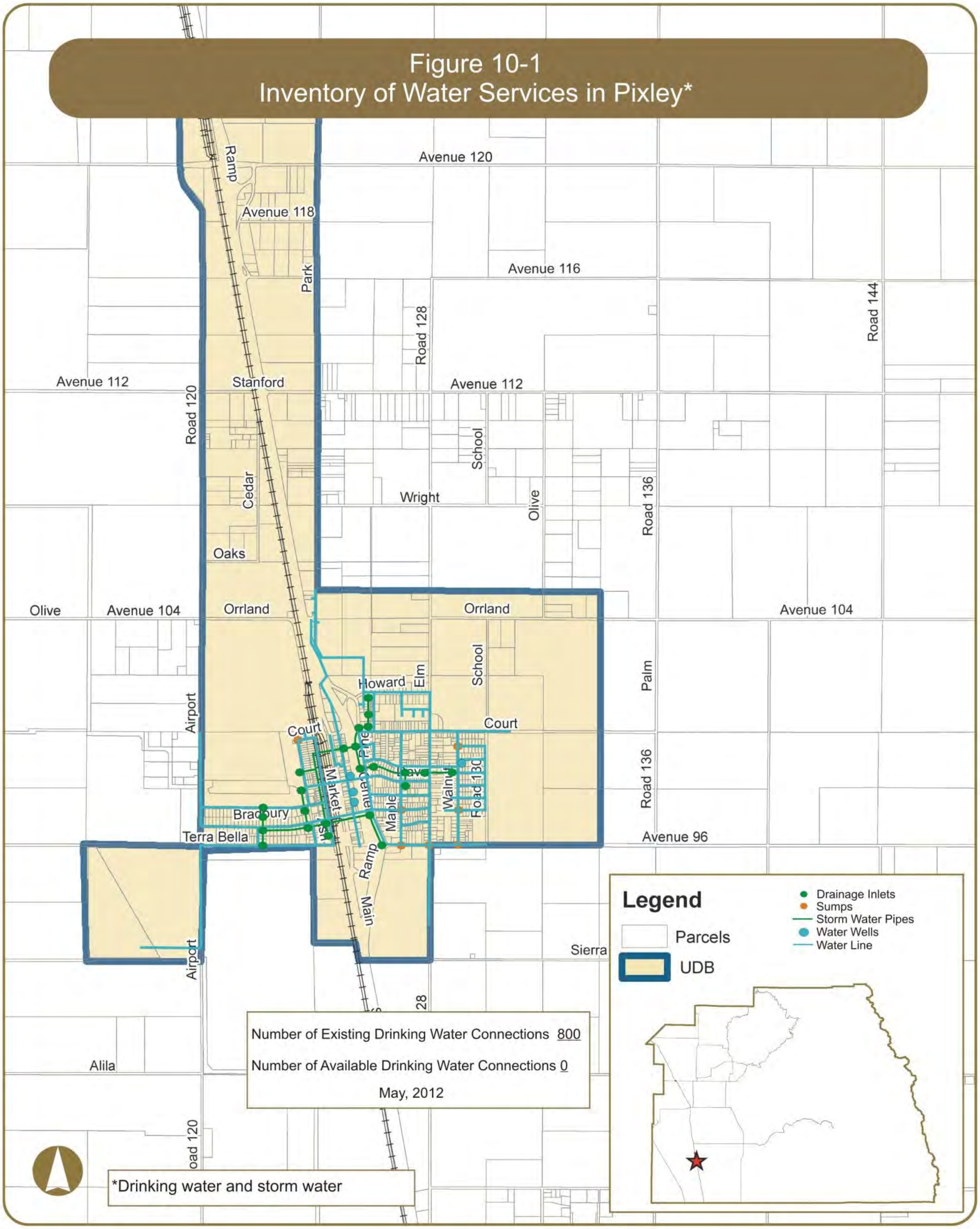


Figure 10-1
Inventory of Water Services in Pixley*
Avenue 120
Ramp
Avenue 118
Avenue 116
Park
Road 128
Road 144
Avenue 112
Stanford
Road 120
Avenue 112
School
Cedar
Wright
Olive
Road 136
Oaks
Olive
Avenue 104
Orrland
Orrland
Avenue 104
Howard
Elm
School
Palm
Airport
Court
Court
Market
Maple
Walnut
Road 130
Road 136
Bradbury
Terra Bella
Avenue 96
Ramp
Main
Sierra
Airport
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells
Water Line
Number of Existing Drinking Water Connections 800
Number of Available Drinking Water Connections 0
May, 2012
Alila
Road 120
*Drinking water and storm water

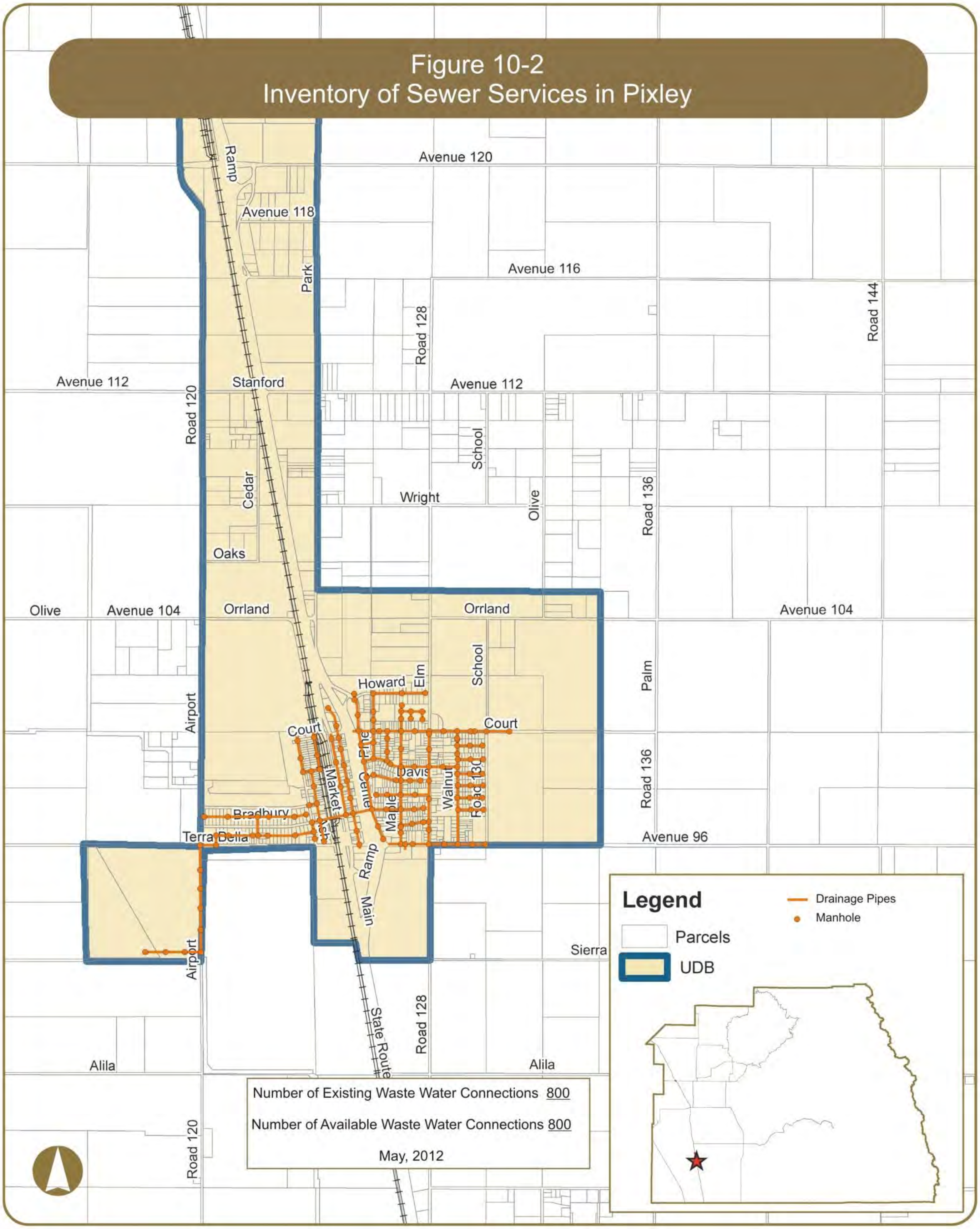


Figure 10-2
Inventory of Sewer Services in Pixley

10.4 Roads

There are various roadways in Pixley that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 10-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 10-3 graphically displays this information on a map.

TABLE 10-3

Roads in Need of Major and Medium Repair in Pixley

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Airport Street	Terra Bella Street to Compton Avenue	GRX
2	Airport Street	Compton Avenue to Orrland Avenue	CHIP
3	Allen Avenue	Main Street to Center Street	CHIP
4	Ash Street	Terra Bella Street to Davis Avenue	CHIP
5	Ash Street	Davis Avenue to north end	RCST
6	Bradbury Avenue	Ash Street to Market Street	CHIP
7	Bradbury Avenue	Main Street to Center Street	CHIP
8	Bradbury Avenue	Airport Street to Cedar Street	GRX
9	Carla Avenue	Walnut Street to School Street	CHIP
10	Carol Avenue	Walnut Street to School Street	CHIP

TABLE 10-3 (Continued)
Roads in Need of Major and Medium Repair in Pixley

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Center Street	Terra Bella Street to Court Avenue	CHIP
12	Compton Avenue	Bend west of Ash Street to Market Street	CHIP
13	Compton Avenue	Main Street to Center Street	CHIP
14	Court Avenue	SR 99 to Park Drive	CHIP
15	Court Avenue	Park Drive to Elm Street	GRX
16	Court Avenue	Elm Street to Walnut Street	CHIP
17	Court Avenue	Walnut Street to School Street	GRX
18	Court Avenue	Main Street to SR 99	CHIP
19	Davis Street	Ash Street to Maple Street	CHIP
20	Dianna Avenue	Walnut Street to School Street	CHIP
21	Ellsworth Avenue	Park Drive to Maple Street	GRX
22	Ellsworth Street	Ash Street to Market Street	CHIP
23	Ellsworth Street	Main Street to Center Street	CHIP
24	Elm Street	Court Avenue to Howard Avenue	GRX
25	Elm Street	Howard Avenue to Orrland Avenue	CHIP
26	Franklin Avenue	Main Street to Center Street	CHIP
27	Franklin Avenue	Park Drive to Pine Street	CHIP
28	Howard Avenue	Park Drive to Pine Street	CHIP
29	Howard Avenue	Pine Street to Elm Street	CHIP
30	Joanne Avenue	Park Drive to Elm Street	CHIP
31	Joanne Avenue	Walnut Street to School Street	CHIP
32	Lavonia Avenue	Maple Street to Elm Street	CHIP
33	Maple Street	Terra Bella Avenue to Lavonia Avenue	CHIP
34	Maple Street	Lavonia Avenue to Davis Street	GRX
35	Market Street	Court Avenue to Orrland Avenue	CHIP
36	McCreary Avenue	Park Drive to Maple Street	OLAY
37	Orrland Avenue	Airport Street to Market Street	CHIP
38	Park Drive	Terra Bella Avenue to Joanne Avenue	GRX
39	Park Drive	Joanne Avenue to Court Avenue	CHIP
40	Pine Street	McCreary Avenue to Howard Avenue	CHIP
41	Sarah Avenue	Walnut Street to School Street	CHIP
42	School Street	Terra Bella Avenue to north end	CHIP
43	Spani Way	Ellsworth Avenue to Court Avenue	CHIP
44	Terra Bella Avenue	Airport Street to Cedar Street	RCST
45	Terra Bella Avenue	Cedar Street to Ash Street	CHIP
46	Terra Bella Avenue	Main Street to Elm Street	OLAY
47	Terra Bella Avenue	Elm Street to School Street	CHIP

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

10.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Pixley and are listed in Table 10-4 and displayed in Figure 10-3.

TABLE 10-4
Existing ADA Curb Ramps in Pixley

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Bradbury Avenue	Airport Street	NE Corner
2	Carla Avenue	Walnut Street	NE Corner
3	Carla Avenue	Walnut Street	SE Corner
4	Carla Avenue	School Street	NW Corner
5	Carla Avenue	School Street	SW Corner
6	Compton Avenue	Airport Street	SE Corner
7	Court Avenue	Center Street	SW Corner
8	Court Avenue	Pine Street	NW Corner
9	Court Avenue	Spani Way	SE Corner
10	Court Avenue	Elm Street	SE Corner
11	Court Avenue	Walnut Street	NE Corner
12	Court Avenue	Walnut Street	NW Corner
13	Court Avenue	Walnut Street	SW Corner
14	Court Avenue	School Street	NW Corner
15	Dianna Avenue	Walnut Street	NE Corner
16	Dianna Avenue	Walnut Street	SE Corner
17	Dianna Avenue	School Street	NW Corner
18	Dianna Avenue	School Street	SW Corner
19	Ellsworth Avenue	Park Drive	SE Corner
20	Ellsworth Avenue	Pine Street	SW Corner
21	Ellsworth Street	Main Street	SE Corner
22	Ellsworth Street	Main Street	SW Corner
23	Entrance at Pixley Park	Park Drive	NE Corner
24	Entrance at Pixley Park	Park Drive	SE Corner
25	Franklin Avenue	Main Street	NE Corner

TABLE 10-4 (Continued)
Existing ADA Curb Ramps in Pixley

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
26	Holste Avenue	School Street	SW Corner
27	Howard Avenue	Park Drive	NE Corner
28	Howard Avenue	Park Drive	SE Corner
29	Joanne Avenue	Maple Street	NE Corner
30	Joanne Avenue	Maple Street	SE Corner
31	Joanne Avenue	Elm Street	NW Corner
32	Joanne Avenue	Elm Street	SW Corner
33	Lavonia Avenue	Maple Street	NE Corner
34	Lavonia Avenue	Maple Street	SE Corner
35	Lavonia Avenue	Elm Street	NW Corner
36	Lavonia Avenue	Elm Street	SW Corner
37	McCreary Avenue	Pine Street	NE Corner
38	Terra Bella Avenue	Park Drive	NE Corner
39	Terra Bella Avenue	Elm Street	NW Corner
40	Terra Bella Avenue	Elm Street	SW Corner
41	Terra Bella Street	Main Street	SE Corner

(Source: County of Tulare Public Works, August 2013)

10.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 10-5 identifies the location of existing sidewalks in Pixley. Figure 10-3 also displays this information graphically. The sidewalks represented in Table 10-5 and Figure 10-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 10-5
Existing Sidewalks in Pixley

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Airport Street	Bradbury Avenue to Compton Avenue	East side
2	Bradbury Avenue	Cedar Street to 525' west	North side
3	Bradbury Avenue	Cedar Street to 525' west	South side
4	Carla Avenue	Walnut Street to School Street	North side
5	Carla Avenue	Walnut Street to School Street	South side
6	Carol Avenue	Walnut Street to School Street	North side
7	Carol Avenue	Walnut Street to School Street	South side
8	Center Street	Ellsworth Street to Franklin Avenue	West side
9	Court Avenue	Park Drive to Pine Street	North side
10	Court Avenue	Park Drive to Pine Street	South side
11	Court Avenue	Elm Street to School Street	North side
12	Court Avenue	Elm Street to School Street	South side
13	Davis Street	Center Street to Park Drive	North side
14	Davis Street	Center Street to Park Drive	South side
15	Dianna Avenue	Walnut Street to School Street	North side
16	Dianna Avenue	Walnut Street to School Street	South side
17	Ellsworth Avenue	Park Drive to Pine Street	North side
18	Ellsworth Avenue	Park Drive to Pine Street	South side
19	Ellsworth Street	Main Street to Center Street	South side
20	Elm Street	Lavonia Avenue to Joanne Avenue	West side
21	Holste Avenue	Walnut Street to School Street	South side
22	Joanne Avenue	Maple Street to Elm Street	North side
23	Joanne Avenue	Maple Street to Elm Street	South side
24	Joanne Avenue	Walnut Street to School Street	North side
25	Joanne Avenue	Walnut Street to School Street	South side
26	Lavonia Avenue	Maple Street to Elm Street	North side
27	Lavonia Avenue	Maple Street to Elm Street	South side
28	Main Street	Compton Avenue to Ellsworth Street	West side
29	Maple Street	Lavonia Avenue to Joanne Avenue	East side
30	Maple Street	McCreary Avenue to Davis Street	West side
31	McCreary Avenue	Pine Street to Maple Street	North side
32	McCreary Avenue	Pine Street to Maple Street	South side
33	Park Drive	Joanne Avenue to McCreary Avenue	East side
34	Park Drive	Court Avenue to north of Pixley Park entrance	East side
35	Pine Street	McCreary Avenue to Davis Street	East side

TABLE 10-5 (Continued)
Existing Sidewalks in Pixley

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
36	School Street	Joanne Avenue to Holste Avenue	West side
37	School Street	Carol Avenue to north end	West side
38	School Street	Court Avenue to north end	East side
39	Terra Bella Avenue	Park Drive to Maple Street	North side
40	Terra Bella Avenue	Maple Street to Elm Street	South side
41	Terra Bella Street	Main Street to Center Street	South side
42	Walnut Street	Joanne Avenue to Holste Avenue	East side
43	Walnut Street	Carol Avenue to Court Avenue	East side
44	Walnut Street	Carol Avenue to Court Avenue	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

10.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 10-6 identifies the location of existing street lights that are maintained by Tulare County, in Pixley, as well as their specifications. Figure 10-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 10-6
Existing Street Lights in Pixley

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Allen Avenue	Main Street	NE corner	934857E	5800	W	W	SCE
2	Bradbury Avenue	Cedar Street	NW corner	2272765E	5800	W	S	SCE
3	Bradbury Avenue	Ash Street	SW corner	1706649EE	5800	W	E	SCE
4	Bradbury Avenue	Market Street	SE corner	1790095E	5800	W	W	SCE
5	Bradbury Avenue	Main Street	SE corner	1342431E	5800	W	W	SCE
6	Carla Avenue	Walnut Street	West side	765315E	5800	W	E	SCE
7	Carol Avenue	Walnut Street	SW corner	896218E	5800	W	E	SCE
8	Compton Avenue	Ash Street	NE corner	4002250E	5800	W	W	SCE
9	Compton Avenue	Market Street	NW corner	1170428E	5800	W	E	SCE
10	Compton Avenue	Main Street	North side	401719E	5800	W	S	SCE

TABLE 10-6 (Continued)
Existing Street Lights in Pixley

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
11	Compton Avenue	Center Street	NW corner	2277750E	5800	W	E	SCE
12	Compton Avenue	Pine Street	NE corner	1235813E	5800	W	W	SCE
13	Court Avenue	Main Street	SE corner	401721E	5800	W	E	SCE
14	Court Avenue	Center Street	NE corner	1018659E	5800	W	S	SCE
15	Court Avenue	Park Drive	SW corner	1018660E	5800	W	E	SCE
16	Court Avenue	Pine Street	SE corner	1536012E	5800	W	N	SCE
17	Court Avenue	Maple Street	NE corner	994560E	5800	W	S	SCE
18	Court Avenue	Elm Street	NE corner	2191804E	5800	W	S	SCE
19	Court Avenue	School Street	NW corner	4672206E	5800	W	S	SCE
20	Davis Street	Elm Street	East side	571112E	5800	W	W	SCE
21	Davis Street	Maple Street	NW corner	2272766E	5800	W	S	SCE
22	Davis Street	Market Street	NW corner	2017309E	5800	W	S	SCE
23	Davis Street	Main Street	SE corner	533394E	5800	W	W	SCE
24	Davis Street	Center Street	SW corner	854166E	5800	W	N	SCE
25	Davis Street	Park Drive	SW corner	505086E	5800	W	E	SCE
26	Ellsworth Avenue	Maple Street	SW corner	555844E	5800	W	E	SCE
27	Ellsworth Avenue	Elm Street	SE corner	995478E	5800	W	W	SCE
28	Ellsworth Avenue	Walnut Street	SW corner	1955150E	5800	W	E	SCE
29	Ellsworth Street	Market Street	East side	2017348E	5800	W	W	SCE
30	Ellsworth Street	Main Street	SE corner	4355947E	5800	W	W	SCE
31	Franklin Avenue	Main Street	SE corner	934859E	5800	W	W	SCE
32	Howard Avenue	Pine Street	SE corner	995182E	5800	W	W	SCE
33	Howard Avenue	Park Drive	NE corner	1400711E	5800	W	S	SCE
34	Howard Avenue	Elm Street	NE corner	852870E	5800	W	W	SCE
35	Joanne Avenue	Walnut Street	West side	896218EE	5800	W	E	SCE
36	Joanne Avenue	Maple Street	NW corner	994518E	5800	W	E	SCE
37	Joanne Avenue	Park Drive	NE corner	5871T	5800	W	W	SCE
38	North of Ellsworth Avenue	Maple Street	West side	N/A	5800	W	E	SCE
39	Terra Bella Avenue	Park Drive	NE corner	N/A	9500	W	SW	SCE
40	Terra Bella Avenue	Elm Street	NE corner	2053248E	5800	W	S	SCE
41	Terra Bella Avenue	Maple Street	NW corner	2053252E	5800	W	S	SCE
42	Terra Bella Avenue	SR 99	South side	N/A	5800	W		SCE
43	Terra Bella Street	Cedar Street	NW corner	2272764E	5800	W	S	SCE
44	Terra Bella Street	Main Street	NW corner	2088954E	5800	W	E	SCE

(Source: Tulare County Public Works, March 2013)

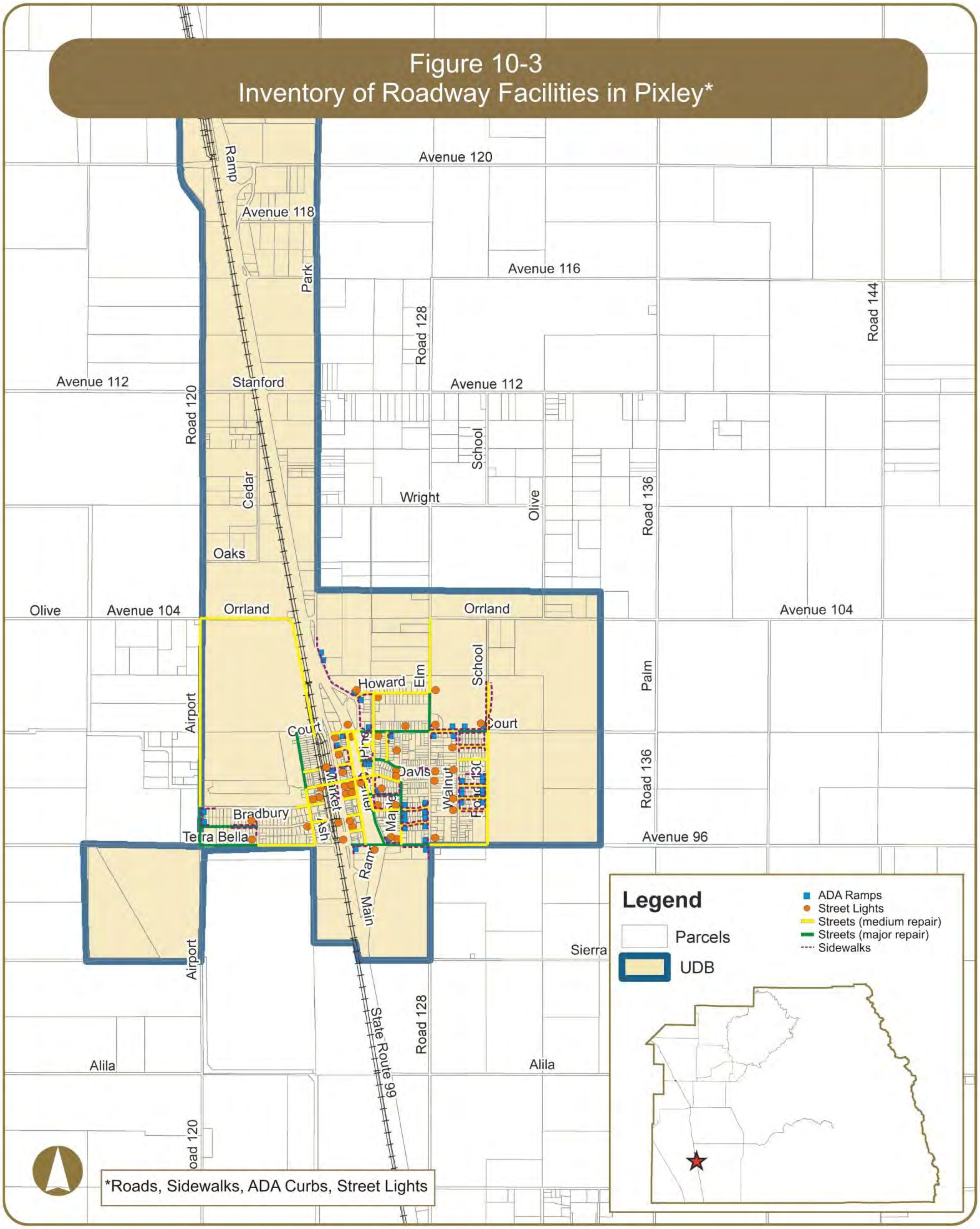


Figure 10-3
Inventory of Roadway Facilities in Pixley*
Avenue 120
Avenue 118
Avenue 116
Avenue 112
Avenue 104
Avenue 96
Road 120
Road 128
Road 136
Road 144
Ramp
Park
Stanford
School
Wright
Olive
Cedar
Oaks
Orrland
Airport
Howard
Elm
Court
Davis
Bradbury
Terra Bella
Market
Ash
Main
Palm
Sierra
Alila
State Route 99
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

11. COMMUNITY OF PLAINVIEW

11.1 General Information

Plainview is a census-designated place located in the western portion of Tulare County. It is generally bounded by Avenue 192 in the south, Avenue 196 in the north, Road 195 in the west, and Road 198 in the east and encompasses 0.3 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Plainview was 945. Similar to other communities in Tulare County, the population of Plainview is racially diverse with 38% White, 1% African American, 2% Native American, less than 1% Asian/Pacific Islander, 55% from other races, and 4% from 2 or more races. 92% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 224 housing units located within Plainview, of which 51% are owner-occupied and 49% are renter-occupied.

11.2 Domestic Water & Wastewater

Domestic water service in Plainview is provided by the Plainview Mutual Water Company (MWC). Plainview lacks a sanitary sewer system and is served by individual or community septic systems. Table 11-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Tulare County, January 2014). Figure 11-1 graphically displays the approximate location of water wells and water lines.

TABLE 11-1
Existing Water & Wastewater Connections in Plainview

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
168	168	0	Septic only	--	--

* Data current as of January 2014

11.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Plainview does not currently have a storm drainage system.

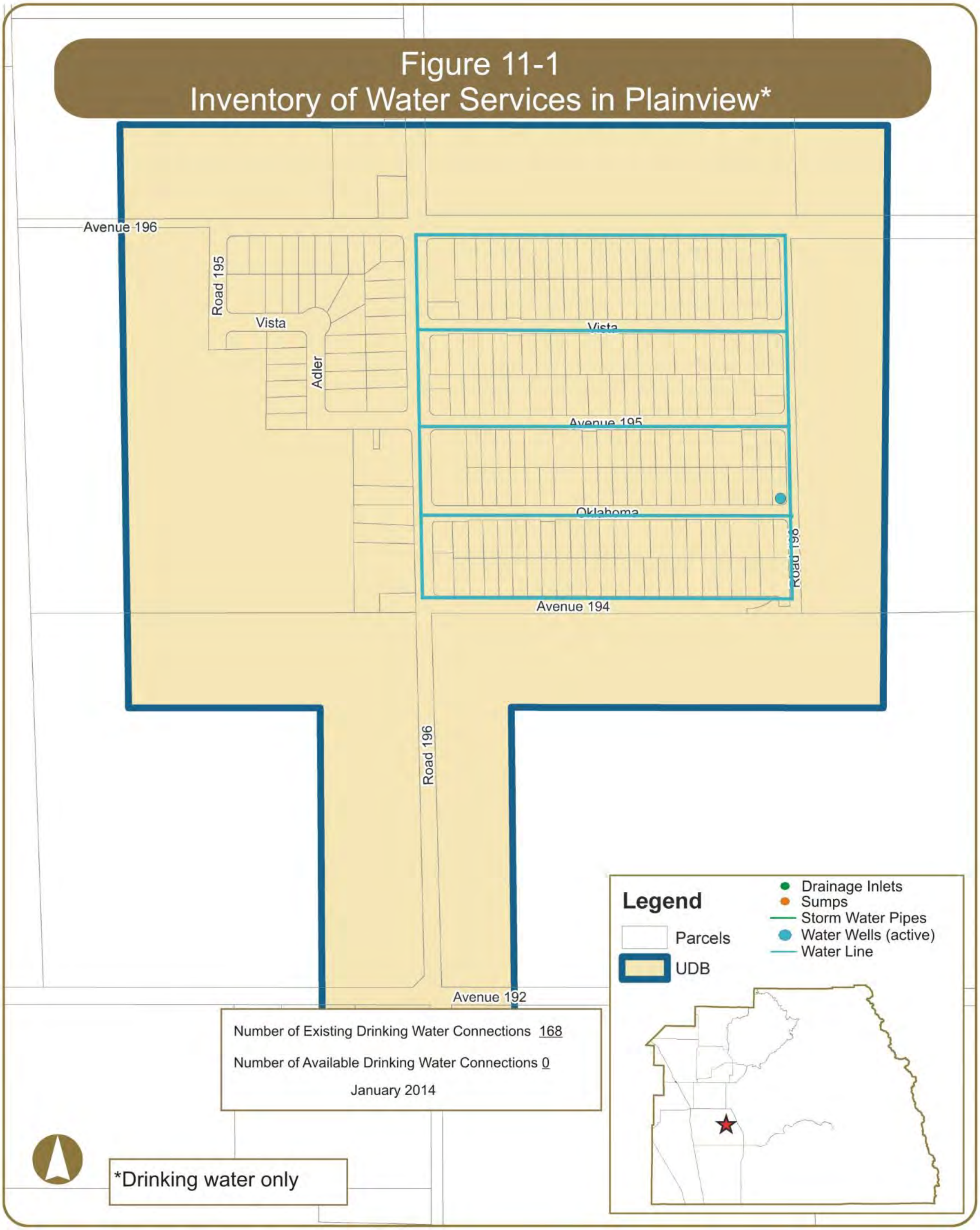


Figure 11-1
Inventory of Water Services in Plainview*
Avenue 196
Road 195
Vista
Adler
Vista
Avenue 195
Oklahoma
Road 198
Avenue 194
Road 196
Avenue 192
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 168
Number of Available Drinking Water Connections 0
January 2014
*Drinking water only

11.4 Roads

There is one roadway in Plainview that is in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 11-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 11-2 graphically displays this information on a map.

TABLE 11-2
Roads in Need of Major and Medium Repair in Plainview

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Road 196	Avenue 194 to Avenue 196	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

11.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Plainview.

11.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Plainview.

11.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 11-3 identifies the location of existing street lights that are maintained by Tulare County, in Plainview, as well as their specifications. Figure 11-2 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 11-3
Existing Street Lights in Plainview

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 192	Road 196	NW Corner	4109826E	9500	W	N	SCE
2	Avenue 195	Alder Road	NE Corner	2281651E	5800	W	S/W	SCE
3	Avenue 195	Road 196	NE Corner	1051118E	5800	W	W	SCE
4	Avenue 196	Road 196	NE Corner	1274826E	5800	W	W	SCE
5	Oklahoma Avenue	Road 196	SE Corner	1051117E	5800	W	W	SCE
6	Vista Avenue	Alder Road	SW Corner	2281652E	5800	W	N/E	SCE
7	Vista Avenue	Road 196	NE Corner	4289463E	5800	W	W	SCE

(Source: Tulare County Public Works, March 2013)

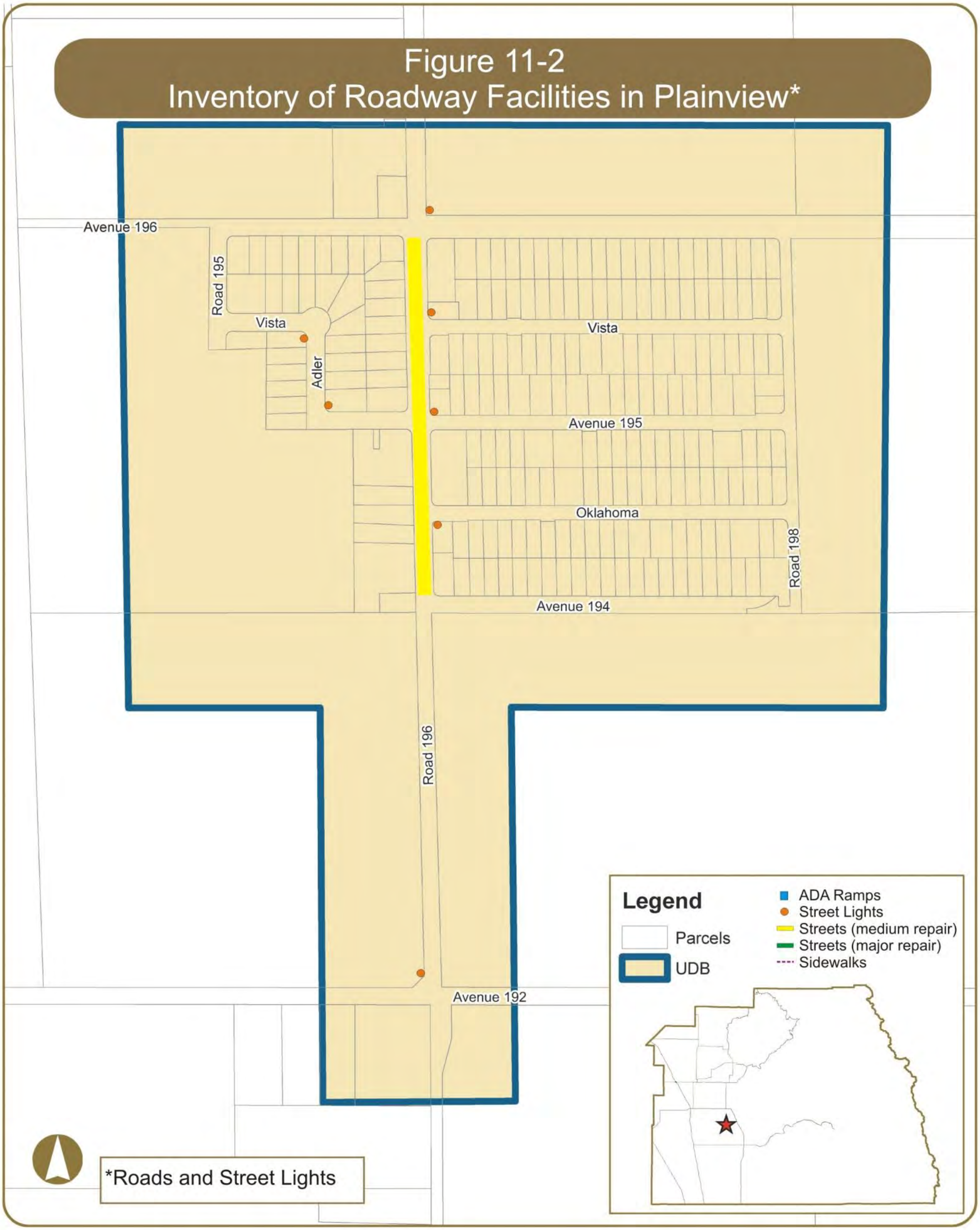


Figure 11-2
Inventory of Roadway Facilities in Plainview*
Avenue 196
Road 195
Vista
Adler
Vista
Avenue 195
Oklahoma
Road 198
Avenue 194
Road 196
Avenue 192
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

12. COMMUNITY OF POPLAR-COTTON CENTER

12.1 General Information

Poplar-Cotton Center is a census-designated place located in the southern portion of Tulare County, approximately eight miles west of Porterville and eleven miles southwest of Lindsay. It is generally bounded by Avenue 136 in the south, Avenue 152 in the north, Road 184 in the west, and Road 193 in the east and encompasses 1.3 square miles of land. Poplar-Cotton Center is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, vacant lands, and scattered rural residential homes. Cities and communities surrounding Poplar-Cotton Center include Porterville to the east, Lindsay to the northeast, Tulare to the northwest, Woodville to the northwest, and Tipton to the east. The Tulare County/Kern County Line is located approximately 18 miles south of Poplar-Cotton Center.

Based on the 2010 Census, the population in Poplar-Cotton Center was 2,470. Similar to other communities in Tulare County, the population of Poplar-Cotton Center is racially diverse with 70% White, 0% African American, 1% Native American, 14% Asian/Pacific Islander, 13% from other races, and 2% from 2 or more races. 73% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 611 housing units located within Poplar-Cotton Center, of which 46% are owner-occupied and 54% are renter-occupied.

12.2 Domestic Water & Wastewater

Domestic water and sewer service in Poplar-Cotton Center is provided by the Poplar Community Services District (CSD), which was formed in December 1959. Table 12-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Maps of the sewer and water systems are currently unavailable.

According to the Municipal Service Review 2007 (MSR), the Poplar CSD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. Poplar CSD staff has indicated that there are approximately 640 connections to the District's water system, which consists of three active wells with a total maximum production efficiency of 2,280 gallons per minute (GPM), and a 300,000 gallon storage tank. The CSD's water supply is chlorinated, but has no permanently installed treatment. Based upon the District's 2004 Annual Drinking Water Quality Report, there is no evidence suggesting that the District's water supply does not meet Federal drinking water standards.

Assuming 650 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Poplar CSD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,250 GPM (500 GPM fire flow, and 750 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served;

The District's water system is capable of delivering a combined source flow of 3,530 GPM (approximately 1,250 GPM could be delivered for two hours from a 300,000 gallon storage tank), indicating that the District's water system meets the requirements of the Tulare County Improvement Standards. Prior to granting any sphere of influence (SOI) amendments that would increase demand for water services provided by the District, the CSD's engineer should provide evidence that the increase in demand would not result in substandard pressures, or inadequate supply capacity for the remainder of the system.

The CSD's water system is in good operating condition, and has available capacity to connect additional users however additional capacity would likely be needed to accommodate build-out of the District's SOI. A complete assessment by the CSD Engineer should be completed prior to the approval of additional connections to ensure that adequate distribution system pressures can be achieved.

The Poplar CSD is also responsible for providing sanitary sewer service to residents within its Boundary. Poplar CSD staff has indicated that there are approximately 640 connections to their sewer system. The District owns and operates a Wastewater Treatment Facility (WWTF) southwest of the community, which is operated under the provisions of Waste Discharge Requirements Order No. 98-214, issued by the Regional Water Quality Control Board (RWQCB). The CSD's WWTF is currently operating in full compliance with the requirements of Order No. 98-214. Order No. 98-214 prescribes that the monthly average discharge flow shall not exceed 0.31 million gallons per day (MGD). Available data indicates that current average dry weather flow at the WWTF is 0.22 MGD, indicating that the WWTF is currently operating at about 71% of its capacity.

Based upon information provided by the CSD's Engineer, developments which have recently been approved within the existing District Boundary will use the remaining capacity at the WWTF. Based upon this realization, the CSD would need to expand its WWTF to support any additional development projects proposed within its District Boundary and/or SOI.

The Poplar CSD recycles its wastewater by irrigating 41-acres of alfalfa owned by the District. The land used for wastewater reclamation will increase in the near future, as the District recently purchased additional acreage for this purpose. The District's wastewater reclamation activities promote water conservation, groundwater recharge, and demonstrate the District's desire to conserve its potable water sources.

TABLE 12-1

Existing Water & Wastewater Connections in Poplar-Cotton Center

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
640	965	325	640	901	261 [1]

* Data current as of May 2012

1 Recently approved projects will use up remaining capacity (Source: MSR)

12.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Poplar-Cotton Center does have a storm drainage system, but system information and mapping is currently unavailable.

12.4 Roads

There are various roadways in Poplar-Cotton Center that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways

- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 12-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 12-1 graphically displays this information on a map.

TABLE 12-2

Roads in Need of Major and Medium Repair in Poplar-Cotton Center

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 145	Road 190 to west of Walker Road	CHIP
2	Avenue 147	Kilroy Road to Road 192	CHIP
3	Avenue 150	Road 190 to Road 192	CHIP
4	Avenue 151	Road 190 to Road 192	CHIP
5	Kilroy Road	Avenue 145 to Avenue 146	CHIP
6	Road 192	SR 190 to Avenue 147	OLAY
7	Road 192	Avenue 147 to Avenue 148	ACST
8	Road 192	Avenue 148 to Avenue 152	OLAY

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

12.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012.

According to the survey, there are various ADA compliant curb ramps located within Poplar-Cotton Center and are listed in Table 12-3 and displayed in Figure 12-1.

TABLE 12-3
Existing ADA Curb Ramps in Poplar-Cotton Center

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 145	Frankie Road	NE Corner
2	Avenue 145	School Driveway east of Frankie Road	NE Corner
3	Avenue 145	School Driveway east of Frankie Road	NW Corner
4	Avenue 145	School Driveway west of Walker Road	NE Corner
5	Avenue 145	School Driveway west of Walker Road	NW Corner
6	Avenue 145	Walker Road	NE Corner
7	Avenue 145	Walker Road	NW Corner
8	Avenue 145	Walker Road	SE Corner
9	Avenue 145	Walker Road	SW Corner
10	Avenue 145	Road 190	NE Corner
11	Avenue 145	Road 190	NW Corner
12	Avenue 145	Road 190	SW Corner
13	Avenue 146	Road 192	NE Corner
14	Avenue 147	Walker Road	NE Corner
15	Avenue 147	Walker Road	NW Corner
16	Avenue 147	Walker Road	SE Corner
17	Avenue 147	Walker Road	SW Corner
18	Avenue 147	Road 190	NW Corner
19	Avenue 147	Road 190	SW Corner
20	SR 190	Road 192	NE Corner
21	SR 190	Road 192	NW Corner
22	SR 190	Road 192	SE Corner
23	SR 190	Road 192	SW Corner
24	Tule Avenue	Walker Road	SE Corner
25	Tule Avenue	Walker Road	SW Corner
26	Tule Avenue	Road 190	NW Corner
27	Tule Avenue	Road 190	SW Corner

(Source: County of Tulare Public Works, August 2013)

12.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 12-4 identifies the location of existing sidewalks in Poplar-Cotton Center. Figure 12-1 also displays this information graphically. The sidewalks represented in Table 12-4 and Figure 12-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 12-4

Existing Sidewalks in Poplar-Cotton Center

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 145	West end to Road 190	North side
2	Avenue 145	400' west of Walker Road to Road 190	South side
3	Avenue 145	Avenue 145 to north end	East side
4	Avenue 146	Road 192 to Road 193	North side
5	Avenue 147	West end to Road 190	North side
6	Avenue 147	West end to Road 190	South side
7	Road 190	Avenue 145 to Avenue 148	West side
8	Road 192	Avenue 146 to 225' north	West side
9	Tule Avenue	West end to Road 190	North side
10	Tule Avenue	West end to Road 190	South side
11	Walker Road	Avenue 145 to Tule Avenue	East side
12	Walker Road	Avenue 145 to Tule Avenue	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

12.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 12-5 identifies the location of existing street lights that are maintained by Tulare County, in Poplar-Cotton Center, as well as their specifications. Figure 12-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 12-5
Existing Street Lights in Poplar-Cotton Center

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 144	West of Road 191	North Side	1057086E	5800	W	S	SCE
2	Avenue 145	Imperial Road	SE Corner	4076101E	5800	W	N	SCE
3	Avenue 145	Kilroy Road	SW Corner	667274E	5800	W	N	SCE
4	Avenue 145	Road 193	SW Corner	61145E	5800	W	E	SCE
5	Avenue 145	Imperial Road	SW Corner	4076101E	5800	W	N	SCE
6	Avenue 145	Road 192	SE Corner	641136E	5800	W	N	SCE
7	Avenue 145	Tobias Road	SE Corner	641140E	5800	W	N	SCE
8	Avenue 145	Road 191	SE Corner	667274E	5800	W	N	SCE
9	Avenue 145	Walker Road	SW Corner	4420523E	5800	C	E	SCE
10	Avenue 146	Road 190	SW Corner	NONE	5800	W	N	SCE
11	Avenue 146	Road 191	SE Corner	937703E	5800	W	N	SCE
12	Avenue 146	Road 192	NE Corner	730676E	5800	W	W	SCE
13	Avenue 146	Tobias Road	SE Corner	69638E	5800	W	N	SCE
14	Avenue 146	Kilroy Road	SE Corner	696368E	5800	W	N	SCE
15	Avenue 146	Kilroy Road	SW Corner	937702E	5800	W	N	SCE
16	Avenue 146	Imperial Road	SE Corner	937704E	5800	W	N	SCE
17	Avenue 147	Kilroy Road	SW Corner	1057083E	5800	W	W	SCE
18	Avenue 147	Road 192	SW Corner	1057084E	5800	W	E	SCE
19	Avenue 147	Imperial Road	East Side	4044239E	5800	W	W	SCE
20	Avenue 147	Road 191	West Side	4044239E	5800	W	E	SCE
21	Avenue 147	Road 190	SW Corner	N/A	N/A	N/A	E	SCE
22	Avenue 148	Imperial Road	SE Corner	4076104E	5800	W	N	SCE
23	Avenue 148	Road 191	SE Corner	4076106E	5800	W	N	SCE
24	Avenue 148	Kilroy Road	SE Corner	4076108E	5800	W	N	SCE
25	Avenue 148	Road 192	SW Corner	N/A	N/A	N/A	N	SCE
26	Avenue 152	Road 192	SW Corner	894120E	9500	W	S	SCE
27	SR 190	Road 191	NE Corner	495921E	5800	W	S	SCE
28	SR 190	Road 193	NE Corner	2366581E	5800	W	S	SCE
29	SR 190	Road 192	SE Corner	X16224E	16000	W	N	SCE
30	SR 190	Road 192	NE Corner	593859E	5800	W	W	SCE
31	SR 190	Road 192	NW Corner	1896054E	16000	W	S	SCE

(Source: Tulare County Public Works, March 2013)

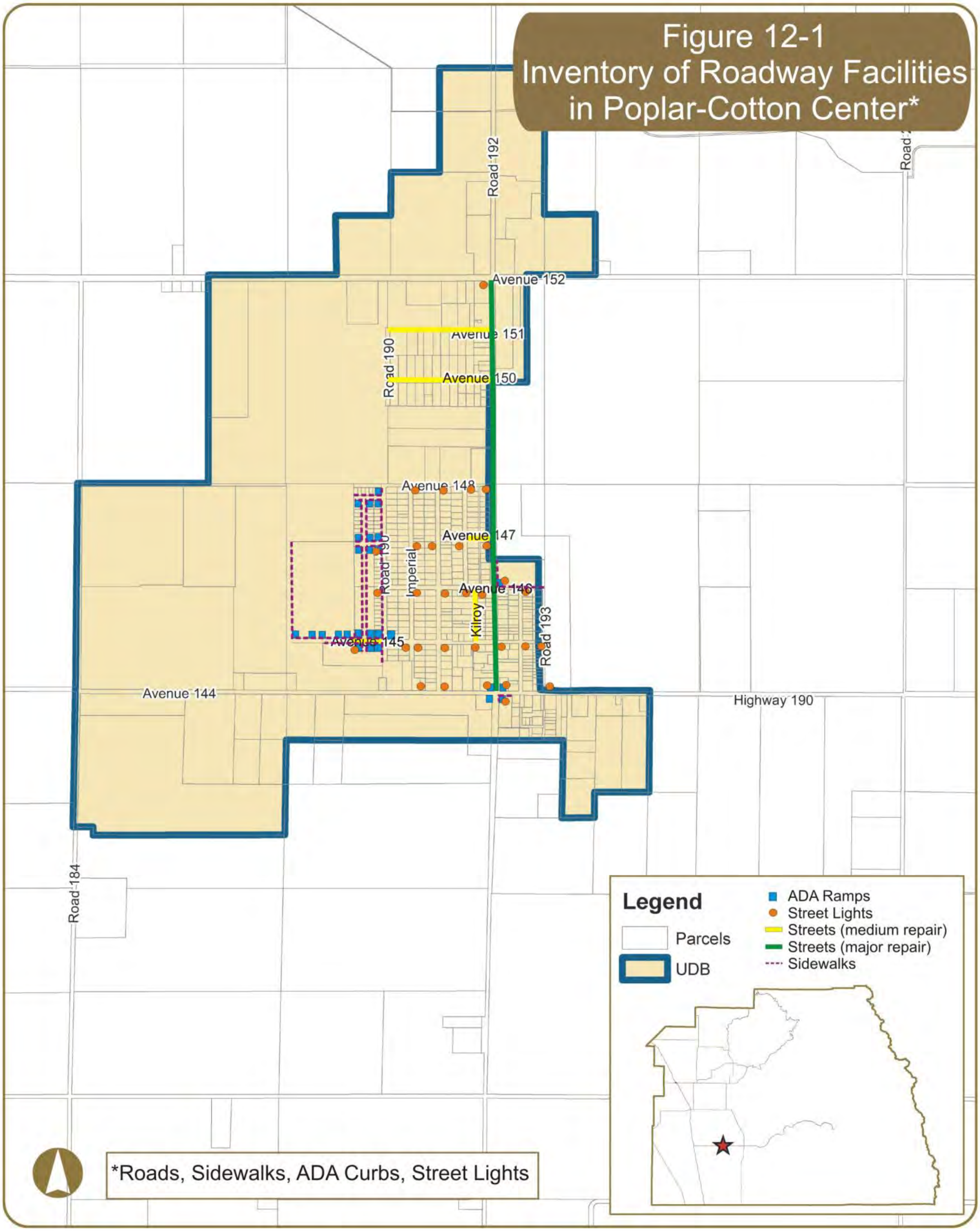


Figure 12-1
Inventory of Roadway Facilities
in Poplar-Cotton Center*
Road 192
Avenue 152
Avenue 151
Road 190
Avenue 150
Avenue 148
Avenue 147
Imperial
Avenue 146
Kilroy
Road 193
Avenue 145
Avenue 144
Highway 190
Road 184
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

13. COMMUNITY OF RICHGROVE

13.1 General Information

Richgrove is a census-designated place located in the southern portion of Tulare County, just north of the Tulare County/Kern County line. It is generally bounded by County Line Road in the south, Avenue 8 in the north, Richgrove Drive in the west, and Road 210 in the east and encompasses 0.5 square miles of land. Nearby cities and communities include Ducor approximately 8 miles to the northeast, Delano approximately 10 miles to the west, Terra Bella approximately 12 miles to the northeast, Poplar-Cotton Center approximately 18 miles to the north, and Porterville approximately 20 miles to the northeast. Richgrove is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, and vacant lands. Richgrove is a vibrant Hispanic community with a strong agricultural industry including many grape vineyards, citrus orchards, and row crops.

Based on the 2010 Census, the population in Richgrove was 2,882. Similar to other communities in Tulare County, the population of Richgrove is racially diverse with 37% White, 1% African American, 1% Native American, 5% Asian/Pacific Islander, 53% from other races, and 3% from 2 or more races. 94% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 610 housing units located within Richgrove, of which 45% are owner-occupied and 55% are renter-occupied.

13.2 Domestic Water & Wastewater

Domestic water and sewer service in Richgrove is provided by the Richgrove Community Services District (CSD), which was formed in March 1977. Table 13-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012 and Municipal Service Review, March 2007). Maps of the sewer and water systems are currently unavailable.

According to the Municipal Service Review 2007 (MSR), the Richgrove CSD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. Richgrove CSD staff has indicated that there are 523 connections to the District's water system, which consists of two active wells and a third well which is currently not operational. The CSD relies solely on groundwater for its water supply. The water is chlorinated at the well sites, and will likely have permanent chlorination installed in the future.

Assuming 550 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Richgrove CSD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,200 gallons per minute (GPM) (500 GPM fire flow, and 700 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The total supply source available for the CSD's water system is unknown. Prior to granting any sphere of influence (SOI) amendments that would increase demand for water services provided the CSD, the CSD's engineer should provide evidence that the increase in demand would not result in substandard pressures, or inadequate supply capacity for the remainder of the system. There is a project planned to install treatment on the well that is currently not in operation. It potentially will add capacity to the CSD's water system, and could also serve as a backup well should one of the existing wells be out of service.

The CSD owns and operates a Wastewater Treatment Facility (WWTF) located northeast of the community, which is operated under the provisions of Waste Discharge Requirements Order No. 83-088, issued by the California Regional Water Quality Control Board, Central Valley Region. Order No. 83-088 prescribes that the monthly average discharge flow shall not exceed 0.22 million gallons per day (MGD). According to the Wastewater User Charge Survey Report FY 2005-06 (Cal EPA State Water Resources Control Board, May 2006), the average dry weather flow at the WWTF is 0.25 MGD. Based upon this information, it is determined that the CSD's WWTF is currently operating above its permitted capacity, indicating that additional connections to the sewer system cannot be support at this time.

Treated effluent from the CSD's WWTF is recycled through irrigation of alfalfa, which is indicative of the CSD's efforts to conserve its potable water sources. The CSD recently completed a *"Wastewater Treatment Facility Performance and Capacity Study"* (Provost & Pritchard, September 2005) in order to evaluate wastewater treatment options to bring the plant into compliance regarding flow to the plant, and to address other WWTF related issues. The *"Wastewater Treatment Facility Performance and Capacity Study"* identifies potential grant sources for the implementation of the proposed improvements, planned to occur in three phases. The potential grant sources identified in the study are small community wastewater grants, community development block grants, and grant assistance provided by the economic development administration. Without increasing the capacity of its WWTF, the CSD will be unable to support any additional connections to its sewer system.

TABLE 13-1

Existing Water & Wastewater Connections in Richgrove

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
523	--	(--) [1]	523	<523 [2]	0

* Data current as of May 2012

** Data current as of March 2007

1 Excess capacity likely, but further study is needed to determine available capacity (Source: MSR)

2 System is over capacity

13.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps.

The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Richgrove does not currently have a storm drainage system.

13.4 Roads

There are various roadways in Richgrove that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 13-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 13-1 graphically displays this information on a map.

TABLE 13-2
Roads in Need of Major and Medium Repair in Richgrove

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Ames Drive	Richgrove Drive to Vineyard Drive	GRX
2	Avenue 4	Richgrove Drive to Wheatland Drive	CHIP
3	Avenue 8	Road 208 to Richgrove Drive	CHIP
4	Avenue 8	Richgrove Drive to Road 210	GRX
5	Bibee Drive	Richgrove Drive to Vineyard Drive	RCST
6	Diaz Avenue	Road 210 to west end	CHIP
7	Espinoza Avenue	Road 210 to west end	CHIP
8	Flores Avenue	Road 210 to west end	CHIP
9	Richgrove Drive	Avenue 0 to Avenue 8	GRX
10	Road 210	Grove Drive to Avenue 8	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

13.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Richgrove and are listed in Table 13-3 and displayed in Figure 13-1.

TABLE 13-3
Existing ADA Curb Ramps in Richgrove

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Ames Drive	Richgrove Drive	NE Corner
2	Ames Drive	Wheatland Drive	NE Corner
3	Ames Drive	Wheatland Drive	NW Corner
4	Ames Drive	Vineyard Drive	NW Corner
5	Avenue 4	Richgrove Drive	NE Corner
6	Avenue 4	Richgrove Drive	SE Corner
7	Avenue 4	Wheatland Drive	SW Corner
8	Avenue 4	Wheatland Drive	NE Corner
9	Avenue 4	Wheatland Drive	SE Corner
10	Avenue 4	Vineyard Drive	SE Corner
11	Avenue 4	Vineyard Drive	SW Corner
12	Avenue 4	Road 210	NW Corner
13	Avenue 4	Road 210	SW Corner
14	Avenue 8	Richgrove Drive	SE Corner
15	Avenue 8	Rowland Street	SE Corner
16	Avenue 8	Rowland Street	SW Corner
17	Avenue 8	Road 210	SW Corner
18	Bibee Drive	Richgrove Drive	NE Corner
19	Bibee Drive	Richgrove Drive	SE Corner
20	Bibee Drive	Wheatland Drive	NE Corner
21	Bibee Drive	Wheatland Drive	NW Corner
22	Bibee Drive	Wheatland Drive	SE Corner
23	Bibee Drive	Wheatland Drive	SW Corner
24	Bibee Drive	Vineyard Drive	NW Corner
25	Bibee Drive	Vineyard Drive	SW Corner
26	Chaney Drive	Richgrove Drive	NE Corner
27	Chaney Drive	Richgrove Drive	SE Corner
28	Chaney Drive	Wheatland Drive	NE Corner
29	Chaney Drive	Wheatland Drive	NW Corner
30	Chaney Drive	Wheatland Drive	SE Corner
31	Chaney Drive	Wheatland Drive	SW Corner
32	Chaney Drive	Vineyard Drive	NW Corner
33	Chaney Drive	Vineyard Drive	SW Corner
34	Diaz Avenue	Road 210	NW Corner
35	Diaz Avenue	Road 210	SW Corner

TABLE 13-3 (Continued)
Existing ADA Curb Ramps in Richgrove

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
36	Dooley Drive	Richgrove Drive	NE Corner
37	Dooley Drive	Richgrove Drive	SE Corner
38	Dooley Drive	Wheatland Drive	NE Corner
39	Dooley Drive	Wheatland Drive	NW Corner
40	Dooley Drive	Wheatland Drive	SE Corner
41	Dooley Drive	Wheatland Drive	SW Corner
42	Dooley Drive	Vineyard Drive	NW Corner
43	Dooley Drive	Vineyard Drive	SW Corner
44	Dooley Drive	Vineyard Drive	NE Corner
45	Dooley Drive	Vineyard Drive	SE Corner
46	Dooley Drive	Road 210	NW Corner
47	Ensign Drive	Richgrove Drive	NE Corner
48	Ensign Drive	Richgrove Drive	SE Corner
49	Ensign Drive	Wheatland Drive	NE Corner
50	Ensign Drive	Wheatland Drive	NW Corner
51	Ensign Drive	Wheatland Drive	SE Corner
52	Ensign Drive	Wheatland Drive	SW Corner
53	Ensign Drive	Vineyard Drive	NW Corner
54	Ensign Drive	Vineyard Drive	SW Corner
55	Espinoza Avenue	Road 210	NW Corner
56	Espinoza Avenue	Road 210	SW Corner
57	Flores Avenue	Road 210	NW Corner
58	Flores Avenue	Road 210	SW Corner
59	Francis Drive	Richgrove Drive	NE Corner
60	Francis Drive	Richgrove Drive	SE Corner
61	Francis Drive	Wheatland Drive	NE Corner
62	Francis Drive	Wheatland Drive	NW Corner
63	Francis Drive	Wheatland Drive	SE Corner
64	Francis Drive	Wheatland Drive	SW Corner
65	Francis Drive	Vineyard Drive	NW Corner
66	Francis Drive	Vineyard Drive	SW Corner
67	Francis Drive	Vineyard Drive	NE Corner
68	Francis Drive	Vineyard Drive	SE Corner
69	Francis Drive	Road 210	NW Corner
70	Francis Drive	Road 210	SW Corner

TABLE 13-3 (Continued)
Existing ADA Curb Ramps in Richgrove

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
71	Guerrero Avenue	Richgrove Drive	NE Corner
72	Guerrero Avenue	Richgrove Drive	SE Corner
73	Guerrero Avenue	Rowland Street	NE Corner
74	Guerrero Avenue	Rowland Street	NW Corner
75	Guerrero Avenue	Road 210	NW Corner
76	Guerrero Avenue	Road 210	SW Corner
77	Hernandez Avenue	Rowland Street	NE Corner
78	Hernandez Avenue	Road 210	NW Corner
79	Hernandez Avenue	Road 210	SW Corner
80	Robles Court	Road 210	NW Corner
81	Robles Court	Road 210	SW Corner

(Source: County of Tulare Public Works, August 2013)

13.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 13-4 identifies the location of existing sidewalks in Richgrove. Figure 13-1 also displays this information graphically. The sidewalks represented in Table 13-4 and Figure 13-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 13-4
Existing Sidewalks in Richgrove

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Ames Drive	Richgrove Drive to Vineyard Drive	North side
2	Avenue 4	Richgrove Drive to Road 210	North side
3	Avenue 4	Richgrove Drive to Road 210	South side
4	Avenue 8	Rowland Street to Road 210	South side
5	Bibee Drive	Richgrove Drive to Vineyard Drive	North side
6	Bibee Drive	Richgrove Drive to Vineyard Drive	South side
7	Chaney Drive	Richgrove Drive to Vineyard Drive	North side
8	Chaney Drive	Richgrove Drive to Vineyard Drive	South side
9	Diaz Avenue	Road 210 to west end	North side
10	Diaz Avenue	Road 210 to west end	South side
11	Dooley Drive	Richgrove Drive to Vineyard Drive	South side
12	Dooley Drive	Richgrove Drive to Road 210	North side
13	Ensign Drive	Richgrove Drive to Vineyard Drive	North side
14	Ensign Drive	Richgrove Drive to Vineyard Drive	South side
15	Espinoza Avenue	Road 210 to west end	North side
16	Espinoza Avenue	Road 210 to west end	South side
17	Flores Avenue	Road 210 to west end	North side
18	Flores Avenue	Road 210 to west end	South side
19	Francis Drive	Richgrove Drive to Road 210	North side
20	Francis Drive	Richgrove Drive to Road 210	South side
21	Guerrero Avenue	Richgrove Drive to Road 210	North side
22	Guerrero Avenue	Richgrove Drive to Road 210	South side
23	Hernandez Avenue	Rowland Street to Road 210	North side
24	Hernandez Avenue	Rowland Street to Road 210	South side
25	Richgrove Drive	Ames Drive to Avenue 8	East side
26	Road 210	Dooley Drive to Avenue 8	West side
27	Robles Court	Road 210 to west end	North side
28	Robles Court	Road 210 to west end	South side
29	Rowland Street	Guerrero Avenue to Avenue 8	East side
30	Rowland Street	Guerrero Avenue to Avenue 8	West side
31	Vineyard Drive	Ames Drive to Avenue 4	West side
32	Vineyard Drive	Dooley Drive to Avenue 4	East side
33	Wheatland Drive	Ames Drive to Avenue 4	East side
34	Wheatland Drive	Ames Drive to Avenue 4	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

13.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 13-5 identifies the location of existing street lights that are maintained by Tulare County, in Richgrove, as well as their specifications. Figure 13-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 13-5

Existing Street Lights in Richgrove

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	400' south of Ames Drive	Richgrove Drive	West side	1529884E	9500	W	S/E	SCE
2	Ames Drive	Richgrove Drive	NE Corner	1529880E	5800	W	W	SCE
3	Ames Drive	Wheatland Drive	NW Corner	1827972E	5800	W	S	SCE
4	Avenue 8	Rowland Street	SE Corner	4276472E	5800	C	N	SCE
5	Bibee Drive	Vineyard Drive	NW Corner	4001705E	5800	W	E	SCE
6	Bibee Drive	Wheatland Drive	SW Corner	1235761E	5800	W	NE	SCE
7	Chaney Drive	Vineyard Drive	NW Corner	4001707E	5800	W	E	SCE
8	Chaney Drive	Richgrove Drive	NE Corner	1342446E	5800	W	W	SCE
9	Chaney Drive	Wheatland Drive	NW Corner	1827973E	5800	W	S	SCE
10	Diaz Avenue	Road 210	NW Corner	N/A	5800	C	E	SCE
11	Dooley Drive	Vineyard Drive	SE Corner	4001708E	5800	W	W	SCE
12	Dooley Drive	Richgrove Drive	NE Corner	1342447E	5800	W	W	SCE
13	Dooley Drive	Wheatland Drive	SE Corner	1827974E	5800	W	N	SCE
14	Ensign Drive	Richgrove Drive	SE Corner	1235760E	5800	W	W	SCE
15	Ensign Drive	Wheatland Drive	NE Corner	1827975E	5800	W	S	SCE
16	Ensign Drive	Vineyard Drive	NW Corner	1235763E	5800	W	SE	SCE
17	Espinoza Avenue	Road 210	NW Corner	4002137E	5800	O	E	SCE
18	Flores Avenue	Road 210	NW Corner	4002136E	5800	O	E	SCE
19	Francis Drive	Richgrove Drive	SE Corner	1529870E	5800	W	W	SCE
20	Francis Drive	Wheatland Drive	NE Corner	1235769E	5800	W	SW	SCE
21	Francis Drive	Vineyard Drive	NE Corner	2100138E	5800	W	S	SCE
22	Grove Drive	Vineyard Drive	NE Corner	4001888E	5800	W	S	SCE
23	Grove Drive	Richgrove Drive	SE Corner	1235770E	5800	W	W	SCE
24	Grove Drive	Wheatland Drive	SW Corner	4002138E	5800	W	N	SCE
25	Hernandez Avenue	Rowland Street	West side	4276473E	5800	C	E	SCE
26	North of Grove Drive	Richgrove Drive	East side	1529864E	5800	W	W	SCE
27	Robles Court	Road 210	SW Corner	4276472E	5800	C	E	SCE

(Source: Tulare County Public Works, March 2013)

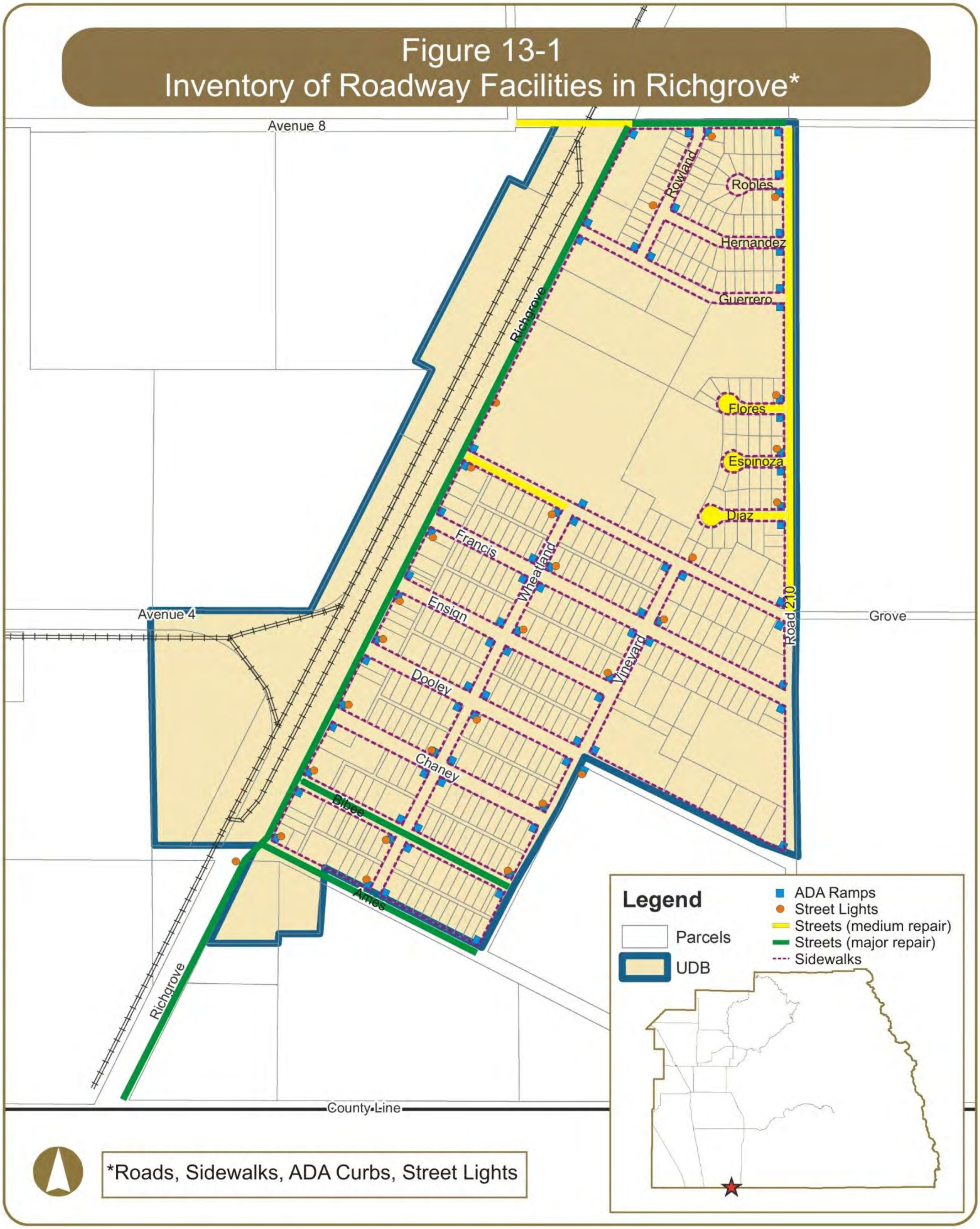


Figure 13-1
Inventory of Roadway Facilities in Richgrove*
Avenue 8
Rowland
Robles
Hernandez
Guerrero
Richgrove
Flores
Espinoza
Diaz
Francis
Wheatland
Ensign
Avenue 4
Grove
Road 210
Vineyard
Dooley
Chaney
Bibee
Ames
Richgrove
County Line
Legend
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
Parcels
UDB
*Roads, Sidewalks, ADA Curbs, Street Lights

14. Community of Springville

14.1 General Information

Springville is a census-designated place located in the eastern portion of Tulare County, northeast of Porterville. It is generally bounded by State Route (SR) 190 in the south, Mount Whitney Ditch in the north, Campbell Creek Drive in the west, and the Tule River in the east and encompasses 4.2 square miles of land. Springville is located in the Sierra Foothills along SR 190 approximately 15 miles east of Porterville. Springville is a small town rural and suburban community that prides itself on a variety of local attractions including antique shops, road and mountain bike trails, boating and fishing at the Lake Success Recreational Area, hiking and backpacking throughout the Giant Sequoia National Monument & Sequoia National Forest, and golfing at the River Island Country Club. Cities and communities surrounding Springville include Porterville approximately 15 miles to the northwest, Strathmore 17 miles to the west, Terra Bella 19 miles to the southwest and Lindsay 19 miles to the northwest.

Based on the 2010 Census, the population in Springville was 934. Similar to other communities in Tulare County, the population of Springville is racially diverse with 90% White, 1% African American, 2% Native American, 1% Asian/Pacific Islander, 3% from other races, and 4% from 2 or more races. 12% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 516 housing units located within Springville, of which 62% are owner-occupied and 38% are renter-occupied.

14.2 Domestic Water & Wastewater

Domestic water and sewer service in Springville is provided by the Springville Public Utilities District (PUD), which was formed in December 1924. Table 14-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 14-1 graphically displays the approximate location of water wells and water lines. Figure 14-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), the Springville PUD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. Springville's water supply is derived from surface water obtained from the Tule River. The Springville PUD operates and maintains a domestic water treatment facility that processes the surface water before entering the distribution system. The PUD's water system also includes two storage tanks with capacities of 150,000 and 200,000 gallons.

Assuming 410 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Springville PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,110 gallons per minute (GPM) (500 GPM fire flow, and 610 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served; The PUD's water system is capable of delivering a combined source flow of 3,940 GPM (approximately 2,900 GPM could be delivered for two hours from two storage tanks totaling 350,000 gallons), indicating that the PUD's water system meets the requirements of the Tulare County Improvement Standards. Prior to granting any sphere of influence (SOI) amendments that would increase demand for water services provided by the PUD, the PUD's engineer should provide evidence that the increase in demand would not result in substandard pressures, or inadequate supply capacity for the remainder of the system.

Based upon the requirements of the Tulare County Improvement Standards, it is estimated that the PUD's water system is operating at approximately 30% of its capacity, and is capable of supporting about 950 additional equivalent dwelling units. It should be noted that there could be special circumstances, i.e. distribution system pressure constraints, that could significantly affect this result, and a complete assessment should be completed by the PUD Engineer prior to the approval of additional connections. The water system would need to be tested at actual system pressure to determine the actual amount of available capacity for domestic and fire flow. Based upon information provided by the PUD Engineer, the PUD is currently pursuing the addition of more storage to its water system in an effort to optimize the water rights capabilities of the PUD.

The PUD owns and operates a Wastewater Treatment Facility (WWTF) located southeast of the community adjacent to and west of the Tule River, which is operated under the provisions of Waste Discharge Requirements Order No. 96-195 issued by the California Regional Water Quality Control Board (RWQCB), Central Valley Region. Order No. 96-195 prescribes that the monthly average dry weather discharge shall not exceed 0.06 million gallons per day (MGD). According to the Wastewater User Charge Survey Report FY 2005-06 (Cal EPA-State Water Resources Control Board, May 2006), the average dry weather flow at the WWTF is 0.056 MGD.

The PUD imposed a sewer connection moratorium back in 1980 due to the limited capacity of its WWTF, effectively ending most new development within its boundaries which include the commercial and residential town center of Springville along Highway 190. In 1996, the RWQCB issued Cease and Desist Order No. 96-196 requiring the Springville PUD to complete improvements to provide additional capacity at its WWTF. A compliance date of October 1, 1998 was established by the RWQCB. To date, the Springville PUD has been unable to comply with the requirements of the Cease and Desist Order due to funding shortfalls, and other setbacks. The Cease and Desist Order is still in effect as of September 2006. The PUD is in partial compliance with the RWQCB; non-compliance is related to the disposal of wastewater.

The PUD has plans to add disposal capacity to its WWTF by constructing a wastewater reclamation line over two miles in length to a property near Highway 190 and Globe Drive. The treated effluent would be stored on the property, and reused for agricultural irrigation purposes. Based upon correspondence from the PUD, it is estimated that the currently proposed project could support an additional 185 connections with allocations being based on capacity. PUD staff has indicated that there is currently a waiting list with 131 requests for sewer connections. This is an indication that additional capacity, above and beyond the currently proposed project would likely be needed in order to accommodate projected growth through year 2025.

The PUD has issued permits to a few residents within the District Boundary to place septic tanks on the property with the provision that they would connect to the sewer system once additional capacity becomes available. Other residences will be allowed to stay with septic tanks as the Springville PUD does not have sewer lines available in all areas of the District, such as Rio Vista Drive. Once additional capacity is made available at the PUD's WWTF, it is recommended that the PUD work to provide sanitary sewer pipelines in areas of the District where the infrastructure does not currently exist. Priority should be given to residents within the existing Boundary of the District, prior to expanding the District's Boundary for additional service provisions.

TABLE 14-1

Existing Water & Wastewater Connections in Springville

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
410	1,366	956	400	585 [1]	185 [1]

* Data current as of May 2012

1 A currently proposed project will add capacity as noted here (Source: Housing Element, MSR)

14.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Springville does not currently have a storm drainage system.

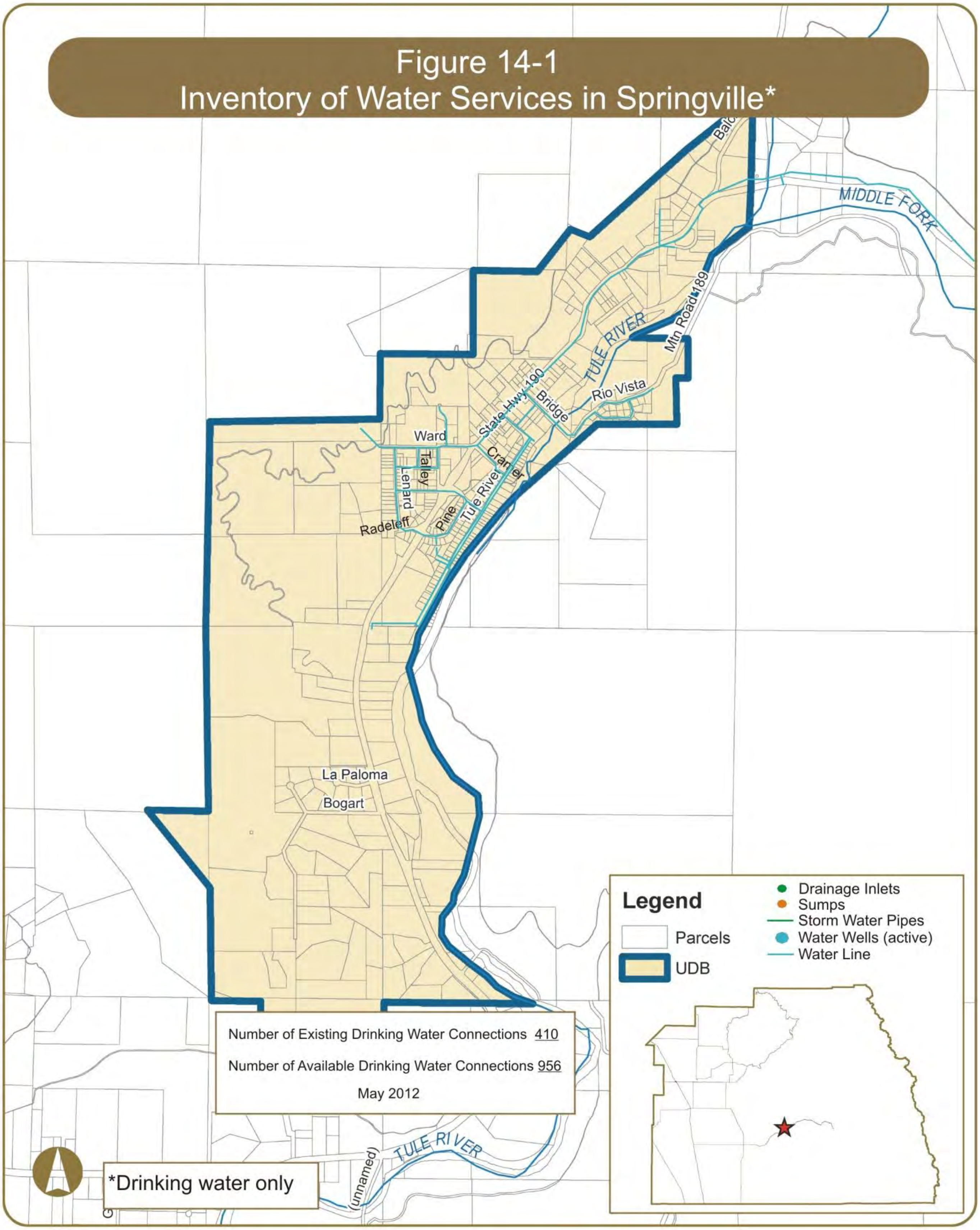


Figure 14-1
Inventory of Water Services in Springville*
MIDDLE FORK
TULE RIVER
Mtn Road 189
State Hwy 190
Bridge
Rio Vista
Ward
Talley
Lenard
Cramer
Tule River
Pine
Radeleff
La Paloma
Bogart
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 410
Number of Available Drinking Water Connections 956
May 2012
(unnamed)
TULE RIVER
*Drinking water only

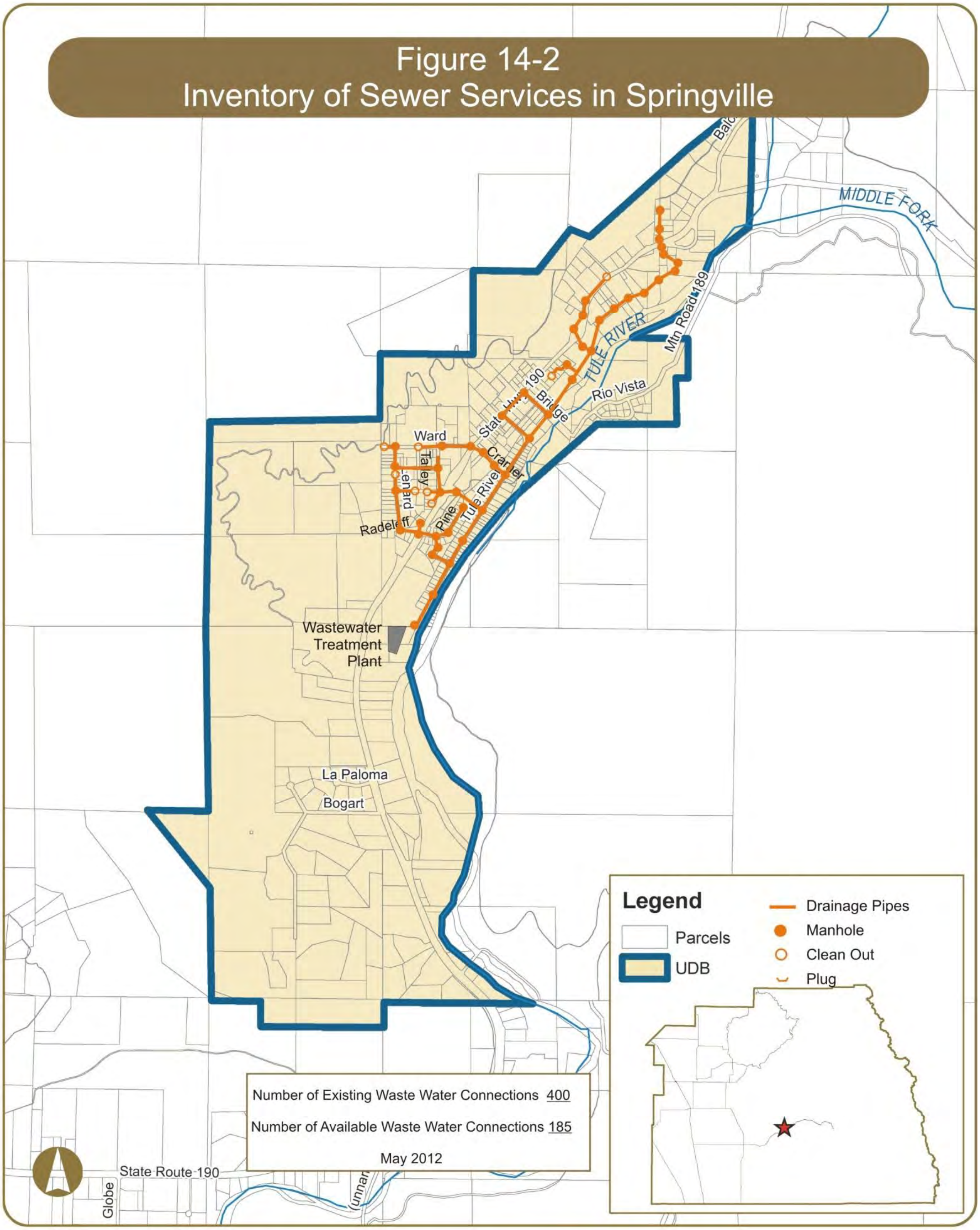


Figure 14-2
Inventory of Sewer Services in Springville
MIDDLE FORK
TULE RIVER
Mtn Road 189
Rio Vista
State Hwy 190
Bridge
Ward
Taley
Lenard
Cramer
Tule River
Pine
Radeleff
Wastewater Treatment Plant
La Paloma
Bogart
State Route 190
Globe
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Number of Existing Waste Water Connections 400
Number of Available Waste Water Connections 185
May 2012

14.4 Roads

There are various roadways in Springville that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 14-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 14-3 graphically displays this information on a map.

TABLE 14-2

Roads in Need of Major and Medium Repair in Springville

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Bridge Drive	SH 190 to Rio Vista Drive	OLAY
2	Cramer Drive	SH 190 to east end	ACST
3	La Paloma Drive	SH 190 to west end	GRX
4	Pine Drive	SH 190 to James Avenue	CHIP
5	Radeleff Avenue	Lenard Road to SH 190	CHIP
6	Rio Vista Drive	Bridge Drive to Alta Drive (south)	OLAY
7	Rio Vista Drive	Alta Drive (south) to north of Alta Drive (north)	GRX
8	Rio Vista Drive	North of Alta Drive (north) to end	CHIP
9	Talley Street	Tennis Avenue to Ward Avenue	CHIP

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

14.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are several ADA compliant curb ramps located within Springville and are listed in Table 14-3 and displayed in Figure 14-3.

TABLE 14-3
Existing ADA Curb Ramps in Springville

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Bridge Drive	SH 190	SE Corner
2	Crosswalk north of Bridge Drive	SH 190	East Side
3	Crosswalk north of Bridge Drive	SH 190	West Side
4	Ward Avenue	Driveway east of Rd Lr337	NE Corner

(Source: County of Tulare Public Works, August 2013)

14.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 14-4 identifies the location of existing sidewalks in Springville. Figure 14-3 also displays this information graphically. The sidewalks represented in Table 14-4 and Figure 14-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 14-4

Existing Sidewalks in Springville

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	SH 190	Cramer Drive to crosswalk north of Bridge Drive	East side
2	SH 190	Ward Avenue to Veterans Memorial Building	West side
3	Ward Avenue	Driveway east of Rd Lr337 to SH 190	North side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

14.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 14-5 identifies the location of existing street lights that are maintained by Tulare County, in Springville, as well as their specifications. Figure 14-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility Provider. Similary, "M" represents metal and "C" represents concrete.

TABLE 14-5
Existing Street Lights in Springville

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	At south end	Tule River Drive	East side	12140T	5800	W	N	SCE
2	Between Spring and Pine Drive	Tule River Drive	East side	12158	5800	W	N	SCE
3	James Avenue	Pine Drive	East side	731720E	5800	W	W	SCE
4	James Avenue	Lenard Road	NE Corner	4236913E	5800	W	S	SCE
5	James Avenue	SH 190	NE Corner	2024	5800	W	S	SCE
6	Malcolm Drive	Tule River Drive	South side	1855054E	5800	W	N	SCE
7	North of Cramer Drive	SH 190	NE Corner	1980713E	5800	W	SE	SCE
8	North of Malcolm Drive	Tule River Drive	East side	1895746E	5800	W	N	SCE
9	North of Pine Drive	Tule River Drive	East side	566704E	5800	W	N	SCE
10	Pine Drive	Tule River Drive	South side	NONE	5800	W	N	SCE
11	Pine Drive	SH 190	NW Corner	196139E	5800	W	S	SCE
12	Radeleff Avenue	Lenard Road	West side	2089001E	5800	W	E	SCE
13	SH 190	South of Bridge Drive	West side	1331240E	5800	C	SE	SCE
14	SH 190	Between Ward Avenue and Bridge Drive	West side	4424528E	5800	C	S	SCE
15	SH 190	Veterans Memorial Building	West side	1981241E	5800	C	SE	SCE
16	SH 190	North of Bridge Drive	West side	555987E	5800	C	SE	SCE
17	SH 190	South of crosswalk	West side	1981240E	5800	W	S	SCE
18	SH 190	BRIDGE DR	West side	661890E	5800	C	SE	SCE
19	SH 190	North of crosswalk	West side	1980725E	5800	C	S	SCE
20	SH 190	North of Bridge Drive	West side	586109E	5800	C	SE	SCE
21	SH 190	South of Veterans Memorial Building	West side	285905E	5800	C	SE	SCE
22	SH 190	Between Ward Avenue and Bridge Drive	North side	1981242E	5800	C	SE	SCE
23	SH 190	Between Ward Avenue and Bridge Drive	West side	N/A	N/A	N/A	SE	SCE
24	South of Malcolm Drive	Tule River Drive	East side	594009E	5800	W	N	SCE
25	South of Spring	Tule River Drive	East side	12151T	5800	W	N	SCE
26	Spring	Tule River Drive	North side	1980331E	5800	W	N	SCE
27	Tennis Avenue	Lenard Road	West side	4236915E	5800	W	S	SCE
28	Ward Avenue	Lenard Road	NW Corner	4236918E	5800	W	E	SCE
29	Ward Avenue	McDonald Street	SW Corner	4236922E	5800	W	E	SCE
30	Ward Avenue	North of SH 190	West side	532040E	5800	W	E	SCE

(Source: Tulare County Public Works, March 2013)

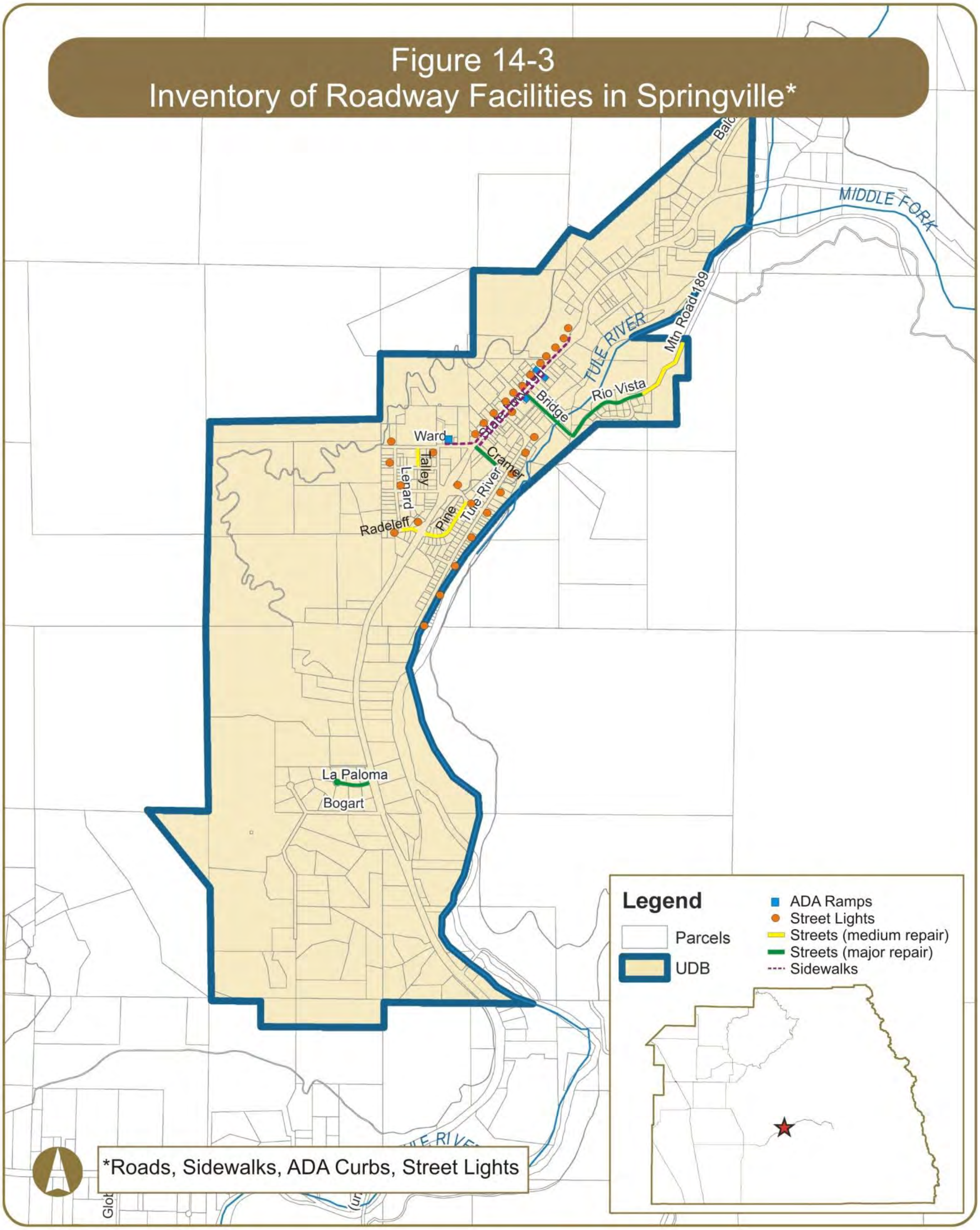


Figure 14-3
Inventory of Roadway Facilities in Springville*
MIDDLE FORK
TULE RIVER
Mtn Road 189
Rio Vista
Bridge
Ward
Talley
Lenard
Cramer
Tule River
Pine
Radeleff
La Paloma
Bogart
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

15. COMMUNITY OF STRATHMORE

15.1 General Information

Strathmore is a census-designated place located southern portion of Tulare County along State Route (SR) 65, and is situated approximately midway between Lindsay and Porterville. It is generally bounded by Avenue 188 in the south, 7th Avenue in the north, SR 65 in the west, and Friant-Kern Canal in the east and encompasses 1.4 square miles of land. Strathmore is located along SR 65 approximately six miles north of Porterville, and five miles south of Lindsay. Strathmore is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses and vacant land. Other cities and communities near Strathmore include Poplar-Cotton Center to the southwest, Woodville to the west, Exeter to the north, and Terra Bella to the south.

Based on the 2010 Census, the population in Strathmore was 2,819. Similar to other communities in Tulare County, the population of Strathmore is racially diverse with 53% White, less than 1% African American, 2% Native American, less than 1% Asian/Pacific Islander, 41% from other races, and 4% from 2 or more races. 79% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 751 housing units located within Strathmore, of which 52% are owner-occupied and 48% are renter-occupied.

15.2 Domestic Water & Wastewater

Domestic water and sewer service in Strathmore is provided by the Strathmore Public Utility District (PUD), which was formed in January 1925. Table 15-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 15-1 graphically displays the approximate location of water wells and water lines. Figure 15-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), the Strathmore PUD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections.

Strathmore's water supply is derived from a sub-contract through Tulare County for water made available from the Cross Valley Canal through an exchange with the Arvin Edison Water District. A water filtration plant was constructed in Strathmore as a joint venture between the Strathmore PUD and the Lindsay-Strathmore Irrigation District (LSID). The LSID has 22.8% ownership of the plant, and the Strathmore PUD has the remaining ownership. The Strathmore PUD also has an underground water well that is used to supplement the District's surface water supply, and as a back-up water supply. Based upon information provided by the PUD, during the peak month, the District's metered water deliveries total about 0.62 million gallons per day (MGD), or 430 gallons per minute (GPM).

Assuming 475 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Strathmore PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,150 GPM (500 GPM fire flow, and 650 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The Strathmore PUD has surface water rights of 400 acre-feet per year. Prior to granting any sphere of influence (SOI) amendments that would increase demand for water services provided by the PUD, the PUD's engineer should provide evidence that the increase in demand would not result in substandard pressures, or inadequate supply capacity for the remainder of the system. As indicated by the Engineer, pending developments near Avenue 196 and SR 65 would max out the District's water system capacity, and further expansion of water service would require the PUD to acquire additional water rights.

The PUD owns and operates a Wastewater Treatment Facility (WWTF) located southwest of the community near the southwest quadrant of the SR 65/Avenue 196 intersection that provides primary treatment of wastewater. The WWTF is operated under the provisions of Order No. 85-024 issued by the California Regional Water Quality Control Board (RWQCB), which prescribes that the monthly average daily discharge shall not exceed 0.40 MGD. According to the Wastewater User Charge Survey Report FY 2005-06 (Cal EPA-State Water Resources Control Board, May 2006), the average dry weather flow at the WWTF is 0.15 MGD, indicating that the WWTF is operating at approximately 40% of its permitted capacity.

Based upon a ratio of the current number of connections (480) to the current flow, it is estimated that the PUD's WWTF has available capacity for an additional 720 equivalent dwelling units. This is an indication that there is sufficient treatment capacity to accommodate projected growth through year 2025. Approximately six acres of eucalyptus trees and orange groves owned by the PUD are flood irrigated with treated effluent from the WWTF.

TABLE 15-1

Existing Water & Wastewater Connections in Strathmore

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
455	--	0 [1]	480	1,200	720

* Data current as of May 2012

1 Additional study is needed to determine capacity. Pending developments are likely to max out water supply (Source: MSR)

15.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 15-2 identifies the approximate location of drainage inlets and sumps in Strathmore. Figure 15-1 also displays this information graphically.

TABLE 15-2

Existing Storm Drainage Facilities in Strathmore

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Avenue 195	Wallace Road	Inlet
2	Avenue 195	Richardson Road	Inlet
3	Avenue 196	Road 226 alignment	Inlet
4	Avenue 196	Road 228	Inlet
5	Avenue 196	Orange Belt Drive	Inlet
6	Avenue 196	West of Orange Belt Drive	Inlet
7	Avenue 196	Road 230	Inlet
8	Avenue 197	Wallace Road	Inlet
9	Avenue 197	Road 231	Inlet
10	Avenue 198	Road 226	Inlet
11	Avenue 198	Orange Belt Drive	Inlet
12	Avenue 198 alignment	East of Meredith Drive	Inlet
13	Between 8th Avenue and Avenue 196	Road 228	Inlet
14	Bishop Avenue	Orange Belt Drive	Inlet
15	Bishop Avenue	Road 230	Inlet
16	Lawson Avenue	Road 231	Inlet
17	Lawson Avenue alignment	Road 232	Inlet
18	Preston Avenue	Meredith Drive	Inlet
19	Preston Avenue alignment	East of Meredith Drive	Inlet
20	Road 226 bend	Road 226	Inlet
21	Road 226 bend	Road 226	Inlet
22	Road 226 bend	Road 226	Inlet
23	South of Bishop Avenue	Orange Belt Drive	Inlet
24	White Avenue	Roth Road	Inlet

(Source: County of Tulare Public Works, 2014)

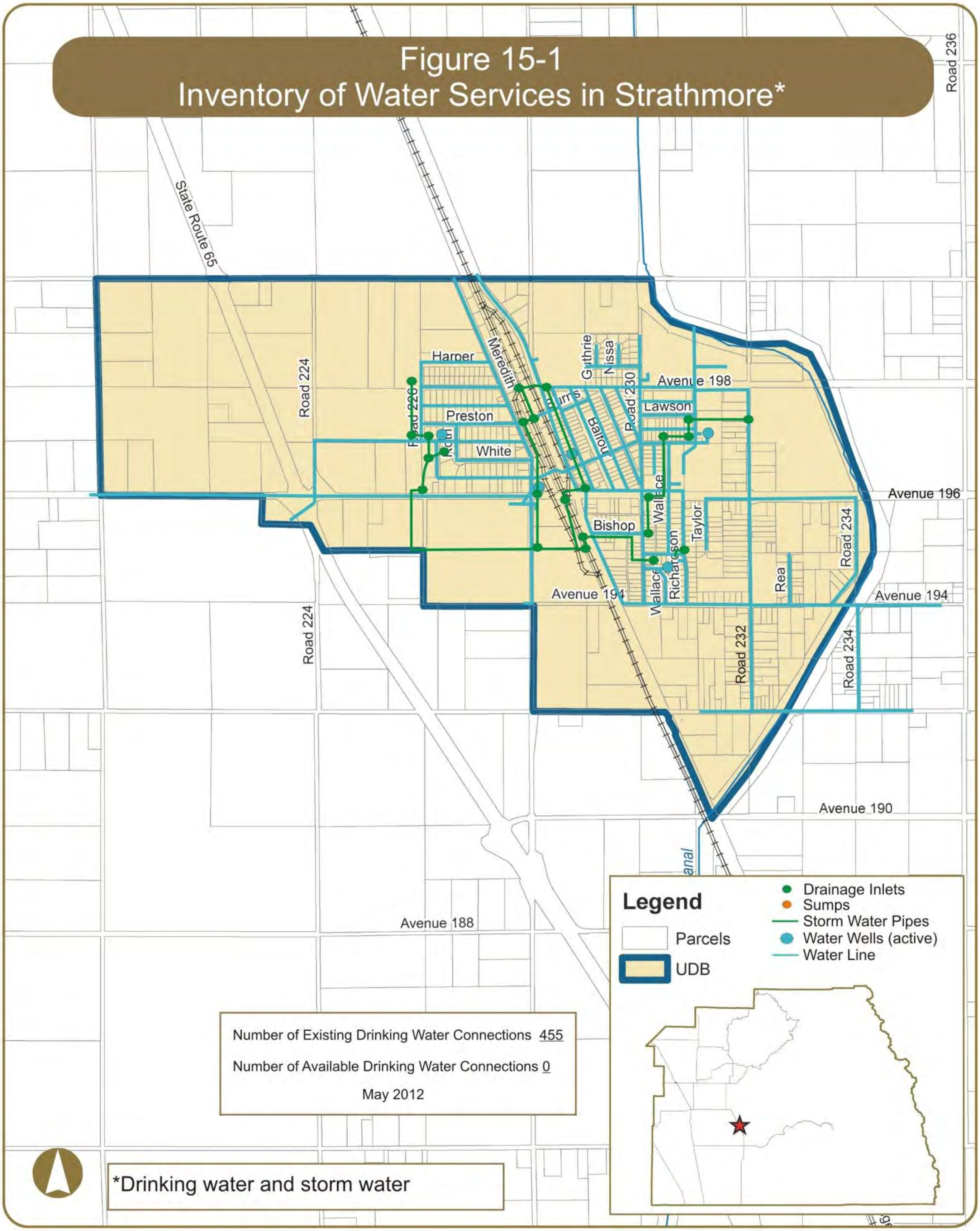


Figure 15-1
Inventory of Water Services in Strathmore*
State Route 65
Road 224
Road 226
Harper
Meredith
Preston
White
Guthrie
Nissa
Road 230
Avenue 198
Lawson
Wallace
Bishop
Taylor
Richardson
Rea
Road 234
Road 232
Avenue 196
Avenue 194
Avenue 190
Avenue 188
Road 236
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 455
Number of Available Drinking Water Connections 0
May 2012
*Drinking water and storm water

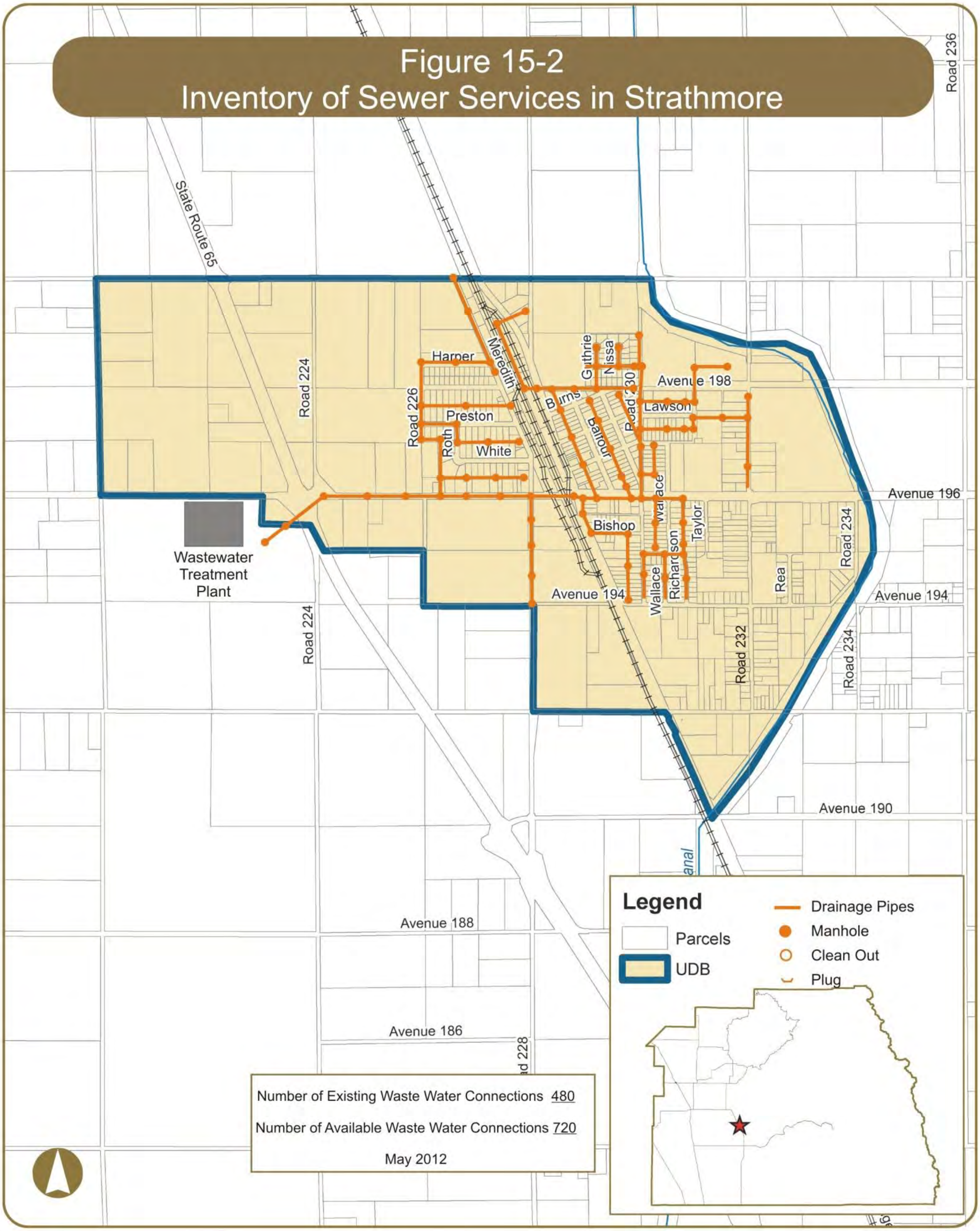


Figure 15-2
Inventory of Sewer Services in Strathmore
State Route 65
Road 224
Road 226
Road 228
Road 230
Road 232
Road 234
Road 236
Harper
Meredith
Preston
Roth
White
Burns
Guthrie
Nissa
Avenue 198
Lawson
Balfour
Wallace
Bishop
Richardson
Taylor
Rea
Avenue 196
Avenue 194
Avenue 190
Avenue 188
Avenue 186
Wastewater
Treatment
Plant
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Number of Existing Waste Water Connections 480
Number of Available Waste Water Connections 720
May 2012

15.4 Roads

There are various roadways in Strathmore that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 15-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 15-3 graphically displays this information on a map.

TABLE 15-3
Roads in Need of Major and Medium Repair in Strathmore

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 194	Road 228 to Orange Belt Drive	CHIP
2	Avenue 195	Road 230 to Richardson Road	OLAY
3	Avenue 196	Westwood Street to Road 228	OLAY
4	Avenue 196	Road 228 to Wallace Road	CHIP
5	Avenue 196	Road 232 to Road 234	CHIP
6	Avenue 197	Road 230 to Road 231	CHIP
7	Avenue 198	Orange Belt Drive to Road 230	CHIP
8	Avenue 200	Meredith Drive to Orange Belt Drive	GRX
9	Bruce Drive	Orange Belt Drive to Road 230	CHIP
10	Guthrie Court	Harper Avenue to north end	CHIP

TABLE 15-3 (Continued)
Roads in Need of Major and Medium Repair in Strathmore

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Harper Avenue	Ward Avenue to Meredith Drive	CHIP
12	Harper Avenue	Road 230 to west end	OLAY
13	Nissa Court	Harper Avenue to north end	CHIP
14	Rea Road	Avenue 194 to north end	CHIP
15	Richardson Road	Avenue 194 to Avenue 195	CHIP
16	Road 232	Avenue 194 to Avenue 196	CHIP
17	Strathmore Avenue	Orange Belt Drive to Avenue 200	CHIP
18	Taylor Road	Avenue 196 to south end	CHIP
19	Wallace Road	Avenue 194 to north end	OLAY
20	Wallace Road	Avenue 196 to Avenue 197	OLAY
21	Ward Avenue	Harper Avenue to south of Preston Avenue	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

15.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Strathmore and are listed in Table 15-4 and displayed in Figure 15-3.

TABLE 15-4
Existing ADA Curb Ramps in Strathmore

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 196	Orange Belt Drive	NE Corner
2	Avenue 196	Road 230	SE Corner
3	Avenue 196	Road 230	SW Corner
4	Avenue 196	Richardson Road	SE Corner
5	Avenue 198	Ward Avenue	NE Corner
6	Avenue 198	Meredith Drive	NW Corner
7	Avenue 198	Orange Belt Drive	NE Corner
8	Avenue 198	Road 230	NE Corner
9	Harmony Magnet Academy Driveway	Road 228	NW Corner
10	Harmony Magnet Academy Driveway	Road 228	SW Corner
11	Harper Avenue	Ward Avenue	SE Corner
12	Harper Avenue	Meredith Drive	SW Corner
13	Lawson Drive	Orange Belt Drive	SE Corner

(Source: County of Tulare Public Works, August 2013)

15.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 15-5 identifies the location of existing sidewalks in Strathmore. Figure 15-3 also displays this information graphically. The sidewalks represented in Table 15-5 and Figure 15-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 15-5
Existing Sidewalks in Strathmore

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 196	Road 226 to Road 228	South side
2	Avenue 196	Orange Belt Drive to Road 230	South side
3	Avenue 196	Orange Belt Drive to Balfour Drive	North side
4	Avenue 197	Road 230 to Wallace Road	South side
5	Avenue 198	Ward Avenue to Meredith Drive	North side
6	Avenue 198	Orange Belt Drive to Guthrie Drive	North side
7	Avenue 198	Road 230 to Road 231	North side
8	Avenue 198	Road 230 to Road 231	South side
9	Balfour Drive	Avenue 196 to Bruce Drive	West side
10	Bruce Drive	Orange Belt Drive to Balfour Drive	North side
11	Bruce Drive	Orange Belt Drive to Balfour Drive	South side
12	Meredith Drive	Avenue 198 to Harper Avenue	West side
13	Meredith Drive	Preston Avenue to Harper Avenue	East side
14	Orange Belt Drive	Avenue 196 to Bruce Drive	West side
15	Orange Belt Drive	Avenue 196 to Lawson Avenue	East side
16	Orange Belt Drive	Burns Drive to Avenue 198	West side
17	Orange Belt Drive	Avenue 198 to Strathmore Avenue	East side
18	Road 228	Avenue 194 to Harmony Magnet Academy	West side
19	Road 228	South of Avenue 196 to Road 226	West side
20	Road 230	Guthrie Drive to Avenue 197	East side
21	Ward Avenue	Avenue 198 to Harper Avenue	East side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

15.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 15-6 identifies the location of existing street lights that are maintained by Tulare County, in Strathmore, as well as their specifications. Figure 15-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 15-6
Existing Street Lights in Strathmore

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 192	Road 232	NE Corner	4292256E	5800	W	S	SCE
2	Avenue 192	Orange Belt Drive	NE Corner	4044417E	9500	W	W	SCE
3	Avenue 194	Richardson Road	NW Corner	2138882E	5800	W	S	SCE
4	Avenue 194	Wallace Road	NW Corner	1980906E	5800	W	S	SCE
5	Avenue 194	Orange Belt Drive	SE Corner	2212331E	5800	W	N	SCE
6	Avenue 194	Road 230	SW Corner	318665E	5800	W	N	SCE
7	Avenue 195	Richardson Road	NW Corner	L6505Y	5800	W	E	SCE
8	Avenue 196	Diagonal 224	SW Corner	4247543E	5800	W	W	SCE
9	Avenue 196	Road 228	SE Corner	1274524E	5800	W	N	SCE
10	Avenue 196	Road 230	SW Corner	2174740E	5800	W	N	SCE
11	Avenue 196	Richardson Road	SE Corner	2174736E	5800	W	N	SCE
12	Avenue 196	Road 232	SE Corner	2174734E	5800	W	N	SCE
13	Avenue 196	West of Orange Belt Drive	South side	2186104E	16000	W	N	SCE
14	Avenue 196	Orange Belt Drive	NE Corner	N/A	5800	S	W	SCE
15	Avenue 196	West of Road 228	North side	2086208E	5800	W	S	SCE
16	Avenue 196	West of Road 228	North side	2086207E	5800	W	S	SCE
17	Avenue 196	West of Road 228	North side	2086206E	5800	W	S	SCE
18	Avenue 196	East of Road 228	South side	2186103E	5800	W	N	SCE
19	Avenue 196	Balfour Drive	South side	4122619E	5800	W	N	SCE
20	Avenue 196	West of Balfour Drive	South side	131314E	5800	W	N	SCE
21	Avenue 196	Orange Belt Drive	SW Corner	N/A	5800	S	E	SCE
22	Avenue 196	Orange Belt Drive	NW Corner	N/A	5800	S	S	SCE
23	Avenue 196	Orange Belt Drive	SE Corner	N/A	5800	S	N	SCE
24	Avenue 197	Wallace Road	North side	2123171E	5800	W	S	SCE
25	Avenue 198	Ward Avenue	SE Corner	894492E	5800	W	N	SCE
26	Avenue 198	Meredith Drive	NW Corner	NONE	5800	W	E	SCE
27	Avenue 198	Guthrie Drive	NE Corner	894495E	5800	W	W	SCE
28	Avenue 198	Road 230	NW Corner	2041461E	5800	W	S	SCE
29	Avenue 198	Road 231	SW Corner	1051121E	5800	W	N	SCE
30	Avenue 198	Between Road 230 and Road 231	South side	894495E	5800	W	W	SCE
31	Avenue 198	Orange Belt Drive	SE Corner	4097699E	5800	W	W	SCE
32	Avenue 200	Meredith Drive	SW Corner	894493E	5800	W	E	SCE
33	Bishop Avenue	Orange Belt Drive	SE Corner	1464957E	5800	W	W	SCE
34	Bishop Avenue	Road 230	SW Corner	513006E	5800	W	E	SCE
35	Bruce Drive	Orange Belt Drive	NE Corner	506557E	5800	W	W	SCE
36	Bruce Drive	Balfour Drive	SE Corner	NONE	5800	W	N/W	SCE
37	Bruce Drive	Guthrie Drive	SE Corner	594978E	5800	W	N	SCE
38	Bruce Drive	Road 230	NE Corner	1799457E	5800	W	W	SCE
39	Burns Drive	Orange Belt Drive	NE Corner	1783025E	5800	W	W	SCE
40	Burns Drive	Balfour Drive	NW Corner	894496E	5800	W	S	SCE
41	Guthrie Drive	Road 230	NE Corner	318651E	5800	W	S	SCE
42	Harper Avenue	Meredith Drive	NW Corner	NONE	5800	W	E	SCE
43	Lawson Avenue	Road 231	East side	2147040E	5800	W	W	SCE
44	Lawson Avenue	Orange Belt Drive	NE Corner	506556E	5800	W	W	SCE
45	Lawson Avenue	Balfour Drive	NE Corner	N/A	5800	W	S/W	SCE

TABLE 15-6 (Continued)
Existing Street Lights in Strathmore

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
46	Lawson Avenue	Guthrie Drive	NE Corner	1635174E	5800	W	S	SCE
47	Lawson Avenue	Road 230	NW Corner	391887E	5800	W	S	SCE
48	North of Avenue 194	Orange Belt Drive	East side	1051120E	5800	W	E	SCE
49	North of Avenue 196	Balfour Drive	West side	1209798E	5800	W	N	SCE
50	Preston Avenue	Roth Road	SE Corner	894490E	5800	W	W	SCE
51	Preston Avenue	Meredith Drive	NW Corner	666819E	5800	W	E	SCE
52	South end	Taylor Road	West side	722295E	5800	W	E	SCE
53	Strathmore Avenue	Orange Belt Drive	NE Corner	4289648E	5800	W	S/W	SCE
54	White Avenue	Road 228	NW Corner	4210219E	5800	W	E	SCE
55	White Avenue	Roth Road	NE Corner	4022771E	5800	W	W	SCE

(Source: Tulare County Public Works, March 2013)

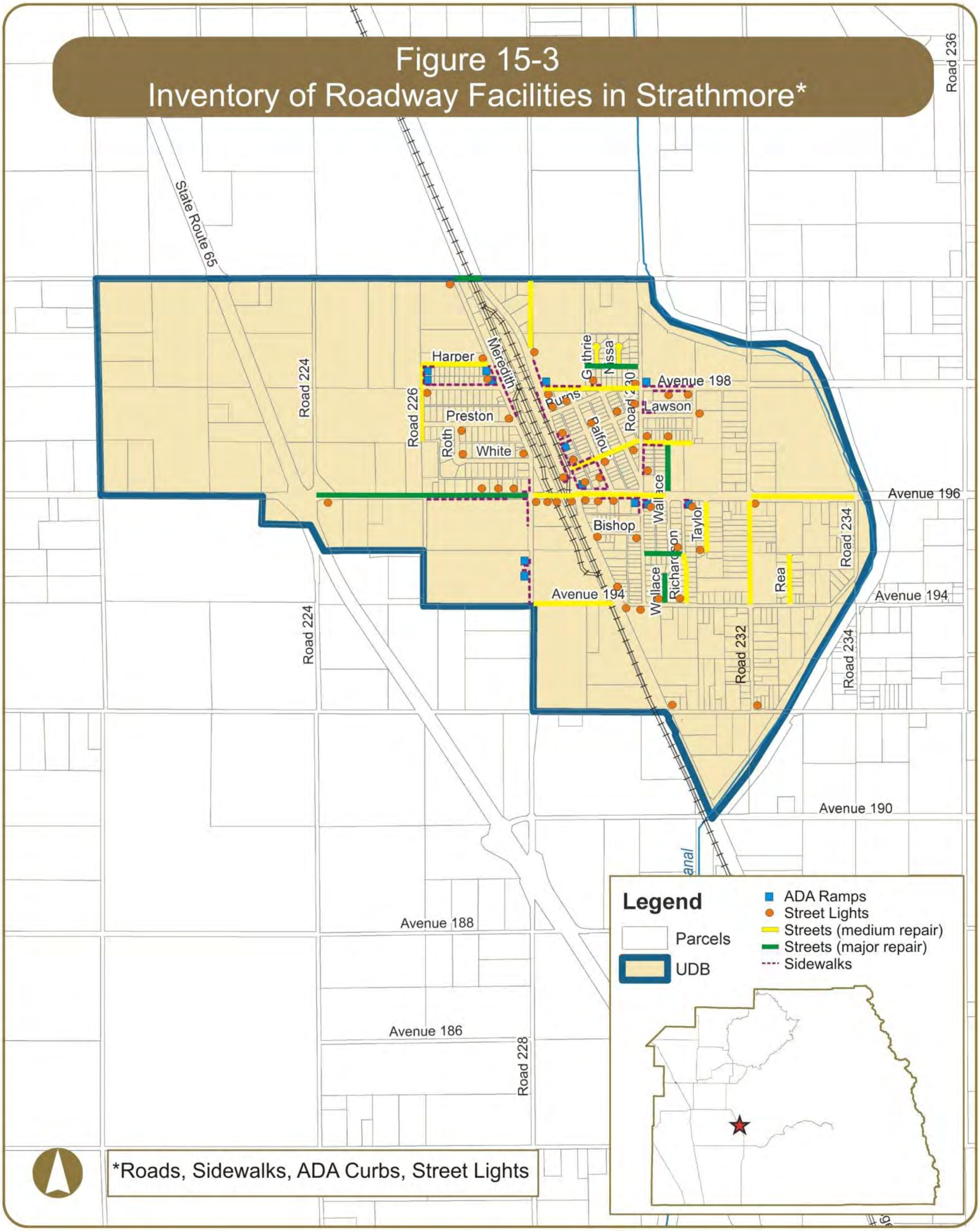


Figure 15-3
Inventory of Roadway Facilities in Strathmore*
State Route 65
Road 224
Road 226
Road 228
Road 230
Road 232
Road 234
Road 236
Harper
Meredith
Preston
Roth
White
Guthrie
Nissa
Avenue 198
Burns
Lawson
Balfour
Avenue 196
Bishop
Wallace
Richardson
Taylor
Rea
Avenue 194
Avenue 190
Avenue 188
Avenue 186
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

16. COMMUNITY OF SULTANA

16.1 General Information

Sultana is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 412 in the south, north of Avenue 416 in the north, Road 100 in the west, and Road 108 in the east and encompasses 0.4 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Sultana was 775. Similar to other communities in Tulare County, the population of Sultana is racially diverse with 41% White, 0% African American, less than 1% Native American, 1% Asian/Pacific Islander, 55% from other races, and 4% from 2 or more races. 90% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 242 housing units located within Sultana, of which 34% are owner-occupied and 66% are renter-occupied.

16.2 Domestic Water & Wastewater

Domestic water service in Sultana is provided by the Sultana Community Services District (CSD), which was formed in 1977. Domestic sewer service is provided by the Cutler Public Utilities District (PUD). Table 16-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Municipal Service Review, October 2011). Information related to domestic sewer connections, as well as sewer and water system maps, are currently unavailable.

According to the Municipal Service Review 2011 (MSR), the CSD community water system consists of 2 wells: Well No. 3 (Main Primary) and Well No. 2 (South Back-up) and Well No. 3 (North Emergency). Wells No. 3 (Main) is drilled to a depth of 430', is equipped with a 60 horse power (hp) turbine pipe that funnels water through a single check valve and into a 5500 gallon steel pressure storage tank. Well No. 3 (Main) is also equipped with a back-up propane engine in case of power failure. Well No. 2 (South Back-up) is drilled to a depth of 358' and contains a 75 hp turbine pump that also funnels water through a single check valve and into a 5500 gallon storage tank and then on to distribution. Well No. 3 (Main) is equipped with a Chlor-tec chlorine generator system that injects chlorine into the system as water is funneled through the check valve into the storage tank. Well No. 2 (South) has not been used for approximately 11 years, but can be put into service at any time if Well No. 3 (Main) ever becomes contaminated or compromised. Over the last 10 years, at least 2 other wells have been abandoned due to contamination (contaminants unknown).

Nitrates can be associated with septic systems, agricultural use of fertilizers and concentrated animal facilities. At least two dairies are located within the District's boundaries and the District is surrounded by agricultural uses, making the system vulnerable to high Nitrate levels. The District's 2009 Consumer Confidence Report (CCR) reiterates that leaks in the distribution plumbing, the presence of underground petroleum tanks, known contamination plumes, agricultural activity and sewer and drainage lines are the primary threats to Well No. 3 (Main) and Well No. 2. The 2009 CCR further indicates that the Sultana area has a history of DBCP contamination, a pesticide banned in the 1970s, but that the most recent sample test results for DBCP were non-detect.

In order to protect the system from vulnerabilities, the latest CCR indicates that the well system should be kept clean and free of weeds and debris to prevent contamination. The report further directs that cement surface seals need to be checked for cracks and immediately repaired or sealed if needed.

Sample test results for Nitrates are to be submitted each year. If a well sample is found to have at least 50% of the maximum contaminate level (MCL) allowed, which is 45 parts per million (ppm), the CSD must submit quarterly test results until the issue is resolved. The CSD must also provide notice of the violation to customers on a quarterly basis and proof of this notice must be submitted to Environmental Health, also on a quarterly basis. The CSD was notified that Well No. 2 samples exceeded the 50% threshold in 2006 and 2007. Proof of customer notification for these violations were not found in the District's Environmental Health file. The record shows that annual Nitrate testing results were not submitted for the year 2005. The 2009 CCR indicates that test samples showed Nitrate levels well below the 50% threshold.

The County's Environmental Health Department provided notice of violation to the CSD for exceeding total Coliform MCL on 5 separate occasions in the last 5 years (bacteriological samples are tested on a monthly basis). No evidence was found in the District's Environmental Health file indicating whether a notice of this violation was mailed to district customers as required by law.

Based on the information available, the system's well, storage, and distribution apparatus are reliable and not in need of major repair, only standard maintenance as suggested in the District's 2009 CCR. The water provided seems to be of good quality with minimal contamination, especially when compared to similar size districts surrounded by similar land uses.

It is also determined; however, that based on the dairy operations within district boundaries and the agricultural uses that surround it, the system is highly vulnerable to contamination, in particular Nitrates. This is evidenced by the number of district wells that have been abandoned over the last 7 years due to contamination. Although the District can rely on Well No. 2 if Well No. 3 (Main) is forced offline, as more wells are abandoned, the number of feasible well sites diminishes. In the future, this could put district customers in a situation where they must rely on bottled water for consumption and boiled water for all other uses while the prolonged process of securing a new well site takes place. Accordingly, the CSD must consider long-term solutions that will expand water supplies available to the District.

TABLE 16-1

Existing Water & Wastewater Connections in Sultana

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
150	150	0	N/A	N/A	N/A

* Data current as of October 2011

16.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Sultana does have a storm drainage system, however system information and mapping is currently unavailable.

16.4 Roads

There are various roadways in Sultana that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and

adjusting any street hardware

- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 16-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 16-1 graphically displays this information on a map.

TABLE 16-2

Roads in Need of Major and Medium Repair in Sultana

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 417	Sultana Road to east end	CHIP
2	Perkins Road	Boone Avenue to Avenue 416	GRX
3	Road 104	Court Avenue to Avenue 416	CHIP
4	Road 105	Avenue 416 to north end	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

16.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Sultana and are listed in Table 16-3 and displayed in Figure 16-1.

TABLE 16-3
Existing ADA Curb Ramps in Sultana

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 416	Road 104	NW Corner
2	Avenue 416	Sultana Road	NE Corner
3	Avenue 416	Road 105	NW Corner
4	Avenue 416	Road 105	SW Corner
5	Avenue 416	Perkins Road	SE Corner
6	Avenue 416	Perkins Road	SW Corner
7	Avenue 416	Road 106	SE Corner
8	Avenue 416	Road 106	SW Corner
9	Road 105 North Loop (north)	Road 105	NE Corner
10	Road 105 North Loop (north)	Road 105	SE Corner
11	Road 105 North Loop (south)	Road 105	NE Corner
12	Road 105 North Loop (south)	Road 105	SE Corner
13	Road 105 South Loop (north)	Road 105	NE Corner
14	Road 105 South Loop (north)	Road 105	SE Corner
15	Road 105 South Loop (south)	Road 105	NE Corner
16	Road 105 South Loop (south)	Road 105	SE Corner

(Source: County of Tulare Public Works, August 2013)

16.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 16-4 identifies the location of existing sidewalks in Sultana. Figure 16-1 also displays this information graphically. The sidewalks represented in Table 16-4 and Figure 16-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 16-4
Existing Sidewalks in Sultana

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 416	Road 104 to 250' west	North side
2	Avenue 416	Sultana Road to Road 105	North side
3	Avenue 416	Road 104 to Road 106	South side
4	Road 104	Avenue 416 to 200' north	West side
5	Road 105	Road 105 South Loop (south) to Road 105 North Loop (north)	East side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

16.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

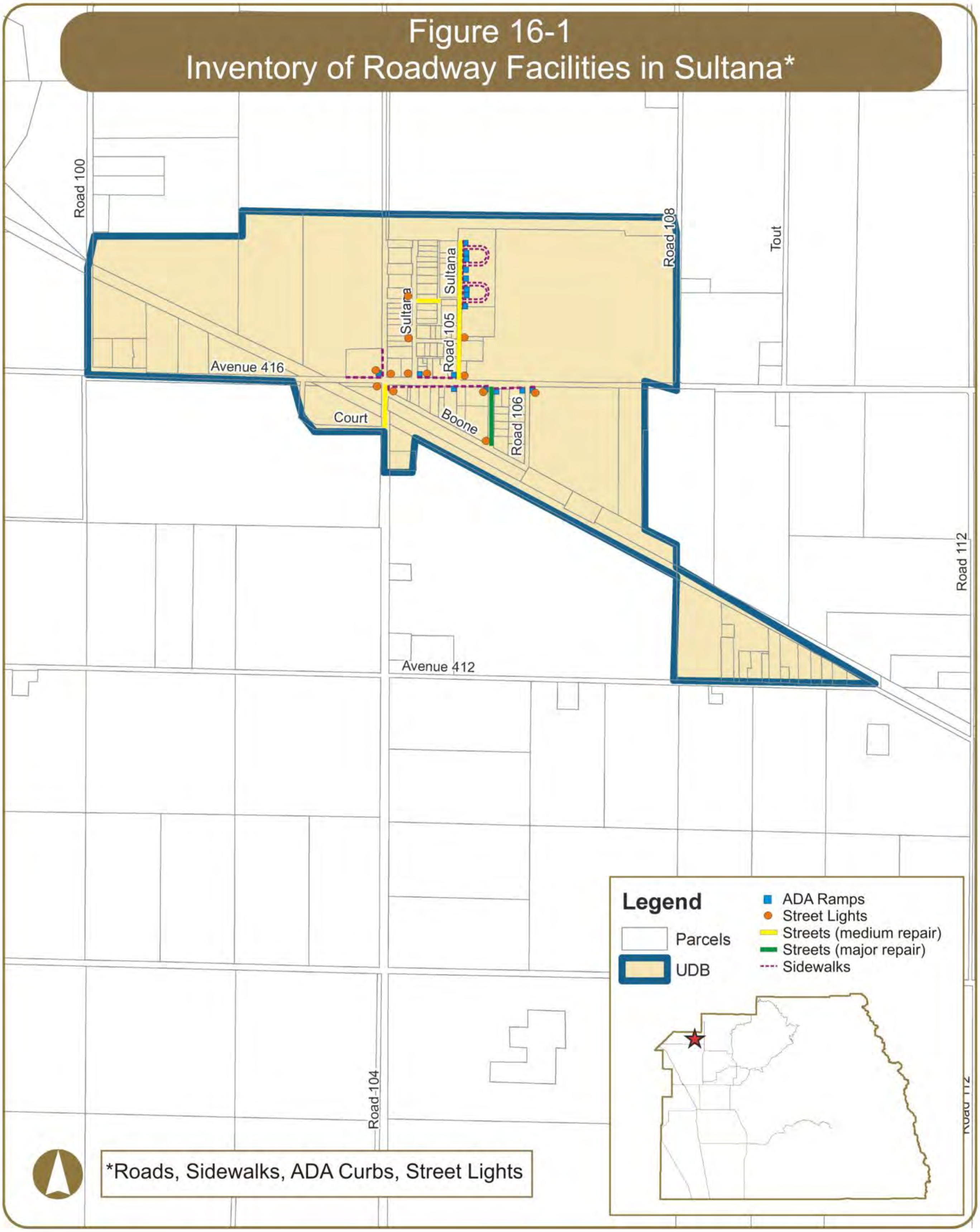
Table 16-5 identifies the location of existing street lights that are maintained by Tulare County, in Sultana, as well as their specifications. Figure 16-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 16-5
Existing Street Lights in Sultana

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 416	Perkins Road	SW Corner	2358	9500	W	N	PG&E
2	Avenue 416	Road 104	NW Corner	CO. SIGNAL	21000	S	S	PG&E
3	Avenue 416	Road 104	SE Corner	CO. SIGNAL	21000	S	N	PG&E
4	Avenue 416	Road 106	SE Corner	1453	5800	W	N	PG&E
5	Avenue 416	Road 104	NE Corner	CO. SIGNAL	21000	S	W	PG&E
6	Avenue 416	Road 104	SW Corner	CO. SIGNAL	21000	S	E	PG&E
7	Avenue 416	Sultana Road	NW Corner	1447	5800	W	S	PG&E
8	Avenue 416	Between Road 104 and	North side	1448	5800	W	S	PG&E
9	Avenue 416	Road 105	NE Corner	1449	5800	W	S	PG&E
10	Avenue 417	Sultana Road	NW Corner	1452	5800	W	E	PG&E
11	Hopson Avenue	Sultana Road	NW Corner	2426	9500	W	E	PG&E
12	Hopson Avenue	Road 105	NE Corner	1450	5800	W	W	PG&E
13	South end	Perkins Road	West side	1451	5800	W	E	PG&E

(Source: Tulare County Public Works, March 2013)

Figure 16-1
Inventory of Roadway Facilities in Sultana*



*Roads, Sidewalks, ADA Curbs, Street Lights

17. COMMUNITY OF TERRA BELLA

17.1 General Information

Terra Bella is a census-designated place located southern portion of Tulare County along State Route (SR) 65, approximately 7½ miles south of Porterville. It is generally bounded by Avenue 88 in the south, Avenue 100 in the north, SR 65 in the west, and Road 248 in the east and encompasses 2.7 square miles of land. Terra Bella is an industrial and agriculturally oriented service community surrounded by lands in agricultural production, vacant lands, and scattered rural residential homes. Cities and communities surrounding Terra Bella include Porterville to the north, Ducor to the south and Poplar-Cotton Center to the northwest. Regional access to and from the community of Terra Bella is provided by SR 65. The Tulare County/Kern County Line is located approximately 12 miles south of Terra Bella.

Based on the 2010 Census, the population in Terra Bella was 3,310. Similar to other communities in Tulare County, the population of Terra Bella is racially diverse with 43% White, less than 1% African American, 1% Native American, 2% Asian/Pacific Islander, 52% from other races, and 2% from 2 or more races. 87% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 824 housing units located within Terra Bella, of which 48% are owner-occupied and 52% are renter-occupied.

17.2 Domestic Water & Wastewater

Domestic water service in Terra Bella is provided by the Terra Bella Irrigation District, formed in January 1915. Table 17-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 17-1 graphically displays the approximate location of water wells and water lines.

According to the Municipal Service Review 2006 (MSR), the Terra Bella Irrigation District operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. The Terra Bella Irrigation District operates two separate water systems, one system which receives surface water from the Friant Kern Canal, which is treated before entering the distribution system. This system is the primary source for domestic water service within the urban area of the District.

Based upon information provided by District staff, there are approximately 700 connections which receive treated surface water. The District's water treatment plant was constructed in 1998, and was constructed to allow for additional capacity above and beyond the expected 1998 demands. The District has a water contract with the U.S. Bureau of Reclamation to receive 29,000 acre feet of water per year from the Friant Kern Canal (water which is used for both domestic and irrigation purposes). The District's treated domestic water system is in good operating condition, and could be expanded to support 600 to 700 additional connections, according to District staff.

The District operates a separate water system that has a primary function of providing irrigation water to the outlying rural areas of the community. This water is untreated. There are also domestic water connections to the District's rural (irrigation) water system that primarily serve rural residential homes related to agricultural. The water supplied by this system does not meet Federal drinking water standards, and is therefore considered to be non-potable. The District sends out a quarterly letter to all residents which receive untreated tap water indicating that the water does not meet Federal drinking water standards, is considered to be non-potable, and shall not be used for drinking or cooking. The potable water source for such connections is considered to be bottled water.

Sanitary sewer service is provided by the Terra Bella Sewer Maintenance District. A map of the sewer system is currently unavailable.

TABLE 17-1

Existing Water & Wastewater Connections in Terra Bella

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
700	1,300 - 1,400	600-700	728	780	52

* Data current as of May 2012

17.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 17-2 identifies the location of drainage inlets and sumps in Terra Bella. Figure 17-1 also displays this information graphically.

TABLE 17-2
Existing Storm Drainage Facilities in Terra Bella

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Avenue 94	Road 238	Inlet
2	Avenue 94 alignment	Clemens Road	Inlet
3	Avenue 96	East of Road 236	Inlet
4	Avenue 96	East of Road 237	Inlet
5	Magnolia Avenue	Road 237	Inlet
6	Magnolia Avenue	Road 238	Inlet
7	North of Avenue 95	Clemens Road	Inlet
8	Pepper Avenue	Road 238	Inlet

(Source: County of Tulare Public Works, 2014)

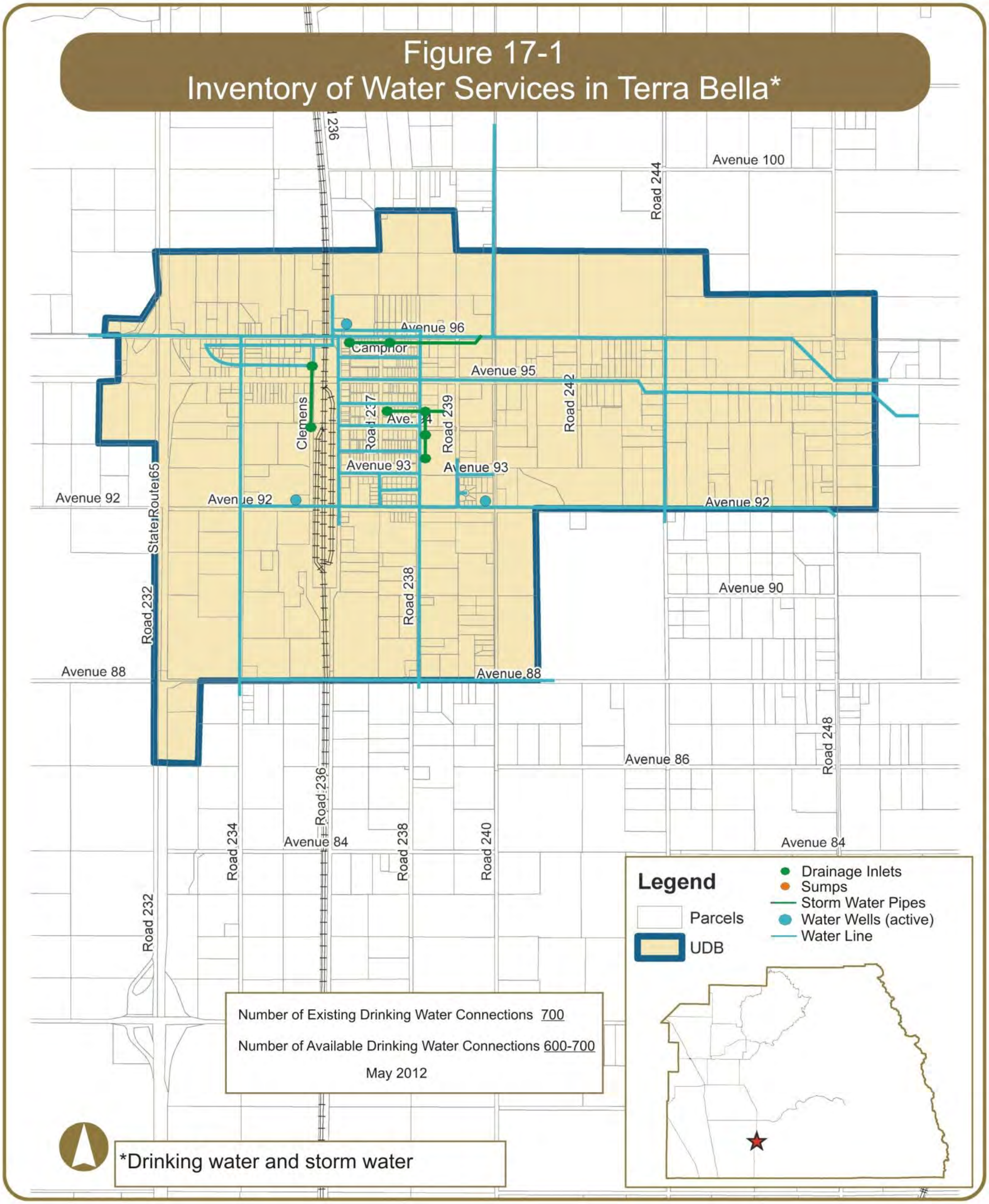


Figure 17-1
Inventory of Water Services in Terra Bella*
Avenue 100
Road 244
Avenue 96
Camphor
Avenue 95
Road 242
Clemens
Road 237
Ave. 94
Road 239
Avenue 93
Avenue 92
State Route 65
Avenue 90
Road 238
Road 232
Avenue 88
Avenue 86
Road 248
Road 236
Avenue 84
Road 234
Road 240
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 700
Number of Available Drinking Water Connections 600-700
May 2012
*Drinking water and storm water

17.4 Roads

There are various roadways in Terra Bella that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 17-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 17-2 graphically displays this information on a map.

TABLE 17-3
Roads in Need of Major and Medium Repair in Terra Bella

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	2nd Street	Pepper Avenue to Terra Bella Avenue	CHIP
2	3rd Street	Avenue 88 to Avenue 92	CHIP
3	4th Street	Terra Bella Avenue to Avenue 96	CHIP
4	5th Street	Terra Bella Avenue to south end	CHIP
5	Acacia Avenue	Road 236 to 3rd Street	CHIP
6	Avenue 88	Road 234 to west end	GRX
7	Avenue 88	Road 234 to Road 236	CHIP
8	Avenue 88	Road 240 to Road 248	CHIP
9	Avenue 92	Road 234 to Clemens Road	CHIP
10	Avenue 92	Road 236 to 3rd Street	GRX

TABLE 17-3 (Continued)

Roads in Need of Major and Medium Repair in Terra Bella

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Avenue 92	Road 240 to Road 244	CHIP
12	Avenue 92	Road 244 to Road 248	GRX
13	Avenue 96	Road 236 to west end	CHIP
14	Avenue 96	Road 236 to 3rd Street	GRX
15	Avenue 96	3rd Street to 5th Street	CHIP
16	Avenue 96	Road 244 to Road 248	CHIP
17	Camphor Avenue	Road 236 to 3rd Street	CHIP
18	Clemens Road	Avenue 92 to Terra Bella Avenue	CHIP
19	Palm Drive	Road 239 to east end	CHIP
20	Road 234	Terra Bella Avenue to Avenue 96	CHIP
21	Road 236	Avenue 88 to Avenue 96	CHIP
22	Road 240	Avenue 88 to Avenue 92	CHIP
23	Road 242	Terra Bella Avenue to Avenue 96	CHIP
24	Road 244	Avenue 90 to Terra Bella Avenue	CHIP
25	Road 248	Avenue 92 to Terra Bella Avenue	CHIP
26	Road 248	Terra Bella Avenue to Avenue 96	GRX
27	Terra Bella Avenue	SR 65 to 4th Street	CHIP
28	Terra Bella Avenue	4th Street to Road 248	GRX

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

17.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012.

According to the survey, there are various ADA compliant curb ramps located within Terra Bella and are listed in Table 17-4 and displayed in Figure 17-2.

TABLE 17-4
Existing ADA Curb Ramps in Terra Bella

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 92	Road 238	SE Corner
2	Avenue 92	Road 239	SW Corner
3	Avenue 93	Road 236	NE Corner
4	Avenue 94	Road 236	NE Corner
5	Avenue 94	Road 236	SE Corner
6	Avenue 94	Road 237	NW Corner
7	Avenue 94	Road 237	SW Corner
8	Avenue 96	Road 236	SW Corner
9	Avenue 96	Road 237	SE Corner
10	Camphor Avenue	Road 237	SE Corner
11	Magnolia Avenue	Road 236	NE Corner
12	Terra Bella Avenue	Road 234	SE Corner
13	Terra Bella Avenue	Clemens Road	NW Corner
14	Terra Bella Avenue	Clemens Road	SW Corner
15	Terra Bella Avenue	Road 236	NE Corner
16	Terra Bella Avenue	Road 236	SE Corner
17	Terra Bella Avenue	Road 237	NE Corner
18	Terra Bella Avenue	Road 237	NW Corner
19	Terra Bella Avenue	Road 238	NW Corner

(Source: County of Tulare Public Works, August 2013)

17.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the ADA and ABA guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 17-5 identifies the location of existing sidewalks in Terra Bella. Figure 17-2 also displays this information graphically. The sidewalks represented in Table 17-5 and Figure 17-2 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 17-5

Existing Sidewalks in Terra Bella

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 92	Road 237 to Road 238	North side
2	Avenue 92	Road 238 to Road 239	South side
3	Avenue 96	Road 236 to Road 237	North side
4	Avenue 96	Road 237 to Road 238	South side
5	Camphor Avenue	Road 237 to Road 238	South side
6	Camphor Avenue	West of Road 237 to Road 238	North side
7	Palm Avenue	Road 237 to Road 238	North side
8	Palm Avenue	Road 237 to Road 238	South side
9	Road 236	Magnolia Avenue to Terra Bella Avenue	East side
10	Road 237	Terra Bella Avenue to Avenue 96	East side
11	Road 237	Terra Bella Avenue to Avenue 96	West side
12	Road 238	Avenue 92 to 325' south	East side
13	Road 238	Pepper Avenue to Avenue 94	East side
14	Road 238	Terra Bella Avenue to Avenue 96	West side
15	Terra Bella Avenue	Road 236 to Road 238	North side
16	Terra Bella Avenue	Road 236 to Road 237	South side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

17.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 17-6 identifies the location of existing street lights that are maintained by Tulare County, in Terra Bella, as well as their specifications. Figure 17-2 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 17-6
Existing Street Lights in Terra Bella

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 92	Road 236	NE Corner	638596E	5800	W	W	SCE
2	Avenue 92	Road 237	NW Corner	4276498E	5800	W	S	SCE
3	Avenue 92	Road 238	SE Corner	1869733E	5800	W	W	SCE
4	Avenue 93	Road 239	SE Corner	1783369E	5800	W	W	SCE
5	Avenue 93	Road 236	NE Corner	NONE	5800	W	W	SCE
6	Avenue 93	Road 237	SW Corner	417424E	5800	W	E	SCE
7	Avenue 93	Road 238	SE Corner	417421E	5800	W	W	SCE
8	Avenue 94	Road 236	NE Corner	986959E	5800	W	W	SCE
9	Avenue 94	Road 237	SW Corner	4691367E	5800	W	E	SCE
10	Avenue 94	Road 238	SE Corner	756253E	5800	W	W	SCE
11	Avenue 95	Road 234	NW Corner	2213086E	5800	W	S	SCE
12	Avenue 95	Clemens Road	NW Corner	4210445E	5800	W	S	SCE
13	Avenue 95	Road 236	NW Corner	2186665E	5800	W	E	SCE
14	Avenue 95	Road 237	NW Corner	345669E	5800	W	S	SCE
15	Avenue 95	Road 238	SE Corner	4076137E	5800	W	N	SCE
16	Avenue 95	Road 239	SE Corner	X16234E	9500	W	N	SCE
17	Avenue 95	SR 65	NE Corner	12-09	16000	S	S	SCE
18	Avenue 96	Road 234	SW Corner	802043E	5800	W	N	SCE
19	Avenue 96	Clemens Road	SW Corner	802039E	5800	W	N	SCE
20	Avenue 96	Road 236	NE Corner	2088954E	5800	W	W	SCE
21	Avenue 96	Road 237	SW Corner	802033E	5800	W	N	SCE
22	Avenue 96	Road 238	SE Corner	802030E	5800	W	N	SCE
23	Camphor Avenue	Road 236	West side	1635734E	5800	W	E	SCE
24	Camphor Avenue	Road 237	SW Corner	345667E	5800	W	E	SCE
25	Camphor Avenue	Road 238	East side	4200997E	5800	W	W	SCE
26	Camphor Avenue	Between Road 237 and Road 238	South side	401285E	5800	W	N	SCE
27	Magnolia Avenue	Road 236	SW Corner	1634983E	5800	W	E	SCE
28	Magnolia Avenue	Road 237	SW Corner	567675E	5800	W	E	SCE
29	Magnolia Avenue	Road 238	SE Corner	1783357E	5800	W	W	SCE
30	Palm Avenue	Road 238	NE Corner	821021E	5800	W	W	SCE
31	Palm Avenue	Road 237	SW Corner	4261953E	5800	W	E	SCE
32	Palm Drive	Road 239	NE Corner	937960E	5800	W	W	SCE
33	Pepper Avenue	Road 236	NE Corner	986958E	5800	W	W	SCE
34	Pepper Avenue	Road 237	NE Corner	4600103E	5800	W	E	SCE
35	Pepper Avenue	Road 238	NE Corner	894594E	5800	W	W	SCE

(Source: Tulare County Public Works, March 2013)

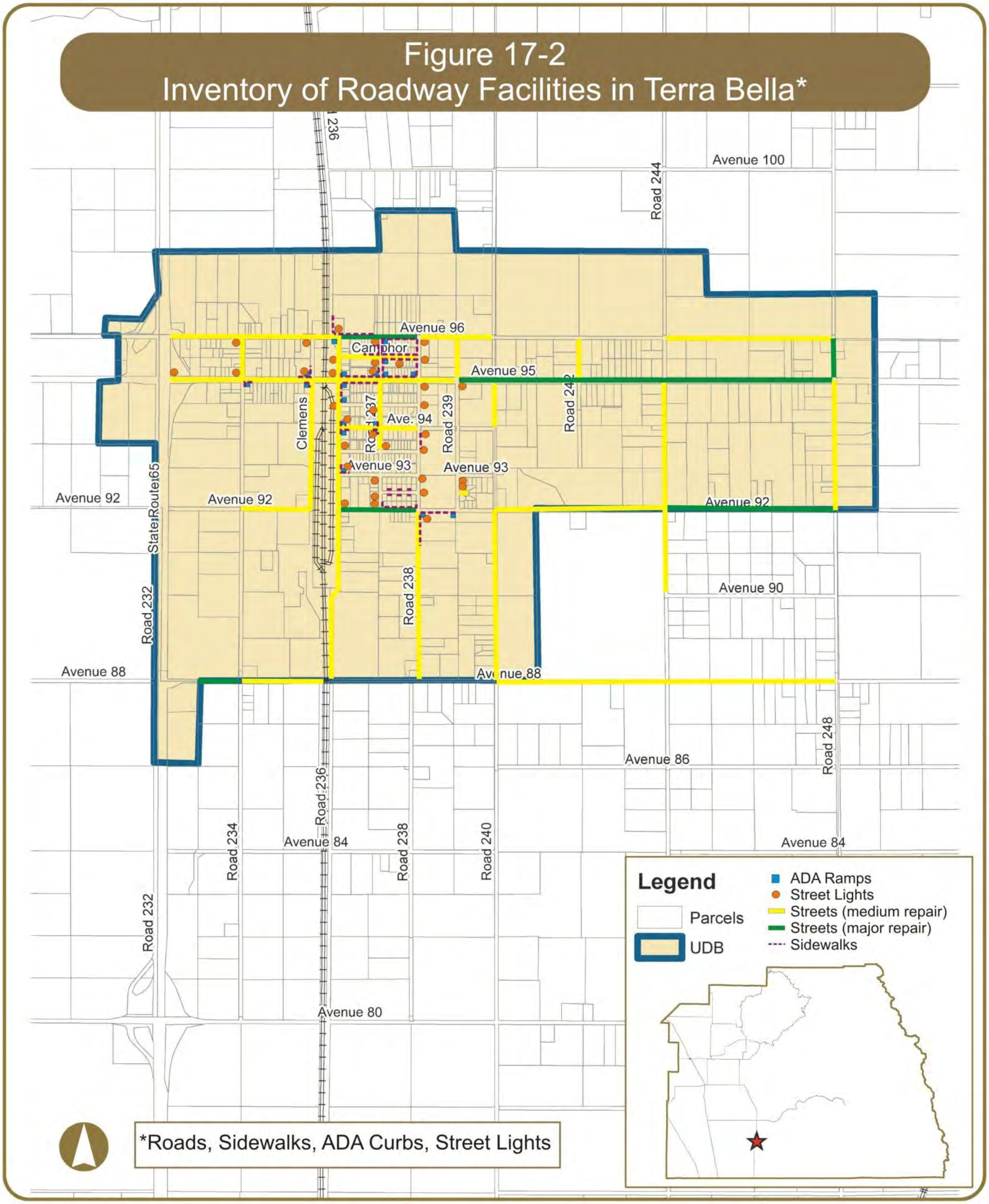


Figure 17-2
Inventory of Roadway Facilities in Terra Bella*
Avenue 100
Road 244
Avenue 96
Camphor
Avenue 95
Road 242
Clemens
Road 237
Ave. 94
Road 239
Avenue 93
Avenue 93
Avenue 92
State Route 65
Avenue 92
Avenue 92
Avenue 90
Road 238
Road 232
Avenue 88
Avenue 88
Avenue 86
Road 248
Road 236
Avenue 84
Avenue 84
Road 234
Road 238
Road 240
Road 232
Avenue 80
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

18. COMMUNITY OF THREE RIVERS

18.1 General Information

Three Rivers is a census-designated place located in the northern portion of Tulare County. It is generally bounded by South Fork Drive in the south, Sequoia and Kings Canyon National Parks in the north, North Fork Drive in the west, and Salt Creek in the east and encompasses 44.5 square miles of land. It is directly served by State Route (SR) 198.

Based on the 2010 Census, the population in Three Rivers was 2,182. Similar to other communities in Tulare County, the population of Three Rivers is racially diverse with 91% White, less than 1% African American, 1% Native American, 1% Asian/Pacific Islander, 3% from other races, and 3% from 2 or more races. 10% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 1,312 housing units located within Three Rivers, of which 73% are owner-occupied and 27% are renter-occupied.

18.2 Domestic Water & Wastewater

Domestic water service in Three Rivers is provided by the Three Rivers Community Services District (CSD), which was formed in 1973. Three Rivers does not have sanitary sewer service and relies on individual or community septic systems. Table 18-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Housing Element, May 2012). Mapping of the water system is currently unavailable.

According to the Municipal Service Review 2011 (MSR), the CSD's web page lists the following as service provided by the CSD:

- Frequent monitoring or rivers and wells
- Provide low cost drinking water testing
- No charge septic system inspections
- Responds to environmental complaints (site is tested if not monitored already)

All landowners within the area are considered customers and they are tracked according to assessors parcel number (APN). There are currently 1350 parcels being serviced by the Three Rivers CSD. The Three Rivers CSD reported no infrastructure deficiencies. The District does not plan to expand or acquire new infrastructure in the foreseeable future.

Upgrade and maintenance of equipment and supplies or capacity expansion associated with district services does not require costly capital expenditures like those associated with sewer or potable water service. Additionally, equipment and supplies used to provide services are not susceptible to sudden failure or being compromised in any other way. It is determined that the District's facilities and infrastructure are in adequate condition and that the District's current capacity is sufficient to serve the District's existing population. It is further determined that future increased demand can be accommodated in a timely and adequate manner based on the limited services the District provides.

TABLE 18-1
Existing Water & Wastewater Connections in Three Rivers

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
90	**	**	Septic only	--	--

* Data current as of May 2012

** Three Rivers CSD does not have the information. Water service is provided by over 35 private water companies.

18.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Three Rivers does not currently have a storm drainage system.

18.4 Roads

There are various roadways in Three Rivers that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 18-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 18-1 graphically displays this information on a map.

TABLE 18-2
Roads in Need of Major and Medium Repair in Three Rivers

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Black Oak Drive	Quail Run Drive to north end	CHIP
2	Blossom Drive	Old Three Rivers to east end	CHIP
3	Cherokee Oaks Drive	Crystal Drive (east connection) to Meadow Drive	CHIP
4	Craig Drive	Skyline Drive to north end	CHIP
5	Crest Lane	Sierra King Lane to north end	CHIP
6	Crystal Drive	Cherokee Oaks Drive (west connection) to Cherokee Oaks Drive (east connection)	CHIP
7	Dinely Drive	SR 198 to north end	CHIP
8	Elk Drive	Cherokee Oaks Drive to south end	CHIP
9	Ferndale Drive	Grouse Drive to west end	CHIP
10	Grouse Drive	Ferndale Drive to south end	CHIP
11	Hammond Drive	Mineral King Road to Oak Grove Drive (east connection)	CHIP
12	Heidi Drive	South Fork Drive to south end	CHIP
13	Kaweah Drive	North Fork Drive to east end	CHIP
14	La Cienega Drive	Alta Acres Drive to south end	GRX
15	Manzanita Drive	Skyline Drive to north end	CHIP

TABLE 18-2 (Continued)

Roads in Need of Major and Medium Repair in Three Rivers

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
16	Meadow Drive	Quail Drive to Cherokee Oaks Drive	CHIP
17	Mineral King Road	SR 198 to Sierra King Drive	GRX
18	Mineral King Road	Sierra King Drive to 0.35 miles east of Oak Grove Drive	CHIP
19	North Fork Drive	SR 198 to 4+ miles north	CHIP
20	Oak Drive	Skyline Drive to south end	CHIP
21	Oak Grove Drive	Hammond Drive to south end	CHIP
22	Oak Grove Drive	Mineral King Road to south end	CHIP
23	Oak Ridge Drive	West end to east end	CHIP
24	Old Three Rivers Road	Blossom Drive to South Fork Drive	CHIP
25	Pierce Drive	SR 198 (south connection) to SR 198 (north connection)	CHIP
26	Quail Run Drive	South Fork Drive to east end	CHIP
27	Sierra King Drive	Mineral King Road to Crest Lane	GRX
28	Sierra King Drive	Crest Lane to Hammond Drive	CHIP
29	Skyline Drive	Oak Drive to Craig Drive	CHIP
30	Skyline Drive	Craig Drive to east end	GRX
31	South Fork Drive	Old Three Rivers Road to Quail Run Drive	CHIP
32	South Fork Drive	Blossom Drive to Heidi Drive	GRX
33	South Fork Drive	Heidi Drive to 1 mile east	CHIP
34	Terminus Court	Ferndale Drive to south end	OLAY

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

18.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Three Rivers.

18.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Three Rivers.

18.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 18-3 identifies the location of existing street lights that are maintained by Tulare County, in Three Rivers, as well as their specifications. Figure 18-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 18-3
Existing Street Lights in Three Rivers

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	North Fork Drive	North of bridge	North side	4417189E	5800	W	S	SCE
2	North Fork Drive	SR 198	SE Corner	4334777E	5800	W	N	SCE
3	North of North Fork Drive	SR 198	South side	N/A	5800	W	N	SCE
4	North of North Fork	SR 198	North side	4629209E	5800	W	N	SCE
5	North of North Fork Drive	SR 198	North side	N/A	N/A	N/A	S	SCE
6	South of Eggers Drive	SR 198	North side	4464488E	9500	W	S	SCE
7	South of Eggers Drive	SR 198	North side	4354778E	5800	W	S	SCE

(Source: Tulare County Public Works, March 2013)

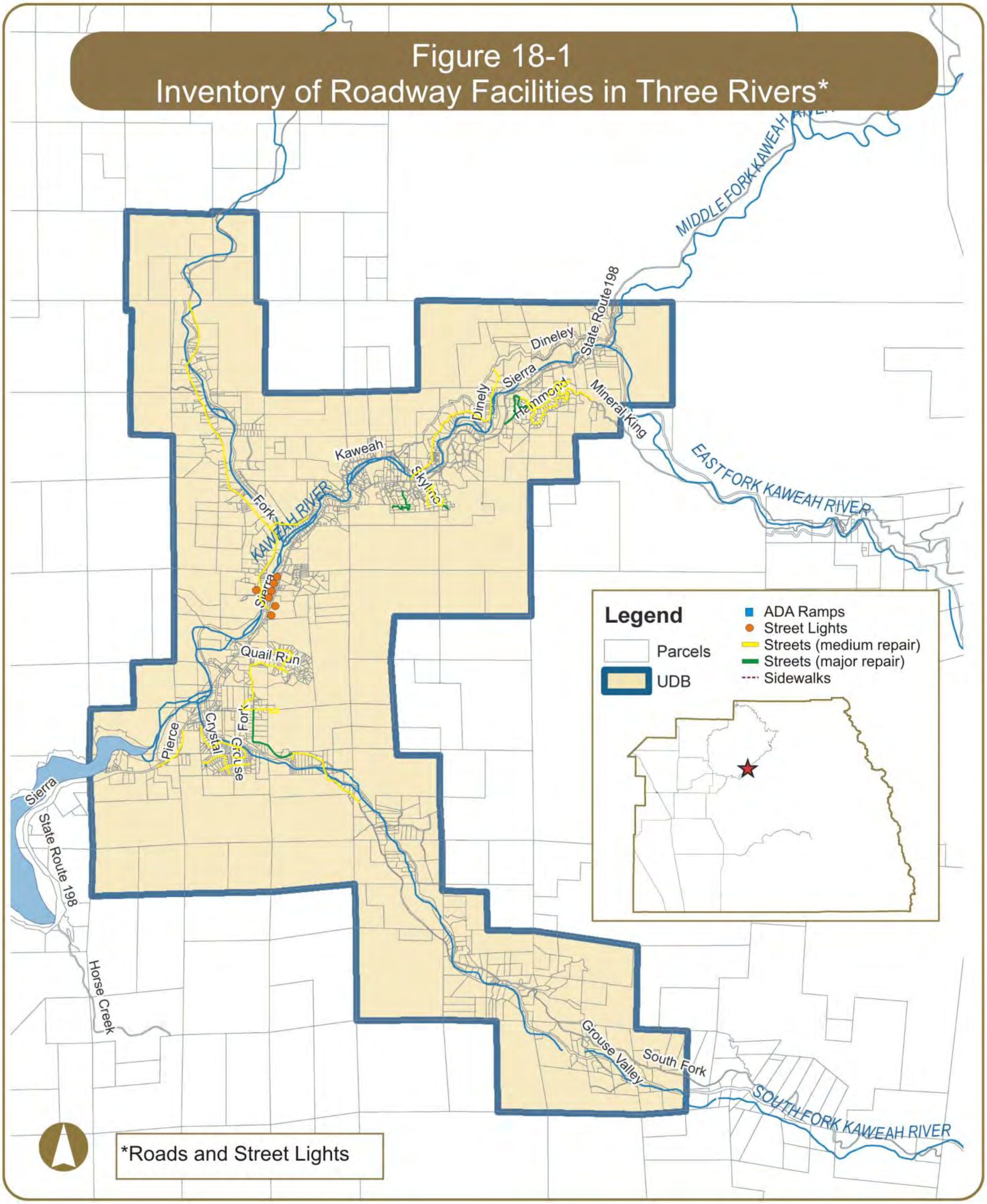


Figure 18-1
Inventory of Roadway Facilities in Three Rivers*
MIDDLE FORK KAWEAH RIVER
State Route198
Dineley
Sierra
Dinely
Hammond
Mineral King
EAST FORK KAWEAH RIVER
Kaweah
Skyline
Fork
KAWEAH RIVER
Sierra
Quail Run
Pierce
Crystal
Fork
Grouse
Sierra
State Route 198
Horse Creek
Grouse Valley
South Fork
SOUTH FORK KAWEAH RIVER
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

19. COMMUNITY OF TIPTON

19.1 General Information

Tipton is a census-designated place located in the southwest portion of Tulare County, south of Tulare along State Route (SR) 99. It is generally bounded by Poplar Avenue in the south, Avenue 152 in the north, Road 112 in the west, and Callison Road in the east and encompasses one (1) square mile of land. Tipton is located approximately 8 miles south of Tulare. The community is square in shape, and is bisected in a north-south direction by SR 99 and the Union Pacific Railroad tracks, which divides the community into two approximately equal sized areas. Tipton is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land. Cities and communities surrounding Tipton include Tulare to the north, Pixley to the south, and the communities of Woodville and Poplar to the east.

Based on the 2010 Census, the population in Tipton was 2,543. Similar to other communities in Tulare County, the population of Tipton is racially diverse with 60% White, less than 1% African American, 1% Native American, less than 1% Asian/Pacific Islander, 36% from other races, and 2% from 2 or more races. 84% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 645 housing units located within Tipton, of which 48% are owner-occupied and 52% are renter-occupied.

19.2 Domestic Water & Wastewater

Domestic water and sewer service in Tipton is provided by the Tipton Community Services District (CSD), which was formed in 1959. Table 19-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 19-1 graphically displays the approximate location of water wells and water lines. Figure 19-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), Tipton's water supply is derived from two operational underground wells that provide an ample, excellent water supply requiring no chlorination or treatment. The two wells have a total maximum production efficiency of approximately 1,500 gallons per minute (GPM). The Tipton CSD also has two wells that are currently inactive; one is currently nonoperational due to oil contamination and the other has been abandoned as a result of nitrate contamination.

The Tipton CSD recently started requiring water meters to be installed for all new development projects although the CSD currently continues to charge a flat rate for water service. Billing on a flat rate schedule for water service does not promote water conservation, which is becoming a critical issue within Tulare County, as the water table in the region is overdrawn due to extended drought periods and increased pumping for domestic use.

The CSD's wells produced 188.727 million gallons in 2003, with a maximum monthly production of 28.855 million gallons occurring in August, corresponding to a maximum day demand of 0.931 million gallons per day (MGD). It is recommended that Local Agency Formation Commission (LAFCO) complete a comprehensive review of any water system planning reports prior to any sphere of influence (SOI) updates to ensure that proper facilities planning has taken place for any proposed SOI expansion area.

Assuming 560 equivalent dwelling units (EDUs) in order to meet Tulare County Improvement Standards, the Tipton CSD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,200 GPM (1,500 GPM fire flow and 700 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The CSD's water system is capable of delivering a source flow 1,500 GPM, indicating that the system falls short of meeting the Tulare County Improvement Standards. The CSD Engineer indicated that a new well is going out for bid, and will be online in the near future. An additional well will likely bring the water system into compliance with the Tulare County Improvement Standards.

A capacity calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, indicates that the CSD's water system is operating at or near its capacity. The CSD does not currently have a water system master plan. The Engineer indicated that there is no need for a water master plan.

The sanitary sewer system for the Tipton community currently supports 554 total connections (58 commercial connections and 496 residential connections). The CSD operates a Wastewater Treatment Facility (WWTF) that provides secondary treatment of wastewater and is located west of the community. The WWTF is operated under the provisions of Order No. 85-170 issued by the California Regional Water Quality Control Board (RWQCB), which prescribes that the monthly average daily discharge shall not exceed 0.40 MGD. Treated effluent from two one-acre evaporation/percolation ponds is used to flood irrigate 40 acres of land owned and controlled by the CSD.

Based upon information contained in the Wastewater User Charge Survey Report FY 2004-05 (CalEPA – State Water Resources Control Board, May 2005), the average dry weather flow at the WWTF is approximately 0.190 MGD resulting in an excess capacity of approximately 210,000 GPD, which could support an estimated additional 600 equivalent dwelling units. It is anticipated that the CSD's WWTF will be operating at or near its permitted capacity within a 20-year planning period (approximately year 2025). The CSD has not received any grants for the construction of wastewater facility improvements. It is recommended that the CSD research State and Federal grants and/or loans that may be available to help finance improvements to the WWTF, including the installation of a flow meter. Clean Water Grants, State Revolving Fund Loans, and Small Community Grants are examples.

The CSD does not currently have a sewer system master plan. The Engineer indicated that there is no need for a sewer master plan.

TABLE 19-1
Existing Water & Wastewater Connections in Tipton

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
554	554	0	554	1,154	600

* Data current as of May 2012

19.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 19-2 identifies the location of drainage inlets and sumps in Tipton. Figure 19-1 also displays this information graphically.

TABLE 19-2
Existing Storm Drainage Facilities in Tipton

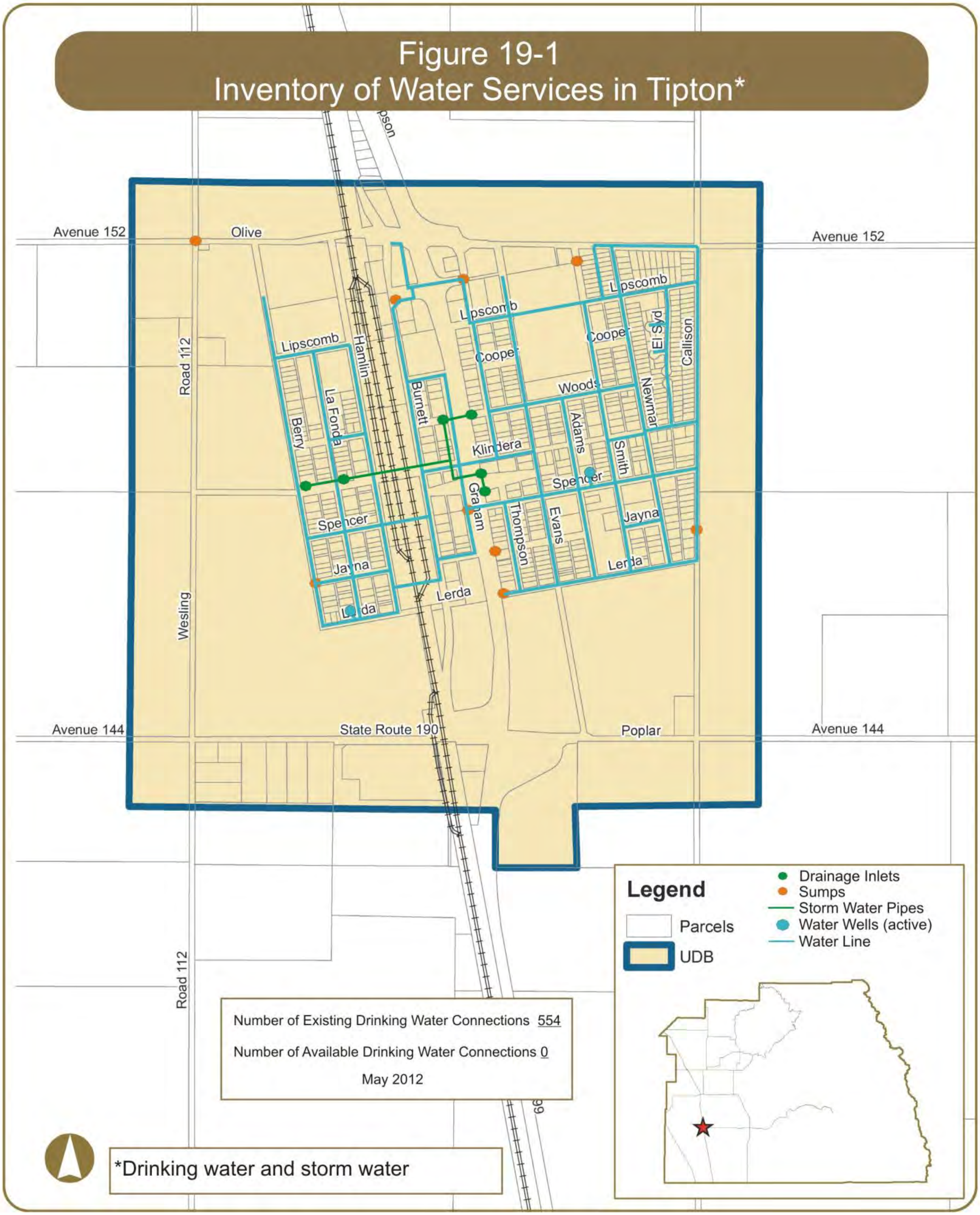
Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Avenue 152	Road 112	Sump
2	Jayna Avenue	West of Thompson Road	Sump
3	Jayne Avenue	Berry Road	Sump
4	Klindera Avenue	Berry Road	Inlet
5	Klindera Avenue	La Fonda Road	Inlet

TABLE 19-2 (Continued)
Existing Storm Drainage Facilities in Tipton

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
6	Lerda Avenue	West of Thompson Road	Sump
7	North of Lerda Avenue	Callison Road	Sump
8	North of Spencer Road	West of Thompson Road	Inlet
9	South of Avenue 152	Smith Road	Sump
10	South of Klindera Avenue	West of Thompson Road	Inlet
11	Spencer Road	Graham Road	Sump
12	SR 99 NB Ramps	Thompson Road	Sump
13	SR 99 SB Ramps	Burnett Road	Sump
14	Woods Avenue	Graham Road	Inlet
15	Woods Avenue	West of Thompson Road	Inlet

(Source: County of Tulare Public Works, 2014)

Figure 19-1
Inventory of Water Services in Tipton*



*Drinking water and storm water

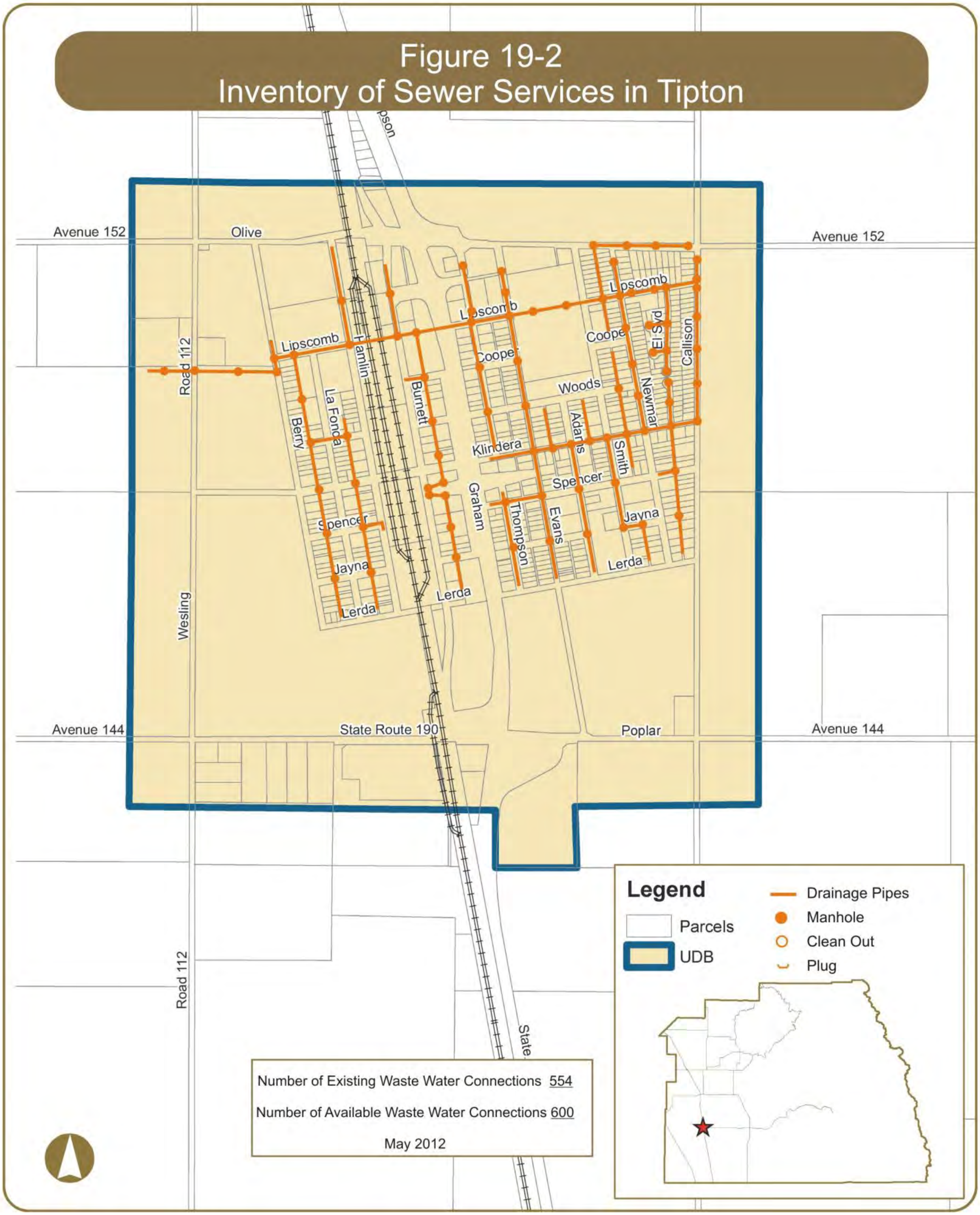


Figure 19-2
Inventory of Sewer Services in Tipton
Avenue 152
Olive
Avenue 152
Lipscomb
Lipscomb
Lipscomb
Road 112
Hamlin
Burnett
Cooper
Cooper
Woods
El Syd
Callison
Newman
Adams
Smith
Berry
La Fonda
Klindera
Spencer
Spencer
Graham
Thompson
Evans
Jayna
Jayna
Lerda
Lerda
Lerda
Wesling
Avenue 144
State Route 190
Poplar
Avenue 144
Road 112
State
Number of Existing Waste Water Connections 554
Number of Available Waste Water Connections 600
May 2012
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug

19.4 Roads

There are various roadways in Tipton that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 19-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 19-3 graphically displays this information on a map.

TABLE 19-3

Roads in Need of Major and Medium Repair in Tipton

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Adams Road	Klindera Avenue to Woods Avenue	CHIP
2	Avenue 152	Road 112 to Hamlin Road	OLAY
3	Avenue 152	Hamlin Road to Callison Road	CHIP
4	Berry Road	Lerda Avenue to Klindera Avenue	GRX
5	Berry Road	Klindera Avenue to Avenue 152	CHIP
6	Burnett Road	Avenue 152 to north end	OLAY
7	Burnett Road	SH 190 to Avenue 152	CHIP
8	Callison Road	SH 190 to Avenue 152	CHIP
9	Cooper Avenue	Burnett Road to Graham Road	GRX
10	Cooper Avenue	Thompson Road to Evans Road	CHIP

TABLE 19-3 (Continued)

Roads in Need of Major and Medium Repair in Tipton

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
11	Cooper Avenue	Smith Road to Newman Road	CHIP
12	Cooper Court	El Syd Street to west end	CHIP
13	El Syd Street	Lipscomb Avenue to south end	CHIP
14	Evans Road	SH 190 to Lerda Avenue	OLAY
15	Evans Road	Lipscomb Avenue to Avenue 152	CHIP
16	Graham Road	Klindera Avenue to south end	CHIP
17	Graham Road	Klindera Avenue to Cooper Avenue	GRX
18	Hamlin Road	Lerda Avenue to Klindera Avenue	CHIP
19	Jayna Avenue	Thompson Road to Adams Road	CHIP
20	Jayne Avenue	Berry Road to Hamlin Road	CHIP
21	Jayne Avenue	Burnett Road to Graham Road	GRX
22	Klindera Avenue	Burnett Road to Graham Road	CHIP
23	Klindera Avenue	Smith Road to Callison Road	CHIP
24	La Fond Road	Lerda Avenue to Spencer Road	GRX
25	Lerda Avenue	Berry Road to Hamlin Road	CHIP
26	Lerda Avenue	Burnett Road to east end	CHIP
27	Lipscomb Avenue	Berry Road to Hamlin Road	GRX
28	Newman Road	Lerda Avenue to Spencer Road	CHIP
29	Poplar Avenue	Burnett Road to SH 190	CHIP
30	Smith Road	Lerda Avenue to Klindera Avenue	CHIP
31	Spencer Road	Adams Road to west end	GRX
32	Thompson Road	Lerda Avenue to Spencer Road	GRX
33	Thompson Road	Klindera Avenue to SR 99 NB Ramps	GRX
34	Thompson Road	SR 99 NB Ramps to Avenue 152	OLAY
35	Tipton Overpass	Burnett Road to Evans Road	OLAY
36	Woods Avenue	Berry Road to Hamlin Road	CHIP
37	Woods Avenue	Burnett Road to Graham Road	CHIP
38	Woods Court	El Syd Street to west end	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

19.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are various ADA compliant curb ramps located within Tipton and are listed in Table 19-4 and displayed in Figure 19-3.

TABLE 19-4
Existing ADA Curb Ramps in Tipton

Location of Existing ADA Ramps			
No.	East-West Roadway	North-South Roadway	Location
1	Avenue 152	Evans Road	SE Corner
2	Avenue 152	Newman Road	SE Corner
3	Avenue 152	Callison Road	SW Corner
4	Cooper Court	El Syd Street	NW Corner
5	Cooper Court	El Syd Street	SW Corner
6	Klindera Avenue	Smith Road	SW Corner
7	Klindera Avenue	Newman Road	NE Corner
8	Klindera Avenue	El Syd Street	NW Corner
9	Klindera Avenue	El Syd Street	NE Corner
10	Klindera Avenue	Callison Road	NW Corner
11	Lipscomb Avenue	Newman Road	SW Corner
12	Lipscomb Avenue	Newman Road	NE Corner
13	Lipscomb Avenue	Newman Road	SE Corner
14	Lipscomb Avenue	El Syd Street	SW Corner
15	Lipscomb Avenue	El Syd Street	SE Corner
16	Lipscomb Avenue	Callison Road	NW Corner
17	Spencer Road	Newman Road	SW Corner
18	Woods Avenue	Evans Road	SW Corner
19	Woods Avenue	Smith Road	SW Corner
20	Woods Avenue	Smith Road	SE Corner
21	Woods Avenue	Newman Road	NW Corner
22	Woods Avenue	Newman Road	SW Corner
23	Woods Court	El Syd Street	NW Corner
24	Woods Court	El Syd Street	SW Corner

(Source: County of Tulare Public Works, August 2013)

19.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 19-5 identifies the location of existing sidewalks in Tipton. Figure 19-3 also displays this information graphically. The sidewalks represented in Table 19-5 and Figure 19-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 19-5
Existing Sidewalks in Tipton

Location of Existing Sidewalks			
No.	Roadway	Limits	Location
1	Adams Road	Jayna Avenue to Spencer Road	East side
2	Avenue 152	Evans Road to west of Smith Road	South side
3	Avenue 152	Newman Road to Callison Road	South side
4	Burnett Road	North of Jayna Avenue to Tipton Overpass	East side
5	Callison Road	Lipscomb Avenue to Avenue 152	West side
6	Cooper Court	El Syd Street to west end	North side
7	Cooper Court	El Syd Street to west end	South side
8	El Syd Street	Lipscomb Avenue to south end	East side
9	El Syd Street	Lipscomb Avenue to south end	West side
10	El Syd Street	Klindera Avenue to north end	East side
11	El Syd Street	Klindera Avenue to north end	West side
12	Graham Road	North of Klindera Avenue to Woods Avenue	West side
13	Jayna Avenue	Smith Road to alley (east)	South side
14	Klindera Avenue	Newman Road to Callison Road	North side
15	Lipscomb Avenue	Newman Road to Callison Road	North side

TABLE 19-5 (Continued)
Existing Sidewalks in Tipton

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
16	Lipscomb Avenue	Newman Road to Callison Road	South side
17	Newman Road	North of Klindera Avenue to south of Lipscomb Avenue	West side
18	Newman Road	Klindera Avenue to Avenue 152	East side
19	Smith Road	Spencer Road to Klindera Avenue	West side
20	Smith Road	North of Klindera Avenue to Woods Avenue	East side
21	Smith Road	North of Klindera Avenue to Woods Avenue	West side
22	Spencer Road	Adams Road to Newman Road	South side
23	Tipton Overpass	Burnett Road to Evans Road	North side
24	Tipton Overpass	Burnett Road to Evans Road	South side
25	Woods Avenue	Thompson Road to Evans Road	South side
26	Woods Avenue	Smith Road to Newman Road	South side
27	Woods Court	El Syd Street to west end	North side
28	Woods Court	El Syd Street to west end	South side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

19.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 19-6 identifies the location of existing street lights that are maintained by Tulare County, in Tipton, as well as their specifications. Figure 19-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 19-6
Existing Street Lights in Tipton

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 152	Newman Road	SE Corner	1254225E	9500	W	N	SCE
2	Avenue 152	Burnett Road	SE Corner	1299641E	9500	W	N	SCE
3	Avenue 152	Thompson Road	SE Corner	4091499E	9500	W	N	SCE
4	Avenue 152	Callison Road	NW Corner	744530E	9500	W	S	SCE
5	Cooper Avenue	Thompson Road	SE Corner	936427E	5800	W	W	SCE
6	Cooper Avenue	Evans Road	SW Corner	696257E	5800	W	NE	SCE
7	Cooper Avenue	Newman Road	SE Corner	2162864E	5800	2	W	SCE
8	Cooper Court	El Syd Street	SW Corner	N/A	5800	C	E	SCE
9	Jayna Avenue	Thompson Road	SW Corner	2348718E	5800	W	E	SCE
10	Jayna Avenue	Evans Road	SW Corner	4044291E	5800	W	E	SCE
11	Jayne Avenue	La Fond Road	NE Corner	1406506E	5800	W	W	SCE
12	Jayne Avenue	Burnett Road	NE Corner	2261673E	5800	W	W	SCE
13	Klindera Avenue	Newman Road	SE Corner	601338E	5800	W	N	SCE
14	Klindera Avenue	La Fond Road	SE Corner	255118E	5800	W	N	SCE
15	Klindera Avenue	Thompson Road	SE Corner	1189571E	5800	W	N	SCE
16	Klindera Avenue	Evans Road	SW Corner	4226187E	5800	W	E	SCE
17	Klindera Avenue	Adams Road	SE Corner	601336E	5800	W	N	SCE
18	Klindera Avenue	Burnett Road	SE Corner	4075610E	5800	W	W	SCE
19	Klindera Avenue	El Syd Street	NW Corner	N/A	5800	C	E	SCE
20	Lerda Avenue	Thompson Road	SW Corner	715547E	5800	W	E	SCE
21	Lerda Avenue	Hamlin Road	NW Corner	397402E	5800	W	E	SCE
22	Lipscomb Avenue	Newman Road	SE Corner	2261670E	5800	W	N	SCE
23	Lipscomb Avenue	Between Thompson	South side	936087E	5800	W	N	SCE
24	Lipscomb Avenue	El Syd Street	SE Corner	4411606E	5800	C	N	SCE
25	Spencer Road	Thompson Road	SE Corner	973806E	5800	W	W	SCE
26	Spencer Road	Berry Road	NE Corner	1406508E	5800	W	S	SCE
27	Spencer Road	Hamlin Road	NW Corner	1406502E	5800	W	E	SCE
28	Spencer Road	Evans Road	SE Corner	936423E	5800	W	N/W	SCE
29	Spencer Road	Adams Road	SW Corner	936422E	5800	W	E	SCE
30	Spencer Road	Smith Road	SW Corner	936442E	5800	W	N	SCE
31	Spencer Road	Callison Road	SW Corner	1406515E	5800	W	N	SCE
32	Tipton Overpass	Burnett Road	NE Corner	2261673E	16000	W	S	SCE
33	Tipton Overpass	Evans Road	SW Corner	2261672E	16000	W	N	SCE
34	Tipton Overpass	SR 99	North side	2269907E	9500	W	S	SCE
35	Woods Avenue	Berry Road	SE Corner	1406503E	5800	W	W	SCE
36	Woods Avenue	Hamlin Road	SW Corner	1406504E	5800	W	N/E	SCE
37	Woods Avenue	Burnett Road	NE Corner	275935E	5800	W	W	SCE
38	Woods Avenue	Graham Road	NW Corner	527997E	5800	W	E	SCE
39	Woods Avenue	Thompson Road	NE Corner	936426E	5800	W	W	SCE
40	Woods Avenue	Evans Road	NW Corner	936425E	5800	W	E	SCE
41	Woods Avenue	Adams Road	NE Corner	97447E	5800	W	S	SCE
42	Woods Avenue	Smith Road	NW Corner	4316569E	5800	W	S	SCE
43	Woods Court	El Syd Street	SW Corner	4520207E	5800	C	E	SCE

(Source: Tulare County Public Works, March 2013)

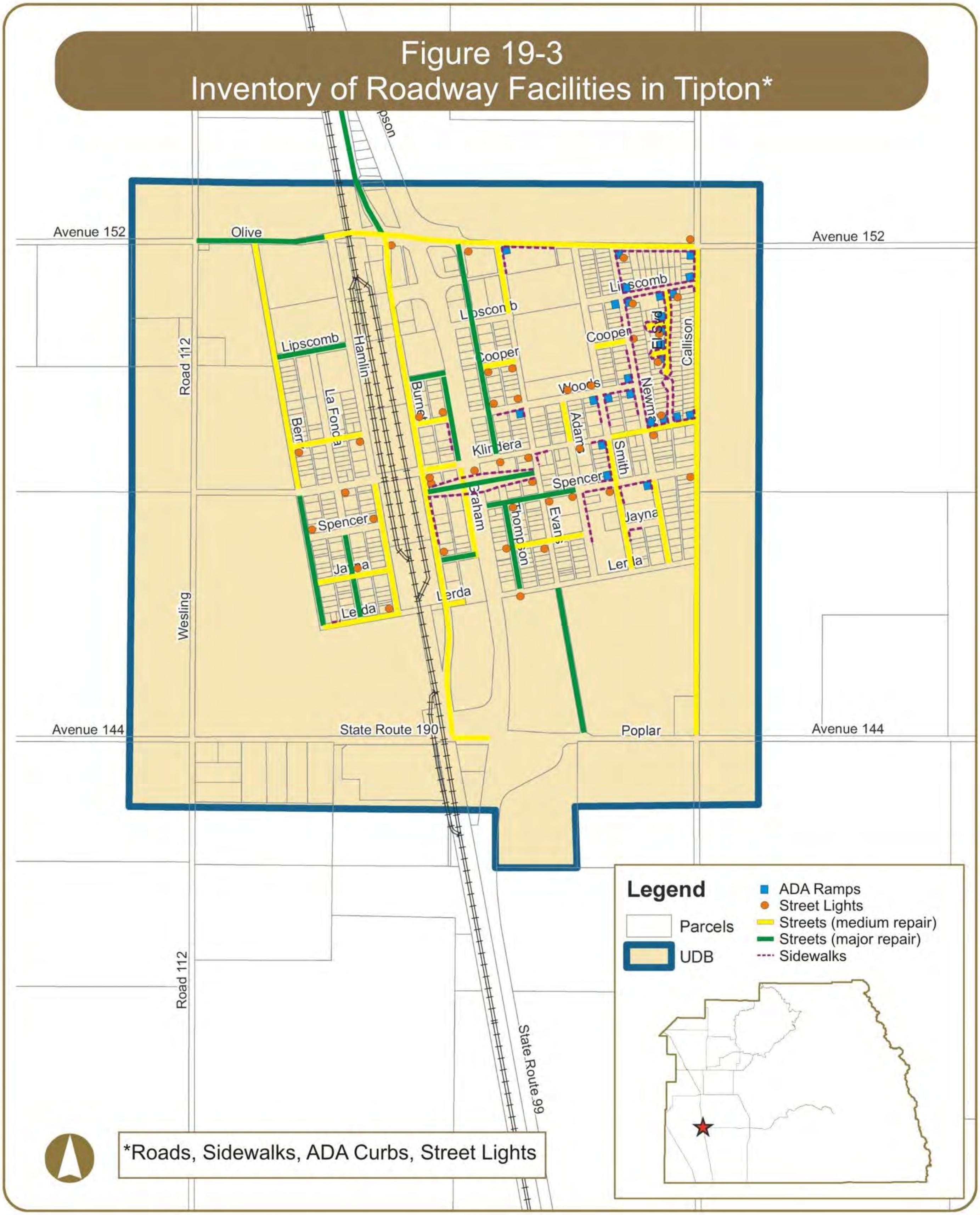


Figure 19-3
Inventory of Roadway Facilities in Tipton*
Avenue 152
Olive
Avenue 152
Lipscomb
Lipscomb
Lipscomb
Hamlin
Cooper
Cooper
Woods
Adams
Newman
Callison
Burnet
La Fonda
Berry
Klindera
Spencer
Spencer
Smith
Graham
Thompson
Evans
Jayna
Jayna
Lerda
Lerda
Lerda
Road 112
Wesling
Avenue 144
State Route 190
Poplar
Avenue 144
Road 112
State Route 99
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

20. COMMUNITY OF TRAVER

20.1 General Information

Traver is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 360 in the south, Avenue 368 in the north, State Route (SR) 99 in the west, and Road 44 in the east and encompasses 0.8 square miles of land. It is directly served by SR 99.

Based on the 2010 Census, the population in Traver was 713. Similar to other communities in Tulare County, the population of Traver is racially diverse with 42% White, less than 1% African American, 3% Native American, 1% Asian/Pacific Islander, 50% from other races, and 3% from 2 or more races. 77% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 184 housing units located within Traver, of which 58% are owner-occupied and 42% are renter-occupied.

20.2 Domestic Water & Wastewater

Domestic water and sewer service in Traver is provided by Tulare County. Table 20-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Tulare County, January 2014). Mapping of the sewer and water systems is currently unavailable.

TABLE 20-1

Existing Water & Wastewater Connections in Traver

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
180	180	0	189	239	50

* Data current as of January 2014

1.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

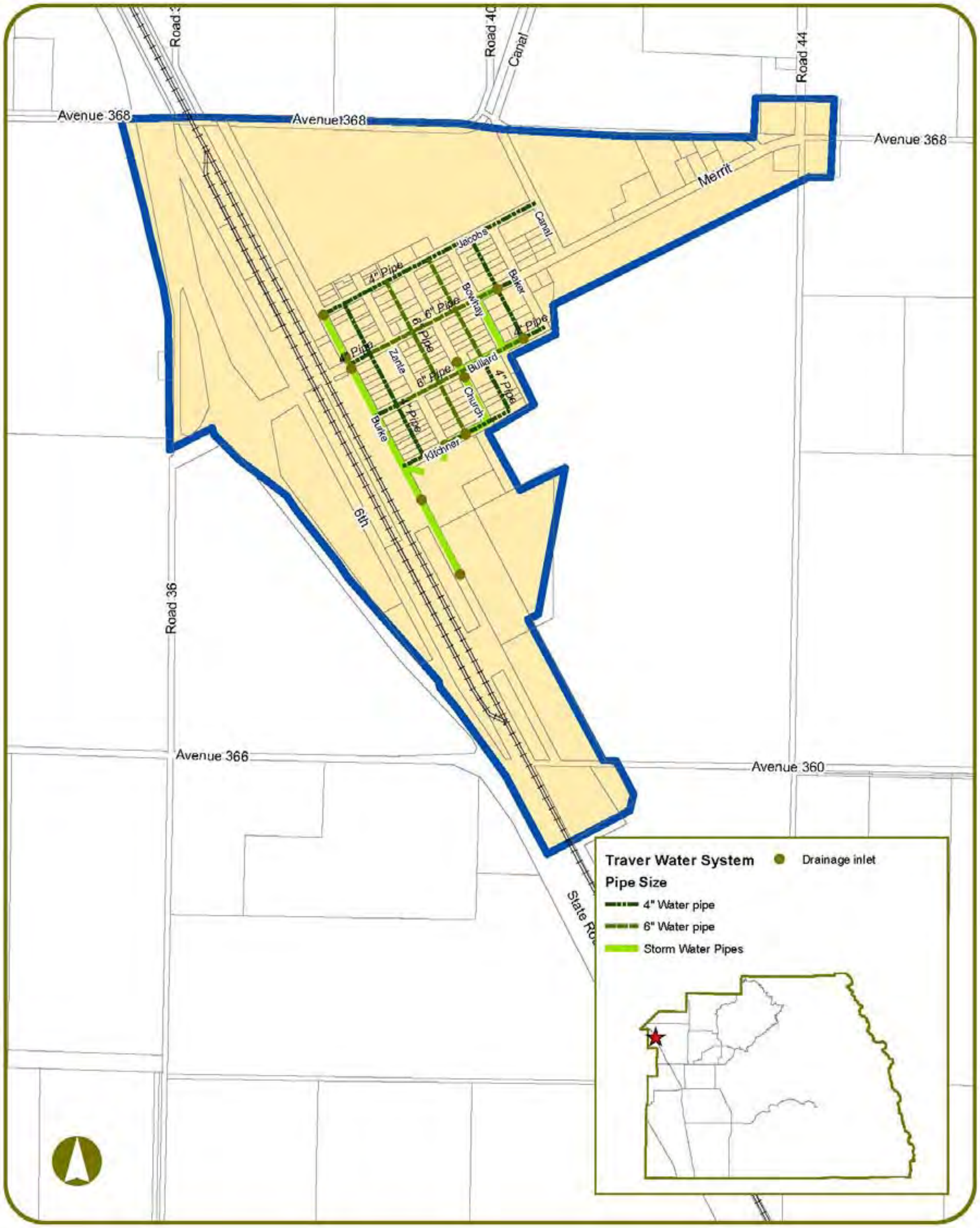
Traver does not currently have a storm drain system. However, a Master Plan was prepared in June 2011. Table 20-2 identifies the location of proposed drainage inlets and sumps in Traver (preferred alternative). Figure 20-1 also displays this information graphically.

TABLE 20-2
Proposed Storm Drainage Facilities in Traver

Location of Proposed Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	Between Kitchner Drive and Avenue 360	Burke Drive	Inlet
2	Bullard Drive	Church Drive	Inlet
3	Bullard Drive	Church Drive	Inlet
4	Bullard Drive	Between Bowhay Drive and Baker Drive	Inlet
5	Jacobs Drive	Burke Drive	Inlet
6	Kitchner Drive	Zante Drive	Inlet
7	Kitchner Drive	Between Zante Drive and Church Drive	Inlet
8	Merritt Drive	Burke Drive	Inlet
9	Merritt Drive	Burke Drive	Inlet
10	Merritt Drive	East of Bowhay Drive	Inlet
11	South of Kitchner Drive	Burke Drive	Inlet

(Source: County of Tulare Public Works, 2014)

Figure 20-1
Traver Water Services Inventory



20.4 Roads

There are various roadways in Traver that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 20-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 20-2 graphically displays this information on a map.

TABLE 20-3
Roads in Need of Major and Medium Repair in Traver

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	6th Street	SR 99 to Avenue 368	CHIP
2	Avenue 368	Merritt Drive to Road 44	CHIP
3	Baker Drive	Bullard Drive to Merrit Drive	GRX
4	Baker Drive	Merritt Drive to Jacobs Drive	CHIP
5	Bullard Drive	Burke Drive to Baker Drive	CHIP
6	Burke Drive	Jacobs Drive to Avenue 368	CHIP
7	Church Drive	Kitchner Drive to Jacobs Drive	CHIP
8	Merritt Drive	SR 99 SB Ramps to 6th Street	OLAY
9	Zante Drive	Kitchner Drive to Merritt Drive	CHIP
10	Zante Drive	Merritt Drive to Jacobs Drive	GRX

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

20.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are several ADA compliant curb ramps located within Traver and are listed in Table 20-4 and displayed in Figure 20-2.

TABLE 20-4
Existing ADA Curb Ramps in Traver

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Jacobs Drive	Canal Drive	NE Corner
2	Merritt Drive	Willis Court	NE Corner
3	Merritt Drive	Willis Court	NW Corner

(Source: County of Tulare Public Works, August 2013)

20.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 20-5 identifies the location of existing sidewalks in Traver. Figure 20-2 also displays this information graphically. The sidewalks represented in Table 20-5 and Figure 20-2 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 20-5
Existing Sidewalks in Traver

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Canal Drive	Jacobs Drive to Avenue 368	East side
2	Merritt Drive	West of Willis Court to Willis Court	North side
3	Willis Court	Merritt Drive to north end	East side
4	Willis Court	Merritt Drive to north end	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

20.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 20-6 identifies the location of existing street lights that are maintained by Tulare County, in Traver, as well as their specifications. Figure 20-2 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 20-6
Existing Street Lights in Traver

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Bullard Drive	Burke Drive	NE Corner	792	5800	W	W	PG&E
2	Bullard Drive	Church Drive	NE Corner	793	5800	W	W	PG&E
3	Bullard Drive	Baker Drive	NW Corner	802	5800	W	E	PG&E
4	Jacobs Drive	Zante Drive	SE Corner	799	5800	W	N	PG&E
5	Kitchner Drive	Church Drive	NE Corner	800	5800	W	W	PG&E
6	Merritt Drive	Burke Drive	SE Corner	794	5800	W	N	PG&E
7	Merritt Drive	Zante Drive	NW Corner	795	5800	W	S	PG&E
8	Merritt Drive	Church Drive	NE Corner	796	5800	W	S	PG&E
9	Merritt Drive	Bowhay Drive	NW Corner	797	5800	W	S	PG&E
10	Merritt Drive	Baker Drive	NW Corner	798	5800	W	S	PG&E

TABLE 20-6 (Continued)
Existing Street Lights in Traver

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
11	Merritt Drive	Canal Drive	NE Corner	801	5800	W	S	PG&E
12	Merritt Drive	SR 99 NB Ramps	NE Corner	N/A	N/A	N/A	W	PG&E
13	Merritt Drive	SR 99 NB Ramps	NW Corner	N/A	N/A	N/A	S	PG&E
14	Merritt Drive	SR 99 NB Ramps	SE Corner	965	5800	W	N	PG&E

(Source: Tulare County Public Works, March 2013)

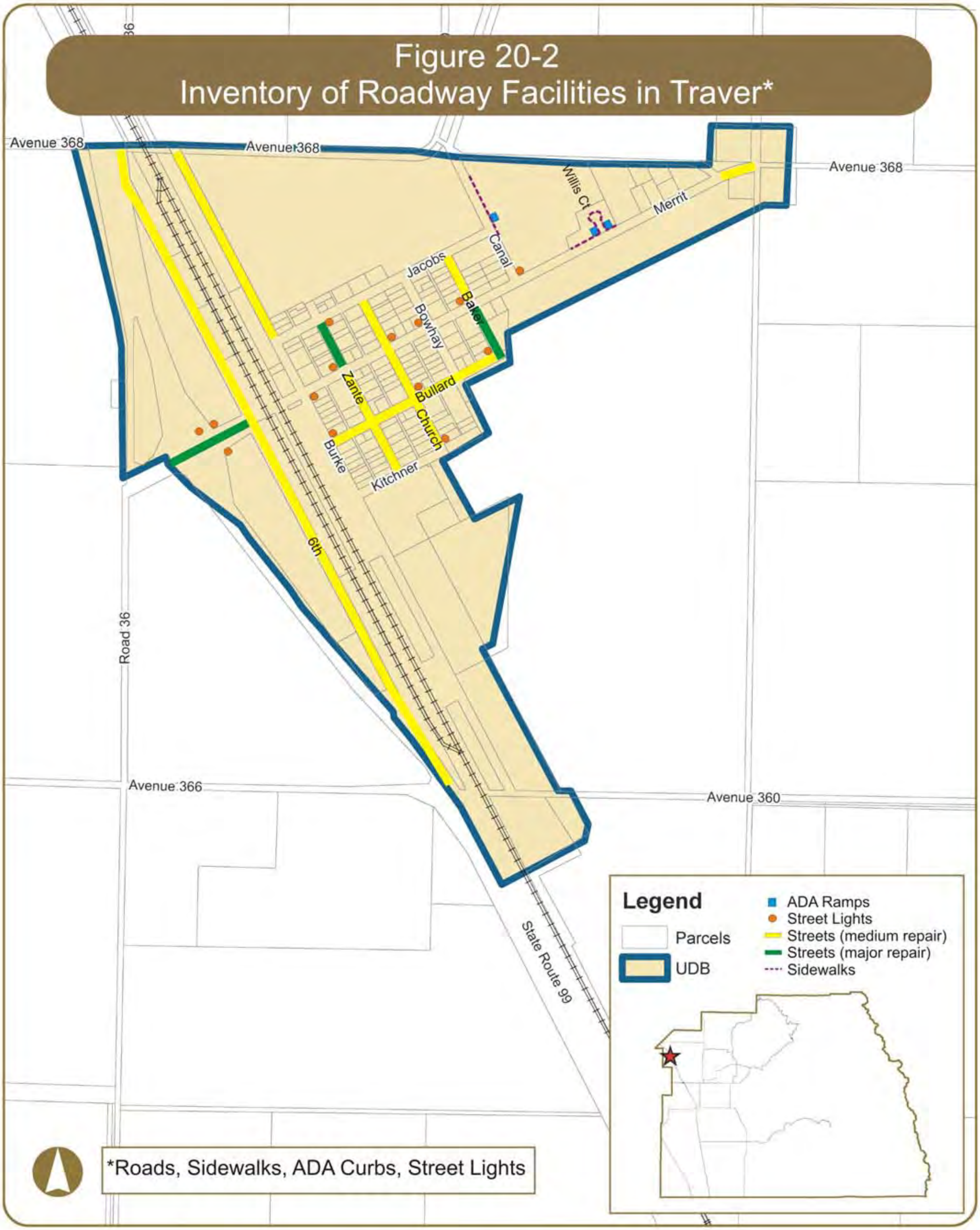


Figure 20-2
Inventory of Roadway Facilities in Traver*
Avenue 368
Avenue 368
Avenue 368
Willis Ct
Merrit
Canal
Jacobs
Baker
Bowhay
Zante
Bullard
Church
Burke
Kitchner
6th
Road 36
Avenue 366
Avenue 360
State Route 99
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

21. COMMUNITY OF WOODVILLE

21.1 General Information

Woodville is a census-designated place located in the southwest portion of Tulare County, and is situated southeast of the Road 152/Avenue 168 intersection. It is generally bounded by Avenue 160 in the south, Avenue 172 in the north, Road 152 in the west, and Road 180 in the east and encompasses 4.4 square miles of land. Woodville is located approximately eight miles northeast of the State Route (SR) 99/Highway 190 interchange. Woodville is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses and vacant land. Cities and communities surrounding Woodville include Porterville to the east, Lindsay to the northeast, Tulare to the northwest, Tipton to the southwest, and Poplar-Cotton Center to the southeast.

Based on the 2010 Census, the population in Woodville was 1,740. Similar to other communities in Tulare County, the population of Woodville is racially diverse with 77% White, less than 1% African American, 2% Native American, less than 1% Asian/Pacific Islander, 19% from other races, and 2% from 2 or more races. 89% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 425 housing units located within Woodville, of which 55% are owner-occupied and 45% are renter-occupied.

21.2 Domestic Water & Wastewater

Domestic water and sewer service in Woodville is provided by the Woodville Public Utilities District (PUD), formed in November 1948. Table 21-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Housing Element, May 2012). Figure 21-1 graphically displays the approximate location of water wells and water lines. Figure 21-2 graphically displays the approximate location of the sewer system and wastewater treatment plant.

According to the Municipal Service Review 2006 (MSR), the Woodville PUD operates a water supply and distribution system under the jurisdiction of the California Department of Health Services Division of Drinking Water and Environmental Management, which is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in California with more than 200 connections. Woodville PUD staff has indicated that there are approximately 480 connections to the District's water system, which consists of two active wells with a total maximum production efficiency of 1,500 gallons per minute (GPM), and hydro-pneumatic pressure tanks. The PUD's water supply is chlorinated, but has no permanently installed treatment. Based upon the PUD's 2004 Consumer Confidence Report, there is no evidence suggesting that the water supply does not meet Federal drinking water standards.

Assuming 500 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards the Woodville PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 1,160 GPM (500 GPM fire flow, and 660 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served; The PUD's water system is capable of delivering a combined source flow of 1,500 GPM, indicating that the PUD's water system meets the requirements of the Tulare County Improvement Standards. Prior to granting any sphere of influence (SOI) amendments that would increase demand for water services provided by the PUD, the PUD's engineer should provide evidence that the increase in demand would not result in substandard pressures, or inadequate supply capacity for the remainder of the system.

Based upon a calculation performed in accordance with General Order 103, published by the California Public Utilities Commission, it is estimated that the PUD's water system is capable of supporting approximately 350 additional equivalent dwelling units. It should be noted that there could be special circumstances (i.e. distribution system pressure constraints) that could significantly affect this result, and a complete assessment should be completed by the District Engineer prior to the approval of additional connections.

The Woodville PUD is also responsible for providing sanitary sewer service to residents within its Boundary. Woodville PUD staff has indicated that there are approximately 480 connections to their sewer system. The PUD owns and operates a Wastewater Treatment Facility (WWTF) southwest of the community, which is operated under the provisions of Waste Discharge Requirements Order No. 86-108, issued by the Regional Water Quality Control Board (RWQCB). The PUD's WWTF is currently operating in full compliance with the requirements of Order No. 86-108.

Treatment and disposal of wastewater bio-solids are regulated by a broad and complicated body of regulations developed by the Environmental Protection Agency (EPA), and are commonly referred to as the 503B rule. According to the Engineer for the Woodville PUD, the District was not in compliance in 2006 with the 503B rule pertaining to sludge handling. The PUD had plans to construct sludge drying beds in 2007 and 2008 in order to achieve compliance with the 503B rule.

Order No. 86-108 prescribes that the monthly average daily dry weather discharge flow shall not exceed 0.33 million gallons per day (MGD). Available data indicates that current average dry weather flow at the WWTF is 0.12 MGD, indicating that the WWTF is currently operating at about 36% of its capacity. Using the ratio of the current number of connections to the current flow, and assuming 90% of permitted flow to be "at capacity", it is estimated that the PUD's WWTF could support a total of 1,160 connections (in terms of equivalent dwelling units), or a total population of about 4,100. The PUD should begin planning for expansions to its WWTF when actual flows reach 75% of the plant capacity. This will allow the PUD time to secure funding for and implement capital improvements to its WWTF before reaching its capacity.

TABLE 21-1

Existing Water & Wastewater Connections in Woodville

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
480	830	350	480	1,160	680

* Data current as of May 2012

21.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Table 21-2 identifies the location of drainage inlets and sumps in Woodville. Figure 21-1 also displays this information graphically.

TABLE 21-2

Existing Storm Drainage Facilities in Woodville

Location of Existing Storm Drainage Facilities			
No.	**East-West Roadway**	**North-South Roadway**	**Type**
1	South of Oak Avenue	Road 164	Inlet

(Source: County of Tulare Public Works, 2014)

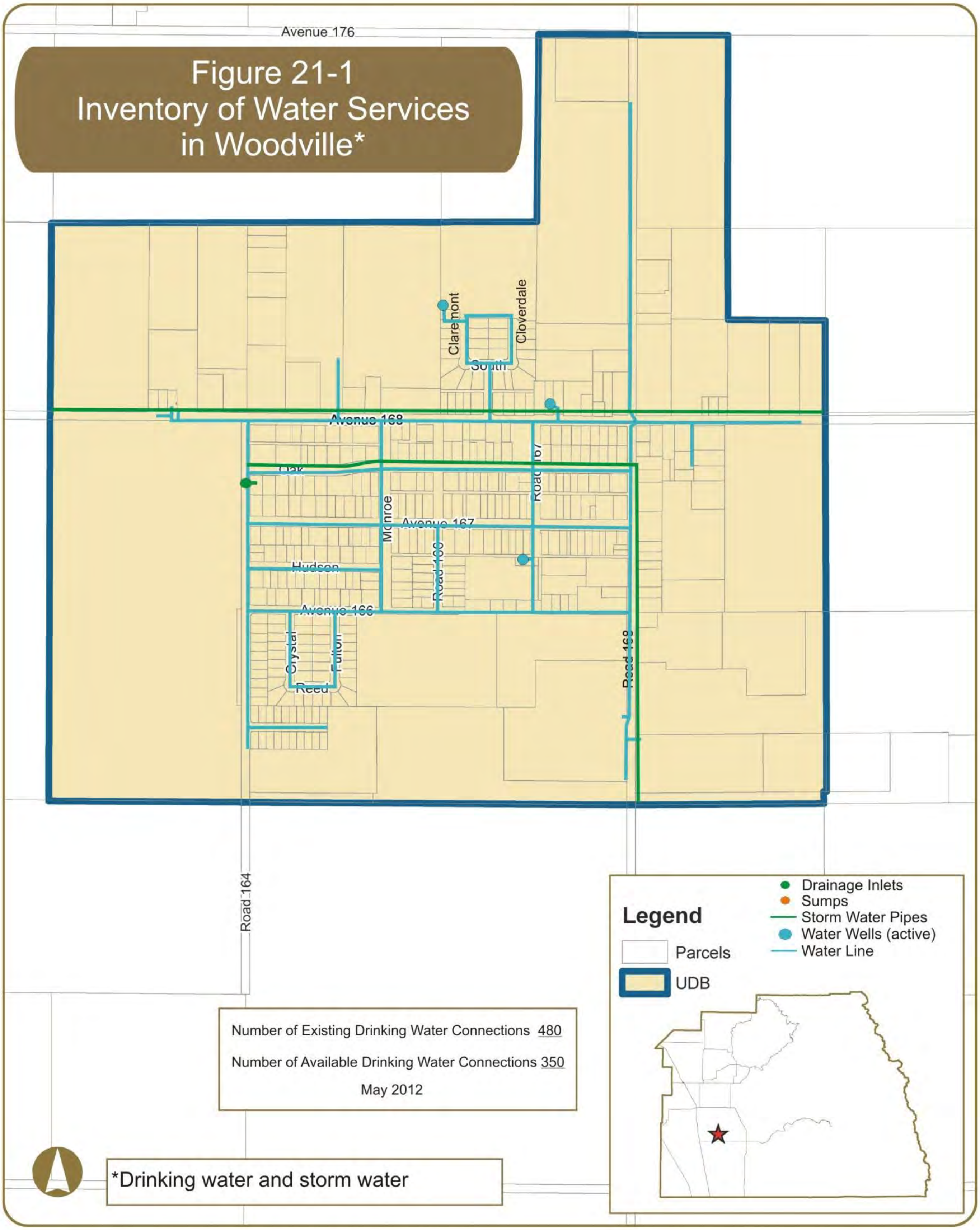


Figure 21-1
Inventory of Water Services
in Woodville*
Avenue 176
Claremont
Cloverdale
South
Avenue 168
Oak
Road 167
Monroe
Avenue 167
Hudson
Road 166
Avenue 166
Crystal
Fulton
Reed
Road 168
Road 164
Legend
Parcels
UDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections 480
Number of Available Drinking Water Connections 350
May 2012
*Drinking water and storm water

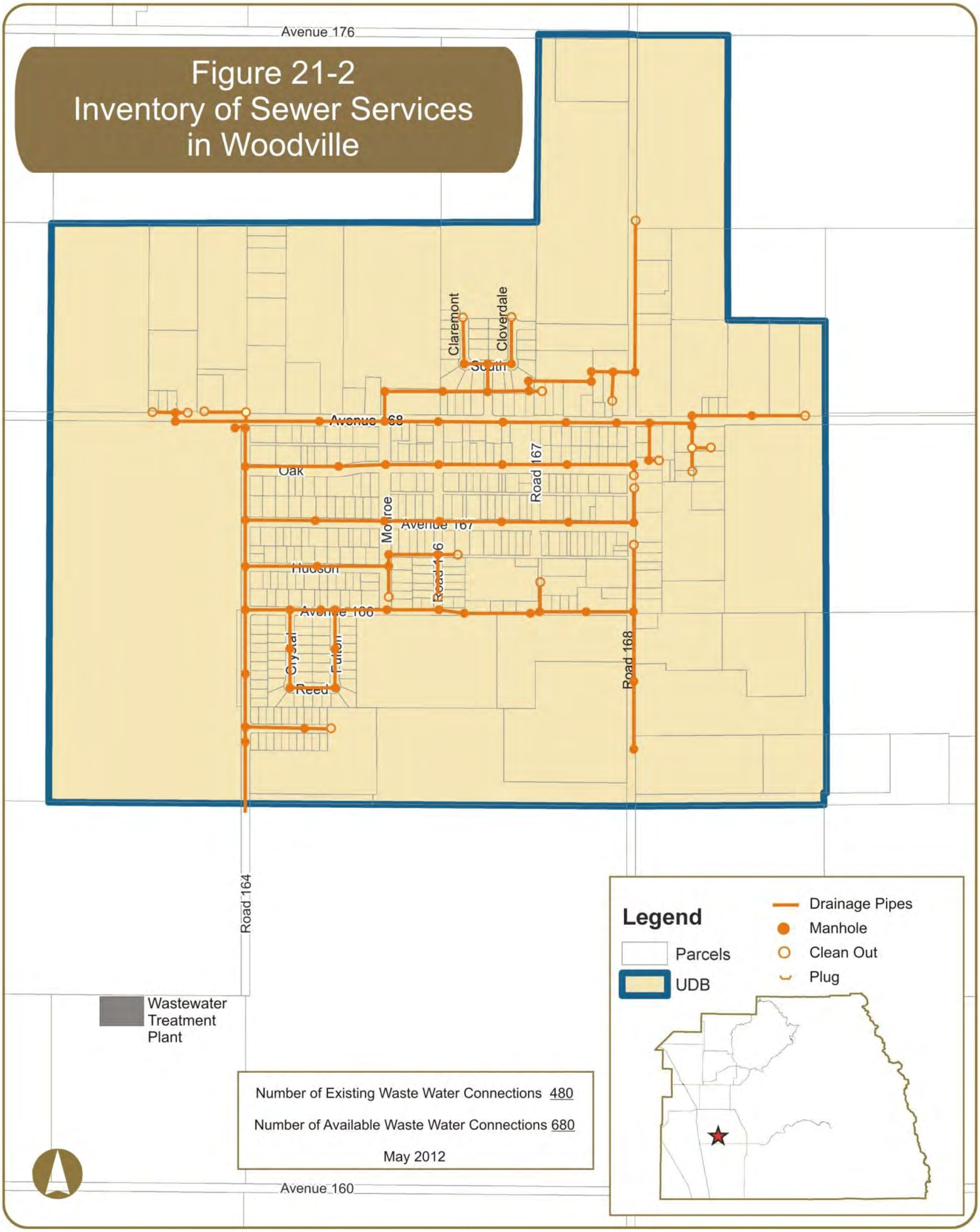


Figure 21-2
Inventory of Sewer Services
in Woodville
Avenue 176
Claremont
Cloverdale
South
Avenue 168
Oak
Road 167
Monroe
Avenue 167
Hudson
Avenue 166
Crystal
Fulton
Reed
Road 168
Road 164
Legend
Parcels
UDB
Drainage Pipes
Manhole
Clean Out
Plug
Wastewater
Treatment
Plant
Number of Existing Waste Water Connections 480
Number of Available Waste Water Connections 680
May 2012
Avenue 160

21.4 Roads

There are various roadways in Woodville that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 21-3 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 21-3 graphically displays this information on a map.

TABLE 21-3
Roads in Need of Major and Medium Repair in Woodville

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 168	Road 164 to Road 168	CHIP
2	Claremont Road	South Avenue to north end	CHIP
3	Cloverdale Road	Avenue 168 to South Avenue	CHIP
4	Cloverdale Road	South Avenue to north end	CHIP
5	Crystal Street	Reed Avenue to Avenue 166	CHIP
6	Fulton Street	Reed Avenue to Avenue 166	CHIP
7	Reed Avenue	Crystal Street to Fulton Street	OLAY
8	Road 168	Avenue 164 to Avenue 167	CHIP
9	Road 168	Avenue 167 to Oak Avenue	OLAY
10	Road 168	Oak Avenue to Avenue 168	CHIP
11	South Avenue	Claremont Road to Cloverdale Road	CHIP
12	Tom Lewis Avenue	Road 166 to east end	CHIP

(Source: County of Tulare Public Works, 2012)

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

21.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are several ADA compliant curb ramps located within Woodville and are listed in Table 21-4 and displayed in Figure 21-3.

TABLE 21-4

Existing ADA Curb Ramps in Woodville

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 168	Road 167	SE Corner
2	Avenue 168	Road 168	SW Corner
3	Camara Avenue	Road 164	NE Corner
4	Camara Avenue	Road 164	SE Corner
5	Oak Avenue	Road 167	NE Corner
6	Oak Avenue	Road 168	NW Corner

(Source: County of Tulare Public Works, August 2013)

21.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 21-5 identifies the location of existing sidewalks in Woodville. Figure 21-3 also displays this information graphically. The sidewalks represented in Table 21-5 and Figure 21-3 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 21-5
Existing Sidewalks in Woodville

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Avenue 168	Road 167 to Road 168	South side
2	Camara Avenue	Road 164 to east end	North side
3	Camara Avenue	Road 164 to east end	South side
4	Oak Avenue	Road 167 to Road 168	North side
5	Road 167	Avenue 168 to Oak Avenue	East side
6	Road 168	Avenue 168 through Woodville Elementary School	West side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

21.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 21-6 identifies the location of existing street lights that are maintained by Tulare County, in Woodville, as well as their specifications. Figure 21-3 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 21-6
Existing Street Lights in Woodville

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 166 alignment	Road 168	East side	281340E	5800	W	W	SCE
2	Avenue 167	Monroe Road	SE Corner	2042033E	5800	W	N	SCE
3	Avenue 167	Road 166	NW Corner	573287E	5800	W	S	SCE
4	Avenue 167	Road 167	NW Corner	1178684E	5800	W	S	SCE
5	Avenue 167	Road 168	East side	1178690E	5800	W	W	SCE
6	Avenue 167	Road 164	NE Corner	410598E	5800	W	W	SCE
7	Avenue 168	Monroe Road	NE Corner	1178688E	5800	W	S	SCE
8	Avenue 168	Road 166	NE Corner	1294508E	5800	W	S	SCE
9	Avenue 168	Cloverdale Road	NE Corner	30247E	5800	W	S	SCE
10	Avenue 168	Road 167	North side	281584E	5800	W	S	SCE
11	Avenue 168	Road 168	NW Corner	281346E	5800	W	E	SCE
12	Avenue 168	East of Road 168	North side	282782E	5800	W	S	SCE
13	Hudson Avenue	Road 164	NE Corner	1572132E	5800	W	W	SCE
14	Hudson Avenue	Monroe Road	NE Corner	1572124E	5800	W	W	SCE
15	Oak Avenue	Road 168	SW Corner	1783169E	5800	W	W	SCE
16	Oak Avenue	Monroe Road	NE Corner	1178687E	5800	W	S	SCE
17	Oak Avenue	Road 166	NW Corner	302483E	5800	W	S	SCE
18	Oak Avenue	Road 167	SW Corner	2331609E	5800	W	N	SCE
19	South Avenue	Cloverdale Road	North side	1134503E	5800	W	S	SCE
20	Tom Lewis Avenue	Monroe Road	NE Corner	2042032E	5800	W	W	SCE
21	Tom Lewis Avenue	Road 166	NE Corner	NO#	5800	W	S	SCE
22	Tom Lewis Avenue	Road 164	SE Corner	2041541E	5800	W	W	SCE
23	Tom Lewis Avenue	Crystal Street	NW Corner	2138558E	5800	W	S	SCE
24	Tom Lewis Avenue	Fulton Street	NE Corner	2138556E	5800	W	S	SCE

(Source: Tulare County Public Works, March 2013)

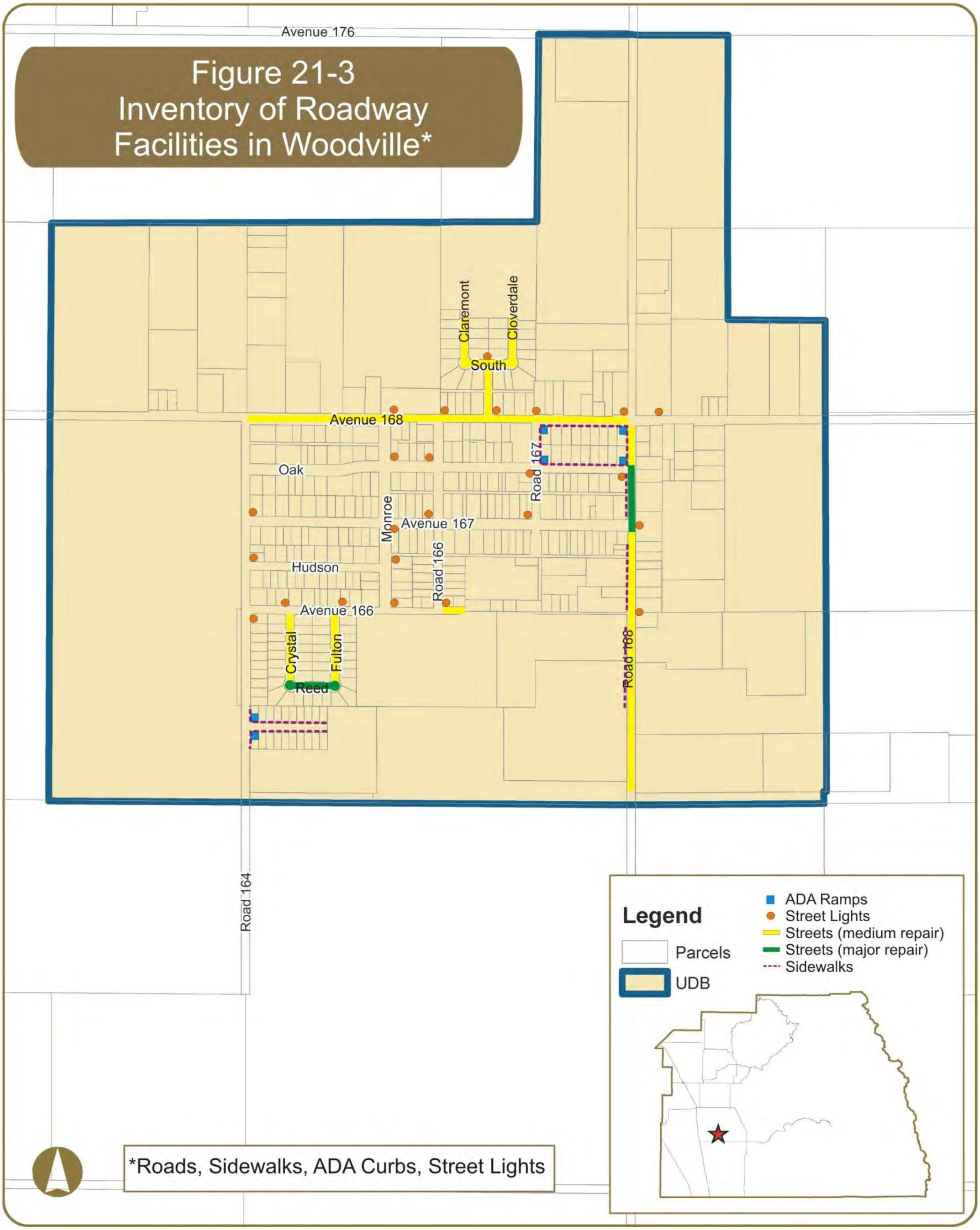


Figure 21-3
Inventory of Roadway Facilities in Woodville*
Avenue 176
Avenue 168
Claremont
Cloverdale
South
Oak
Monroe
Avenue 167
Road 167
Road 166
Hudson
Avenue 166
Crystal
Fulton
Reed
Road 168
Road 164
Legend
Parcels
UDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

22. HAMLET OF ALLENSWORTH

22.1 General Information

Allensworth is a census-designated place located in the southwest portion of Tulare County. It is generally bounded by Avenue 24 in the south, Attocks Avenue in the north, Road 76 in the west, and State Route (SR) 43 in the east and encompasses 3.1 square miles of land.

Based on the 2010 Census, the population in Allensworth was 471. Similar to other communities in Tulare County, the population of Allensworth is racially diverse with 34% White, 5% African American, 0% Native American, 2% Asian/Pacific Islander, 59% from other races, and 1% from 2 or more races. 93% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 142 housing units located within Allensworth, of which 49% are owner-occupied and 51% are renter-occupied.

22.2 Domestic Water & Wastewater

Domestic water service in Allensworth is provided by the Allensworth Community Service District (CSD), which was formed in 1967. Allensworth does not have sanitary sewer service and relies on individual or community septic systems. Table 22-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Municipal Service Review, October 2011). Mapping of the water system is currently unavailable.

According to the Municipal Service Review 2011 (MSR), the CSD community water system consists of 2 wells drilled 3 miles east of the community in order to avoid naturally occurring excessive levels of Arsenic in the aquifer underlying the community. The wells are a few hundred feet apart on an east-west line and alternately supply a common 6" line to a 42,000 gallon storage tank. Two centrifugal pumps draw water from the tank to a 5,000 gallon pressure tank and then on to distribution. The wells have a single check valve to prevent back flow to the well from storage. This is an automated system that is triggered by water levels in the storage tank. Wells No. 1 was drilled in 1984 to a depth of 250' and is equipped with a 10 horsepower (hp) submersible pump installed in 1995. Well No. 2 was drilled in 1999 to a depth of 320' and has a 20 hp submersible pump. According to the District's latest Sanitary Survey Report (2008), both wells are properly sealed and secured. The water system contains no treatment method.

There have been upgrades to the distribution system; six 6" PVC mains and six 6" laterals were installed using a 2007 Community Development Block Grant loan in the amount of $24,000. The District is required to conduct bacteriological contaminant testing of water samples on a monthly basis (monthly testing involves several water samples). According to the District's Environmental Health file, from September 2007 to November of 2008 only a single sample tested positive for bacteriological contaminants. Likewise, a single sample returned with positive results in both 2009 and 2010. Notice of violation was submitted by Tulare Environmental Health for total Coliform on January 2011. Results of repeat samples or proof of customers notification of the 2011 violation were not found in the District's Environmental Health file. Notice of violation was also provided in October 2008 for failing to submit Bacteriological sample test results (testing occurs each month). No violations of excessive Nitrate levels were found in the District's Environmental Health file.

Records indicate that the CSD's water system is continuously in violation of the maximum levels set for Arsenic. Most recently (December 2010), an Environmental Health compliance order was provided to the District for violation of maximum Arsenic levels. The order directs the District to notify all district customers of the violation on a quarterly basis, submit proof of customers notification on a quarterly basis, and submit sample test results to the Tulare Environmental Health Department on a quarterly basis. This order must be followed for as long as the system remains in violation. The order further directs the District to consider various avenues to address the problem and to prepare an action plan, complete with timeline, and submit the plan to the Environmental Health.

On December 29, 2010, the CSD Board adopted Resolution 2010-1109, which imposes a moratorium on new water connections and on the drilling of new wells within district boundaries. According to the resolution, the moratorium was prompted by the high cost associated with pumping groundwater from lower depths as a result of decreased groundwater levels coupled with the District's financial inability to drill new wells and therefore meet existing rate payer demand.

It is determined that the CSD's system is highly vulnerable to Arsenic contamination, as evidenced by the fact that system wells were drilled at their current location (3 miles outside the District's bounds) specifically to avoid naturally occurring excessive levels of Arsenic as well as the numerous notices of violation for excessive Arsenic levels submitted by Tulare Environmental Health. It is further determined that the present groundwater supplies available to the District are inadequate. Unless the incredibly high cost of securing new well sites is passed on to a customer pool that can ill-afford higher rates, decreased groundwater levels coupled with the District's poor financial condition make it highly probable that, absent state or federal grants/loans, the system will experience complete failure in the near future.

As mentioned above, the December 2010 Environmental Health compliance order directs the District to prepare a plan, complete with timeline, to address the Arsenic contamination issue. It is determined that the scope of solutions contained in the action plan also encompass the groundwater level challenge facing the District and the low-income condition of its customer pool.

TABLE 22-1

Existing Water & Wastewater Connections in Allensworth

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
116	116	0	Septic Only	--	--

* Data current as of October 2011

22.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Allensworth does not currently have a storm drainage system.

22.4 Roads

There are several roadways in Allensworth that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware

- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 22-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 22-1 graphically displays this information on a map.

TABLE 22-2

Roads in Need of Major and Medium Repair in Allensworth

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 39	Road 81 to Road 84	GRX
2	Road 84	Avenue 36 to Avenue 39	GRX

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

22.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Allensworth.

22.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Allensworth.

22.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 22-3 identifies the location of existing street lights that are maintained by Tulare County, in Allensworth, as well as their specifications. Figure 22-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 22-3
Existing Street Lights in Allensworth

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 36	Young Road	SW Corner	1343	5800	W	E	SCE
2	Avenue 36	East of Young Road	South Side	1416	5800	W	N	SCE
3	Avenue 36	Road 84	SW Corner	1342	5800	W	E	SCE
4	Avenue 39	Road 84	NW Corner	1401	5800	W	E	PG&E
5	Avenue 39	East of Young Road	South Side	1412	5800	W	N	SCE
6	Avenue 39	Young Road	SW Corner	1413	5800	W	E	SCE
7	Grant Drive	North-west of Road 84	SW Corner	1410	5800	W	E	SCE
8	Grant Drive	Road 84	West Side	1411	5800	W	E	SCE
9	South of Avenue 36	Young Road	East Side	1515	5800	W	W	SCE
10	South of Avenue 39	Young Road	West side	1414	5800	W	E	SCE
11	South of Avenue 39	Road 84	West side	1489	5800	W	E	SCE

(Source: Tulare County Public Works, March 2013)

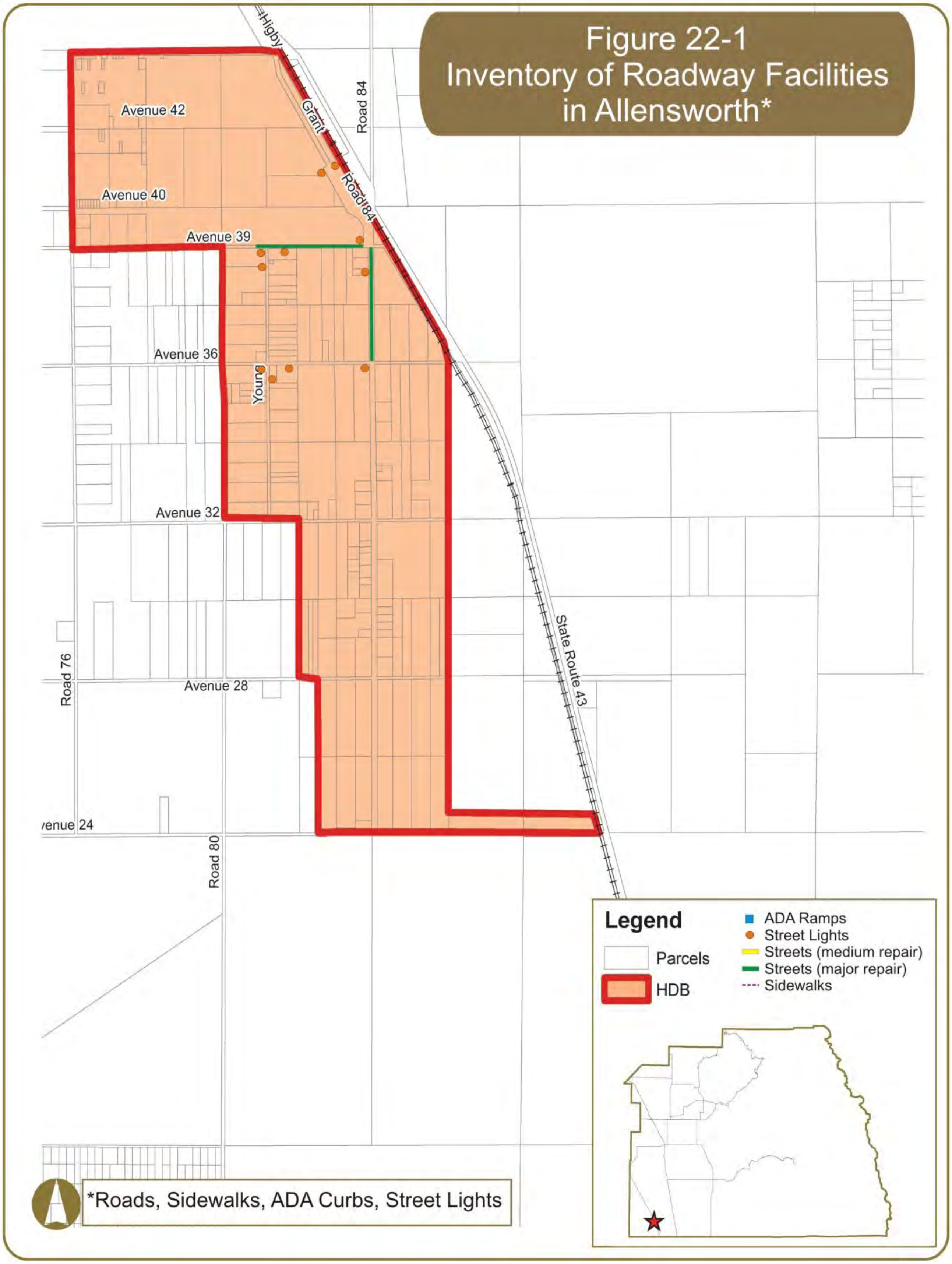


Figure 22-1
Inventory of Roadway Facilities in Allensworth*
Avenue 42
Avenue 40
Avenue 39
Avenue 36
Avenue 32
Avenue 28
venue 24
Higby
Grant
Road 84
Young
Road 76
Road 80
State Route 43
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

23. HAMLET OF DELFT COLONY

23.1 General Information

Delft Colony is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by south of Payne Avenue in the south, Avenue 400 in the north, Road 56 in the west and encompasses 0.07 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Delft Colony was 454. Similar to other communities in Tulare County, the population of Delft Colony is racially diverse with 47% White, 3% African American, 0% Native American, 0% Asian/Pacific Islander, 49% from other races, and 1% from 2 or more races. 94% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 124 housing units located within Delft Colony, of which 50% are owner-occupied and 50% are renter-occupied.

23.2 Domestic Water & Wastewater

Domestic water and sewer service in Delft Colony is provided by Tulare County. Table 23-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Tulare County, January 2014). Mapping of the sewer and water systems is currently unavailable.

TABLE 23-1

Existing Water & Wastewater Connections in Delft Colony

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
112	112	0	112	142	30

* Data current as of January 2014

23.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Delft Colony does not currently have a storm drainage system.

23.4 Roads

There are several roadways in Delft Colony that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 23-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 23-1 graphically displays this information on a map.

TABLE 23-2
Roads in Need of Major and Medium Repair in Delft Colony

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 397	Road 56 to Road 57	CHIP
2	Avenue 397	Road 57 to Road 58	CHIP
3	Payne Ave	Road 57 to Road 58	CHIP
4	Road 56	Avenue 397 to Lawrence Avenue	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

23.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Delft Colony.

23.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 23-3 identifies the location of existing sidewalks in Delft Colony. Figure 23-1 also displays this information graphically. The sidewalks represented in Table 23-3 and Figure 23-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 23-3
Existing Sidewalks in Delft Colony

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Lawrence	Road 56 to Road 57	North side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

23.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 23-4 identifies the location of existing street lights that are maintained by Tulare County, in Delft Colony, as well as their specifications. Figure 23-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 23-4
Existing Street Lights in Delft Colony

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 397	Road 56	NE Corner	1508	9500	W	W	PG&E
2	Avenue 397	Road 57	NE Corner	1507	5800	W	N	PG&E
3	Lawerence Avenue	Road 56	NE Corner	N/A	9500	W	S	SCE
4	Lawerence Avenue	Road 57	NW Corner	1505	5800	W	S	PG&E

(Source: Tulare County Public Works, March 2013)

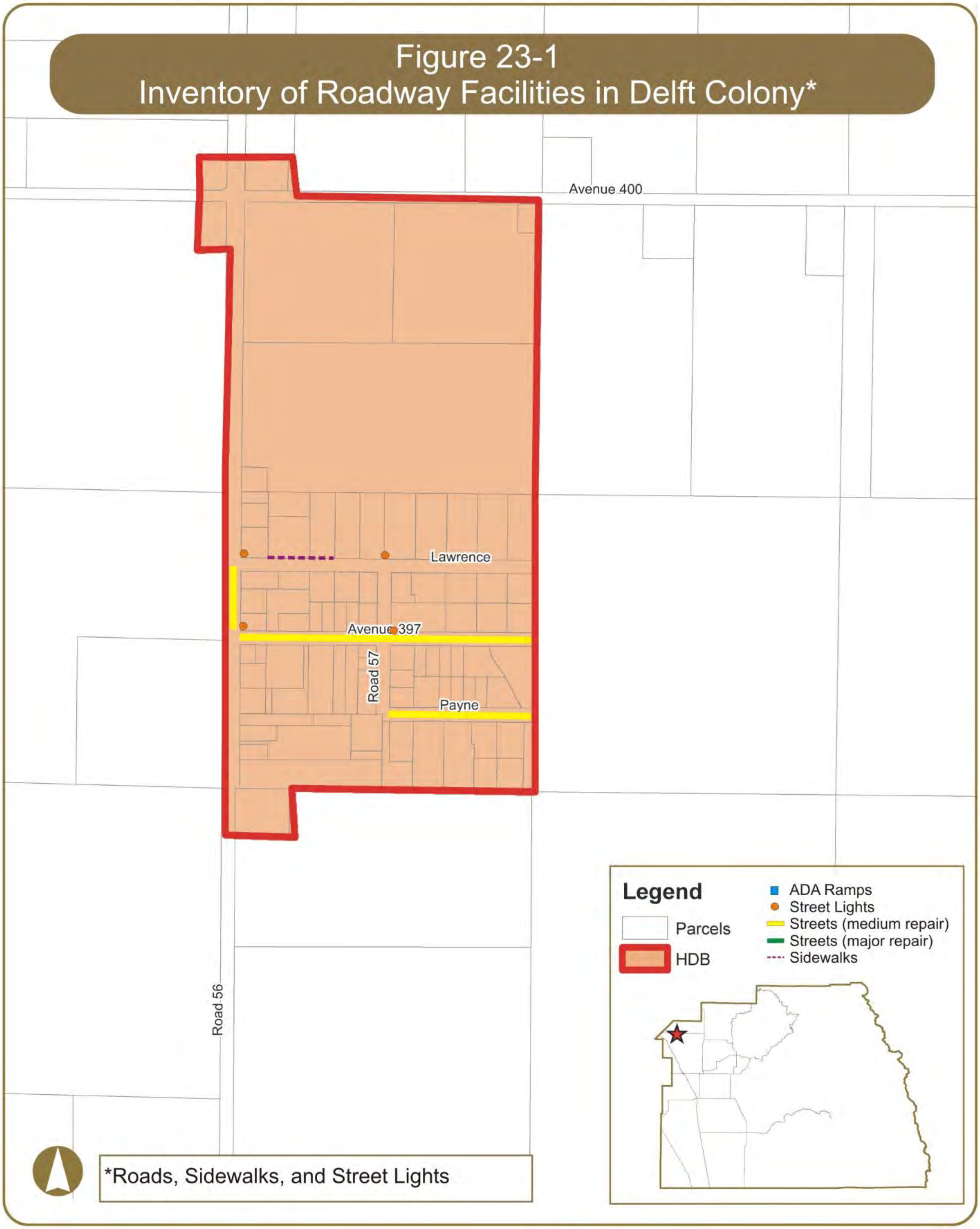


Figure 23-1
Inventory of Roadway Facilities in Delft Colony*
Avenue 400
Lawrence
Avenue 397
Road 57
Payne
Road 56
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, and Street Lights

24. HAMLET OF EAST TULARE VILLA

24.1 General Information

East Tulare Villa is a census-designated place located in the western portion of Tulare County. It is generally bounded by Bardsley Avenue in the south, State Route (SR) 137 in the north, Munson Road in the west, and Road 132 in the east and encompasses 0.5 square miles of land. It is directly served by SR 137.

Based on the 2010 Census, the population in East Tulare Villa was 778. Similar to other communities in Tulare County, the population of East Tulare Villa is racially diverse with 63% White, 1% African American, 1% Native American, 1% Asian/Pacific Islander, 29% from other races, and 5% from 2 or more races. 55% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 218 housing units located within East Tulare Villa, of which 60% are owner-occupied and 40% are renter-occupied.

24.2 Domestic Water & Wastewater

Domestic water service in East Tulare Villa is provided by Tulare County. East Tulare Villa does not have sanitary sewer service and relies on individual or community septic systems. Information related to the number of water connections, as well as mapping of the water system, is currently unavailable.

24.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

East Tulare Villa does not currently have a storm drainage system.

24.4 Roads

There are various roadways in East Tulare Villa that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 24-1 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 24-1 graphically displays this information on a map.

TABLE 24-1
Roads in Need of Major and Medium Repair in East Tulare Villa

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Allen Road	Bardsley Avenue to Avenue 226	CHIP
2	Allen Road	Avenue 228 to Gregory Avenue	CHIP
3	Avenue 226	Road 129 (End) to Munson Road	CHIP
4	Avenue 226	Munson Road to Allen Road	CHIP
5	Avenue 226	Allen Road to Road 130 (End)	CHIP

TABLE 24-1 (Continued)

Roads in Need of Major and Medium Repair in East Tulare Villa

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
6	Avenue 230	Allen Road to Brian Road	CHIP
7	Brian Road	Gregory Road to Avenue 230	CHIP
8	Gregory Avenue	Allen Road to Brian Road	CHIP
9	Munson Road	Bardsley Avenue to Avenue 226	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

24.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within East Tulare Villa.

24.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 24-2 identifies the location of existing sidewalks in East Tulare Villa. Figure 24-1 also displays this information graphically. The sidewalks represented in Table 24-2 and Figure 24-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 24-2

Existing Sidewalks in East Tulare Villa

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Bardsley Avenue	West of Munson Road to Road 132	South side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

24.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 24-3 identifies the location of existing street lights that are maintained by Tulare County, in East Tulare Villa, as well as their specifications. Figure 24-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 24-3

Existing Street Lights in East Tulare Villa

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 226	Road 130	SE Corner	N/A	N/A	N/A	W	N/A
2	Avenue 228	Brian Road	NW Corner	N/A	5800	W	S	SCE
3	Avenue 228	Road 130	NW Corner	N/A	N/A	N/A	S	N/A
4	Bardsley Avenue	Road 130	NW Corner	N/A	N/A	N/A	S	N/A
5	Gregory Avenue	Brian Road	SW Corner	1982247 E	5800	W	N	SCE

(Source: Tulare County Public Works, March 2013)

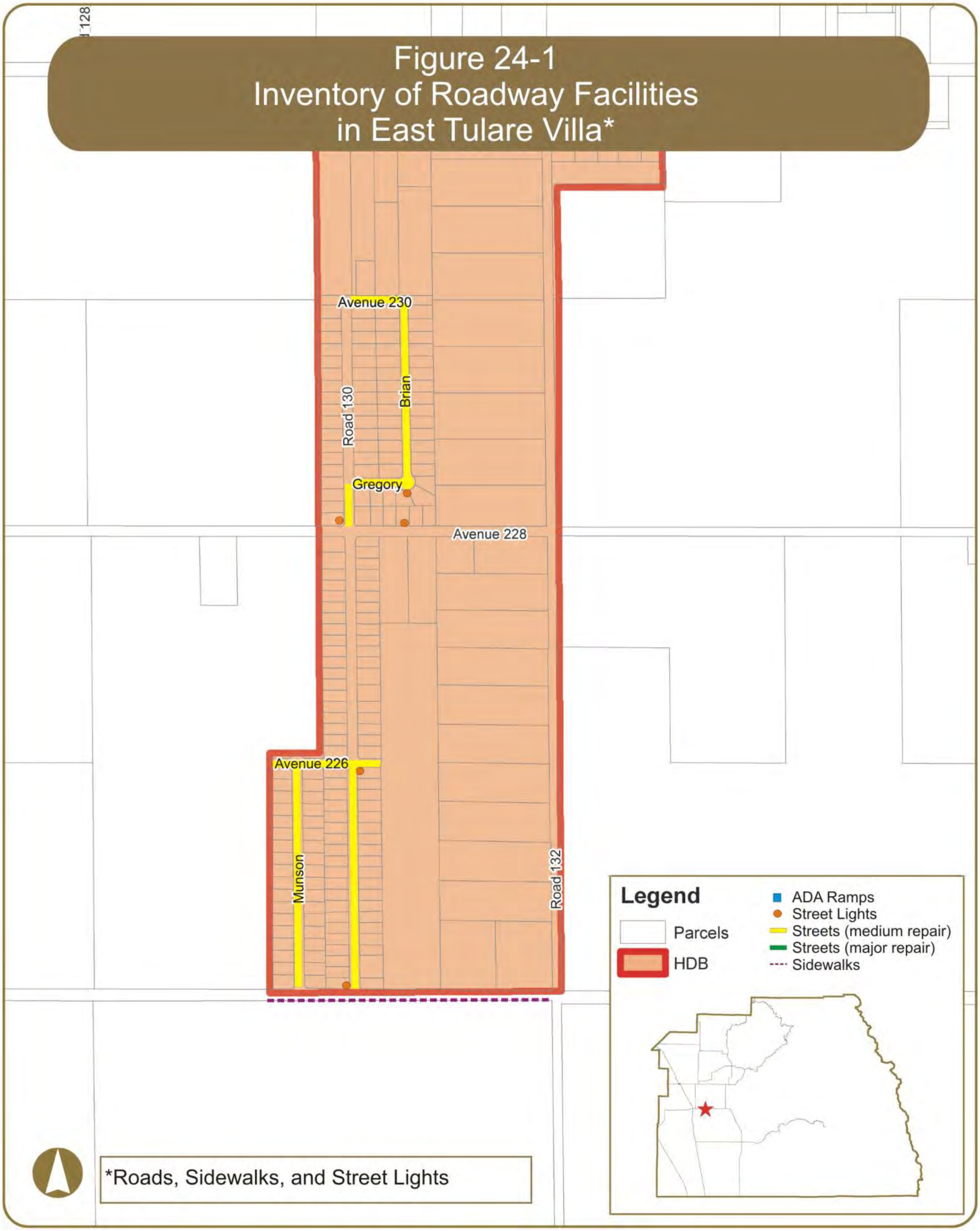


Figure 24-1
Inventory of Roadway Facilities
in East Tulare Villa*
Avenue 230
Road 130
Brian
Gregory
Avenue 228
Avenue 226
Munson
Road 132
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, and Street Lights

25. HAMLET OF LINDCOVE

25.1 General Information

Lindcove is a census-designated place located in the northern portion of Tulare County. It is generally bounded by Avenue 312 in the south, Boston Avenue in the north, Road 226 in the west, and Road 228 in the east and encompasses 0.7 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Lindcove was 406. Similar to other communities in Tulare County, the population of Lindcove is racially diverse with 70% White, 1% African American, 4% Native American, 0% Asian/Pacific Islander, 24% from other races, and 2% from 2 or more races. 49% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 140 housing units located within Lindcove, of which 66% are owner-occupied and 34% are renter-occupied.

25.2 Domestic Water & Wastewater

Lindcove does not currently have any domestic water service. Lindcove also lacks a sanitary sewer system and is served by individual or community septic systems.

25.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Lindcove does not currently have a storm drainage system.

25.4 Roads

There are several roadways in Lindcove that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 25-1 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 25-1 graphically displays this information on a map.

TABLE 25-1
Roads in Need of Major and Medium Repair in Lindcove

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 312	Blair Road to Griswold Road	GRX
2	Road 228	Avenue 312 to Carson Avenue	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

25.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Lindcove.

25.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. There are currently no sidewalks located within Lindcove.

25.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

There are currently no street lights located within Lindcove.

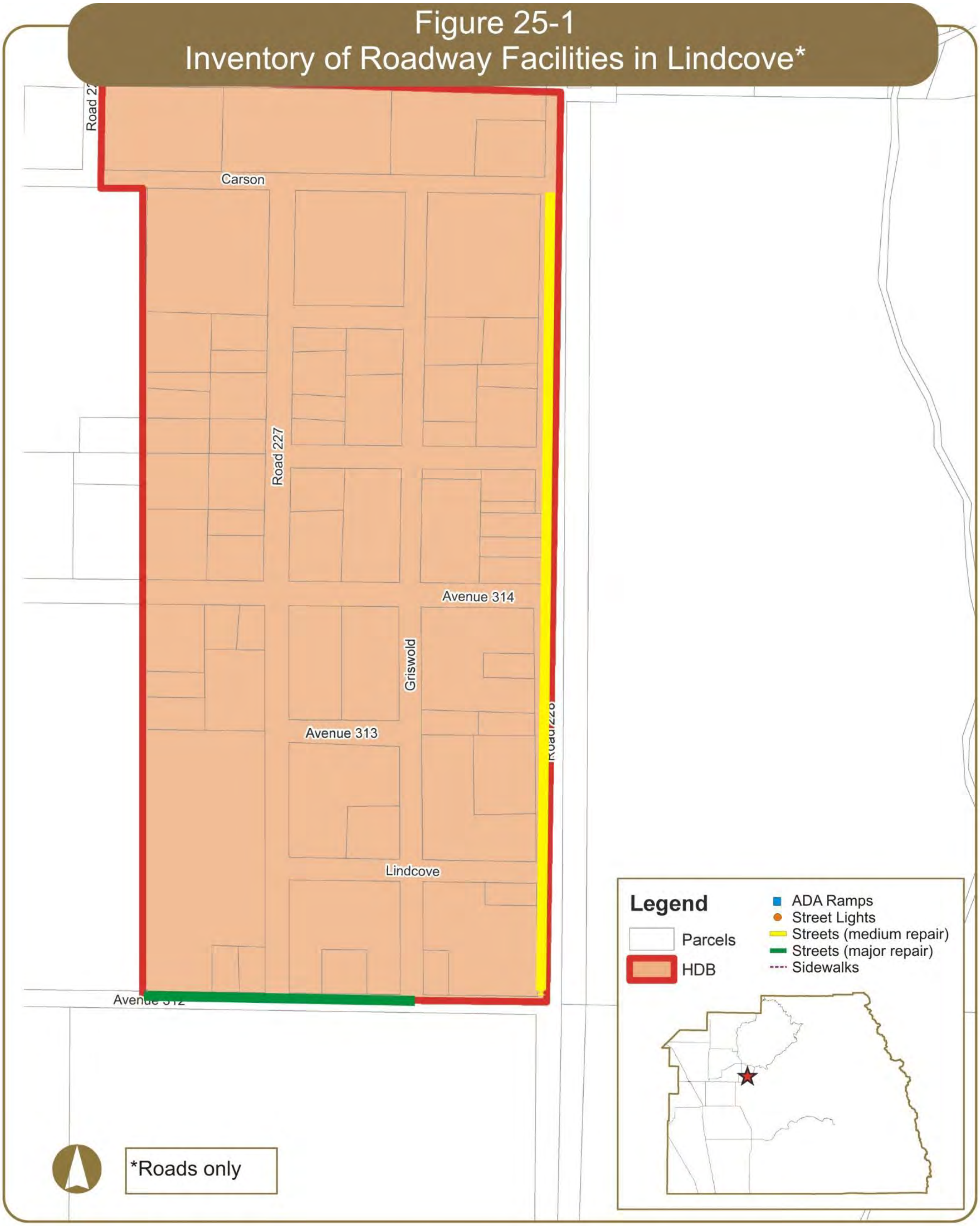


Figure 25-1
Inventory of Roadway Facilities in Lindcove*
Carson
Road 227
Griswold
Avenue 314
Avenue 313
Lindcove
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads only

26. HAMLET OF MONSON

26.1 General Information

Monson is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 384 in the south, Avenue 388 in the north, Sand Creek in the west, and Road 108 in the east and encompasses 0.5 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Monson was 188. Similar to other communities in Tulare County, the population of Monson is racially diverse with 64% White, 1% African American, 3% Native American, 2% Asian/Pacific Islander, 30% from other races, and 0% from 2 or more races. 78% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 52 housing units located within Monson, of which 55% are owner-occupied and 45% are renter-occupied.

26.2 Domestic Water & Wastewater

Monson does not currently have any domestic water service. Monson also lacks a sanitary sewer system and is served by individual or community septic systems.

26.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Monson does not currently have a storm drainage system.

26.4 Roads

There are various roadways in Monson that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 26-1 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 26-1 graphically displays this information on a map.

TABLE 26-1
Roads in Need of Major and Medium Repair in Monson

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 388	Monson Drive to Road 108	CHIP
2	Monson Drive	Simpson Drive to Road 104	CHIP
3	Monson Drive	Avenue 384 to Simpson Drive	GRX
4	Road 104	Avenue 388 to Monson Drive	CHIP
5	Simpson Drive	Avenue 384 to Monson Drive	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

26.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Monson.

26.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. There are currently no sidewalks located within Monson.

26.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

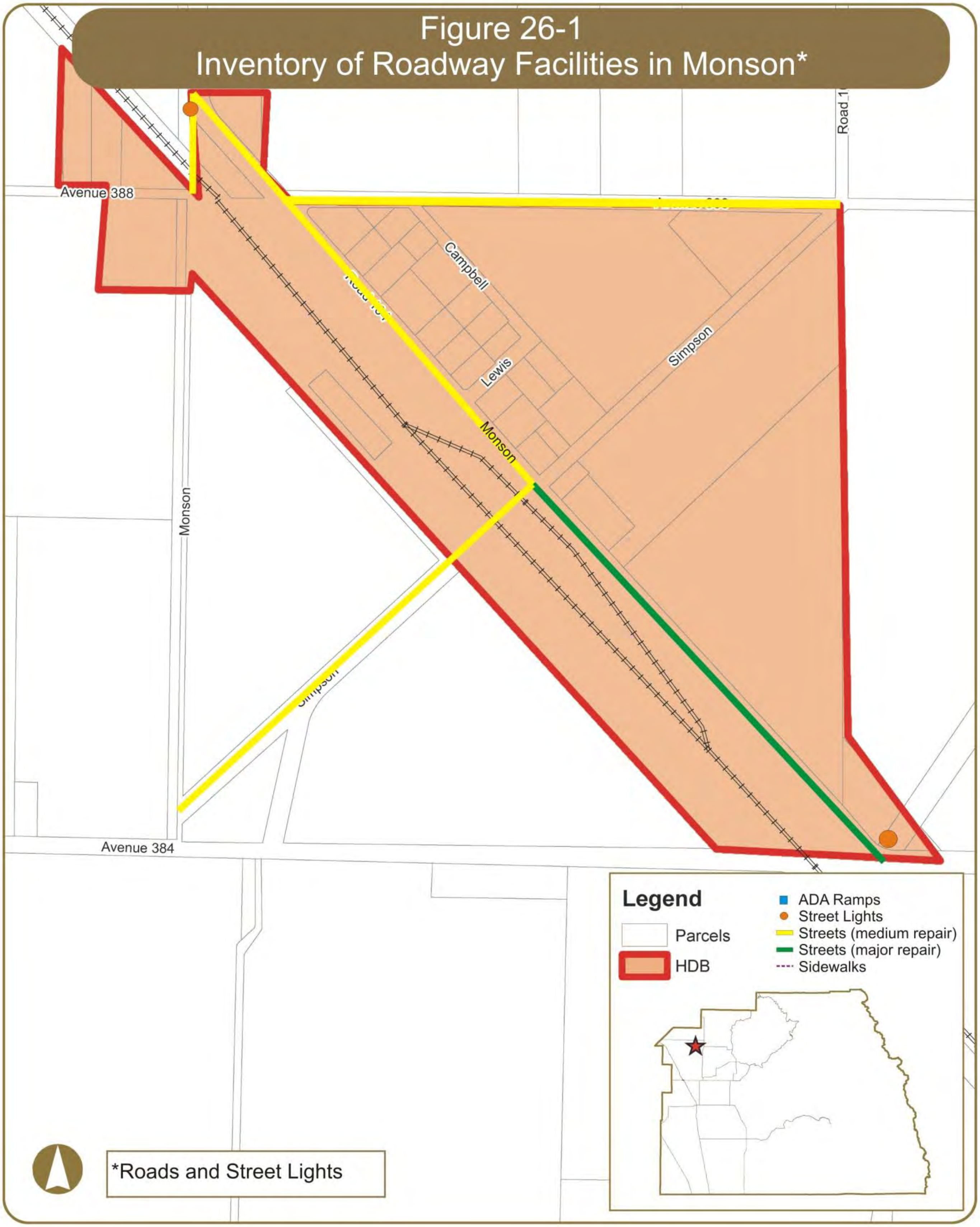
Table 26-2 identifies the location of existing street lights that are maintained by Tulare County, in Monson, as well as their specifications. Figure 26-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 26-2
Existing Street Lights in Monson

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 384	Monson Drive	NE Corner	5	9500	W	S	PG&E
2	Road 104	Monson Drive	NW Corner	2454	9500	W	E	PG&E

(Source: Tulare County Public Works, March 2013)

Figure 26-1
Inventory of Roadway Facilities in Monson*



*Roads and Street Lights

27. HAMLET OF SEVILLE

27.1 General Information

Seville is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Inyo Avenue in the south, Avenue 384 in the north, Road 152 in the west, and east of Road 156 in the east and encompasses 0.6 square miles of land. It is directly served by State Route (SR) 201.

Based on the 2010 Census, the population in Seville was 480. Similar to other communities in Tulare County, the population of Seville is racially diverse with 42% White, 0% African American, 1% Native American, 0% Asian/Pacific Islander, 54% from other races, and 3% from 2 or more races. 95% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 115 housing units located within Seville, of which 51% are owner-occupied and 49% are renter-occupied.

27.2 Domestic Water & Wastewater

Domestic water and sewer service in Seville is provided by Tulare County. Table 27-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Tulare County, January 2014). Mapping of the sewer and water systems is currently unavailable.

TABLE 27-1

Existing Water & Wastewater Connections in Seville

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
114	114	0	99	103	4

* Data current as of January 2014

27.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Seville does not currently have a storm drainage system.

27.4 Roads

There are various roadways in Seville that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 27-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 27-1 graphically displays this information on a map.

TABLE 27-2
Roads in Need of Major and Medium Repair in Seville

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 383	Road 153 to Road 155	CHIP
2	Inyo Avenue	Road 153 to Road 156	CHIP
3	Kern Road	Seville Avenue to Avenue 384	CHIP
4	Road 153	Inyo Avenue to Avenue 381	GRX
5	Road 153	Visalia Avenue to Seville Avenue	GRX
6	Road 153	Seville Avenue to Avenue 384	CHIP
7	Road 155	Inyo Avenue to Seville Avenue	CHIP
8	Seville Avenue	Road 153 to Kern Road	CHIP
9	Visalia Avenue	Road 153 to Road 156 (End)	GRX

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

27.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there is one ADA compliant curb ramps located within Seville and are listed in Table 27-3 and displayed in Figure 27-1.

TABLE 27-3
Existing ADA Curb Ramps in Seville

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	Avenue 383	Road 156	NW Corner

(Source: County of Tulare Public Works, August 2013)

27.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Seville.

27.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 27-4 identifies the location of existing street lights that are maintained by Tulare County, in Seville, as well as their specifications. Figure 27-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 27-4
Existing Street Lights in Seville

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 383	Road 156	NE Corner	2	5800	W	W	PG&E
2	Seville	Road 156	NE Corner	N/A	5800	W	W	PG&E
3	SR 201	Road 156	NE Corner	11	9500	W	S	PG&E

(Source: Tulare County Public Works, March 2013)

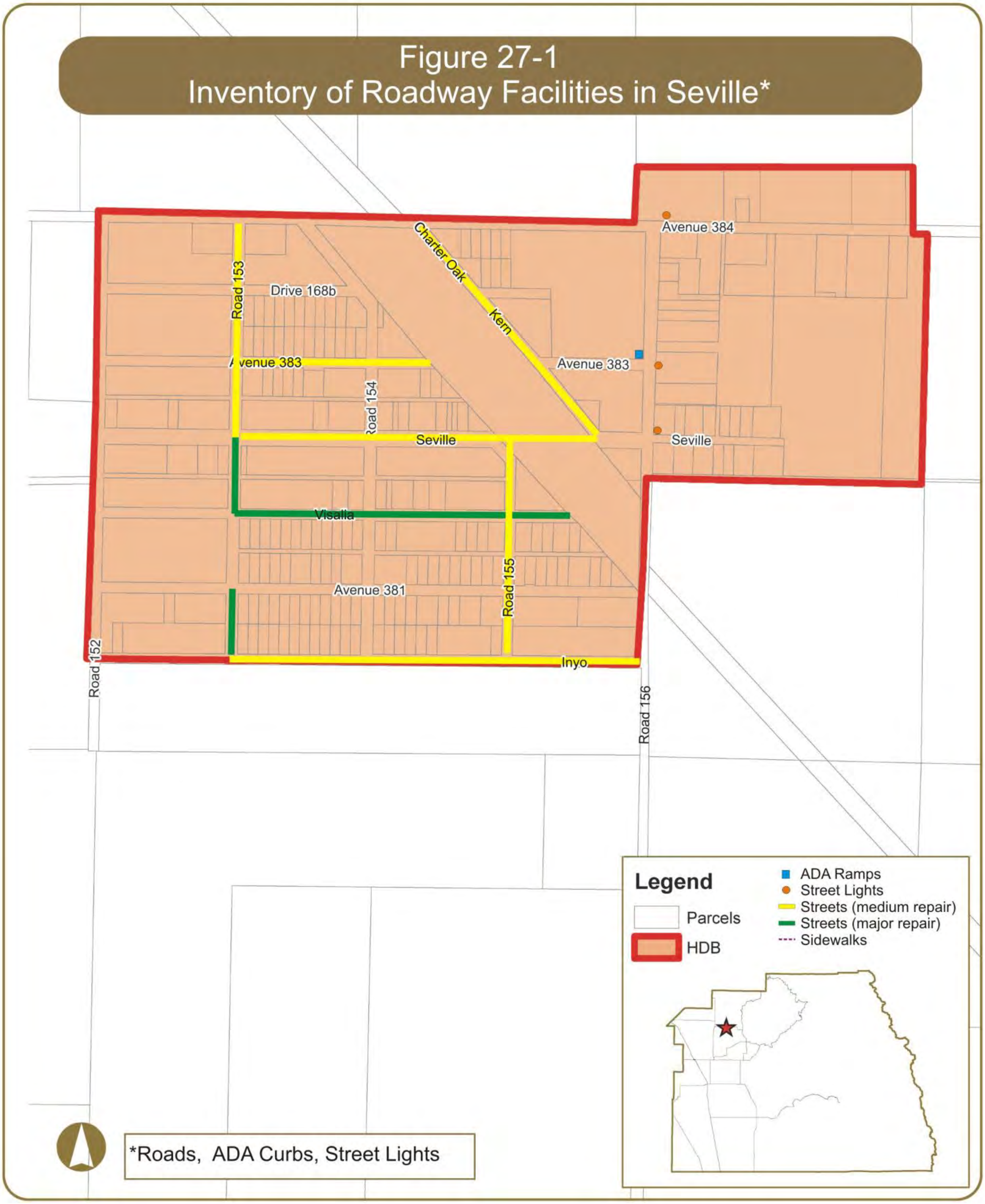


Figure 27-1
Inventory of Roadway Facilities in Seville*
Avenue 384
Charter Oak
Kern
Road 153
Drive 168b
Avenue 383
Avenue 383
Road 154
Seville
Seville
Visalia
Road 155
Avenue 381
Inyo
Road 152
Road 156
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, ADA Curbs, Street Lights

28. HAMLET OF TEVISTON

28.1 General Information

Teviston is a census-designated place located in the southwest portion of Tulare County, southwest of Porterville. It is generally bounded by south of Avenue 72 in the south, Avenue 84 in the north, Road 126 in the west, and Road 136 in the east and encompasses 2.2 square miles of land. Teviston is an agriculturally oriented service community surrounded on the north, west and south by lands in agricultural production and on the east by scattered rural residential, agricultural, and vacant land.

Based on the 2010 Census, the population in Teviston was 1,214. Similar to other communities in Tulare County, the population of Teviston is racially diverse with 37% White, 4% African American, 1% Native American, 1% Asian/Pacific Islander, 53% from other races, and 5% from 2 or more races. 86% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 352 housing units located within Teviston, of which 44% are owner-occupied and 56% are renter-occupied.

28.2 Domestic Water & Wastewater

Domestic water service in Teviston is provided by the Teviston Community Services District (CSD), which was formed in November 1956. Teviston lacks a sanitary sewer system and is served by individual or community septic systems. Table 28-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Housing Element, May 2012). Mapping of the water system is currently unavailable.

According to the Municipal Service Review 2006 (MSR), Teviston's water supply is derived from two existing deep underground wells that provide an ample clean water supply requiring no chlorination or treatment. The two wells have a total maximum production efficiency of approximately 900 gallons per minute (GPM).

The Teviston CSD water system supports 105 total connections including 99 residential connections, 4 church connections, 1 school connection, and 1 connection to the community center. In 1998, the District completed several improvements to its water system including replacing old deteriorating water lines, construction of new water lines, installation of fire hydrants throughout the system, installation of meters for all connections, and improvements to the north well site.

The *Preliminary Engineering Report Water System Rehabilitation Project* (Roberts Engineering, November 1995) estimates that the two wells have adequate water supply to support a population of approximately 460 residents, or approximately 125 equivalent dwelling units (EDUs) at a dwelling unit occupancy rate of 3.7 persons per household. It is recommended that the District plan for future water system improvements as the current system reaches its capacity, perhaps through a meter plan, or updated water system study. Potential funding sources should also be identified during the planning process.

Assuming 105 EDUs, in order to meet Tulare County Improvement Standards the Teviston CSD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 857 GPM (500 GPM fire flow and 357 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 pounds per square inch (PSI) to each lot served. The District's water system is capable of delivering a source flow of 900 GPM, and includes pneumatic pressure tanks for storage, indicating that the system currently meets the requirements of the Tulare County Improvement Standards.

TABLE 28-1

Existing Water & Wastewater Connections in Teviston

Description of Existing Infrastructure					
Drinking Water*			Waste Water		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
105	125	20	Septic only	--	--

* Data current as of May 2012

28.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Teviston does not currently have a storm drainage system.

28.4 Roads

There are various roadways in Teviston that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 28-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 28-1 graphically displays this information on a map.

TABLE 28-2
Roads in Need of Major and Medium Repair in Teviston

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 72	Road 128 to Bishop Drive	CHIP
2	Avenue 72	Road 130 to Road 136	CHIP
3	Avenue 76	Road 132 to Road 134	CHIP
4	Avenue 76	Road 134 to Road 136	RCST
5	Avenue 78	Road 126 to Road 128	CHIP
6	Avenue 80	Road 126 to Bishop Drive	GRX
7	Avenue 80	SR 99 to Road 131	GRX
8	Avenue 80	Road 131 to Road 132	CHIP
9	Avenue 80	Road 132 to Road 136	GRX
10	Avenue 84	Road 128 to Road 132	GRX
11	Avenue 84	Road 132 to Road 136	CHIP
12	Bishop Drive	Avenue 72 to Avenue 80	CHIP
13	Elm Street	SR 99 to Avenue 84	CHIP
14	Road 126	Avenue 78 to Avenue 80	CHIP
15	Road 128	Avenue 72 to Avenue 78	CHIP

TABLE 28-2 (Continued)
Roads in Need of Major and Medium Repair in Teviston

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
16	Road 130	Avenue 72 to Avenue 76	CHIP
17	Road 131	Williams Avenue to Avenue 80	GRX
18	Road 132	Avenue 72 to Williams Avenue	CHIP
19	Road 132	Avenue 80 to Avenue 84	CHIP
20	Road 134	Avenue 72 to Avenue 76	CHIP
21	Road 134	Avenue 80 to Avenue 84 (End)	CHIP
22	Road 136	Avenue 72 to Avenue 84	CHIP
23	SR 99	Avenue 76 to Elm Street	GRX

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

28.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Teviston.

28.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk

width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Teviston.

28.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 28-3 identifies the location of existing street lights that are maintained by Tulare County, in Teviston, as well as their specifications. Figure 28-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 28-3
Existing Street Lights in Teviston

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Avenue 76	Road 132	NW Corner	1316608E	5800	W	S	SCE
2	Avenue 80	Road 126	SE Corner	854236E	5800	W	N	SCE
3	Avenue 80	Road 131	North Side	Removed	5800	W	S	SCE
4	Avenue 80	Road 132	NW Corner	4477708E	5800	W	S	SCE
5	Avenue 80	Between Road 130 and Road 131	North Side	854393E	5800	W	S	SCE
6	Avenue 80	Between Road 130 and Road 131	North Side	1316587E	5800	W	S	SCE
7	Avenue 84	Road 132	NW Corner	686466E	5800	W	S	SCE
8	Bishop Drive	Avenue 76	SE Corner	1349358E	5800	W	N/A	SCE
9	Bishop Drive	Avenue 80	Pedestrian Overcrossing (NE Corner)	C/T	9500	S	E	SCE
10	Bishop Drive	Avenue 80	Pedestrian Overcrossing (NE Corner)	C/T	5800	S	S	SCE
11	SR 99	Avenue 80	Pedestrian Overcrossing (NE Corner)	N/A	9500	S	W	SCE
12	SR 99	Avenue 80	Pedestrian Overcrossing (NE Corner)	N/A	16000	S	W	SCE
13	Williams	Road 132	SW Corner	1706286E	5800	W	N/A	SCE

(Source: Tulare County Public Works, March 2013)

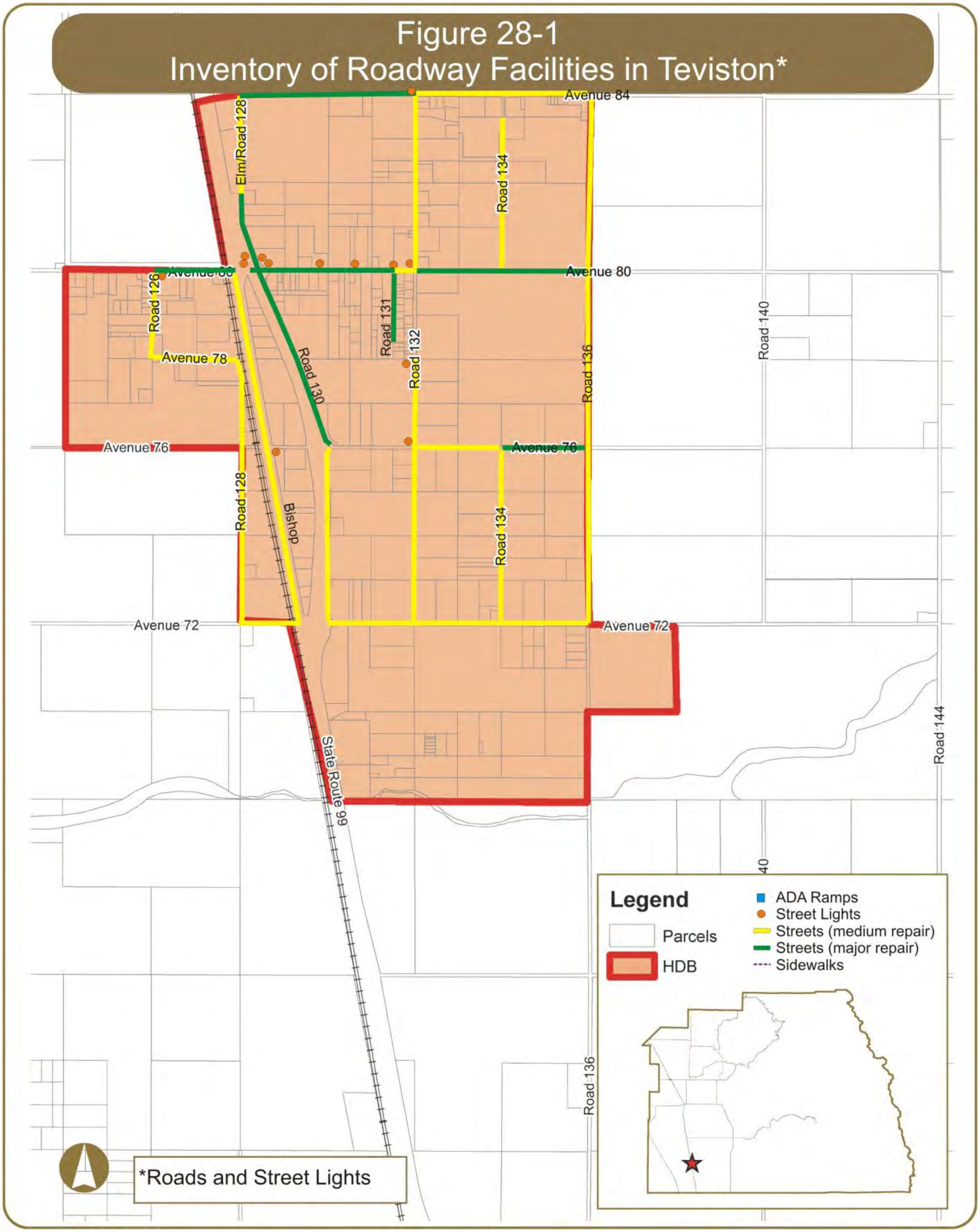


Figure 28-1
Inventory of Roadway Facilities in Teviston*
Avenue 84
Elm/Road 128
Road 134
Avenue 80
Road 126
Avenue 78
Road 130
Road 131
Road 132
Road 136
Road 140
Avenue 76
Road 128
Bishop
Road 134
Avenue 72
State Route 99
Road 144
Road 136
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

29. HAMLET OF TONYVILLE

29.1 General Information

Tonyville is a census-designated place located in the western portion of Tulare County. It is generally bounded by Avenue 252 in the south, Avenue 254 in the north, and Road 216 in the west and encompasses 0.05 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Tonyville was 316. Similar to other communities in Tulare County, the population of Tonyville is racially diverse with 56% White, 0% African American, 0% Native American, 4% Asian/Pacific Islander, 36% from other races, and 4% from 2 or more races. 91% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 68 housing units located within Tonyville, of which 37% are owner-occupied and 63% are renter-occupied.

29.2 Domestic Water & Wastewater

Domestic water service in Tonyville is provided by the Lindsay-Strathmore Irrigation District (LSID) and sanitary sewer service is provided by Tulare County. Table 29-1 shows the number of existing sewer connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Housing Element, May 2012). The capacity and number of connections for the water system is unavailable. Figure 29-1 graphically displays the approximate location of water wells and water lines. A map of the sewer system is currently unavailable.

TABLE 29-1

Existing Water & Wastewater Connections in Tonyville

Description of Existing Infrastructure					
Drinking Water			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
N/A	N/A	N/A	79	170	91

* Data current as of May 2012

29.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Tonyville does not currently have a storm drainage system.

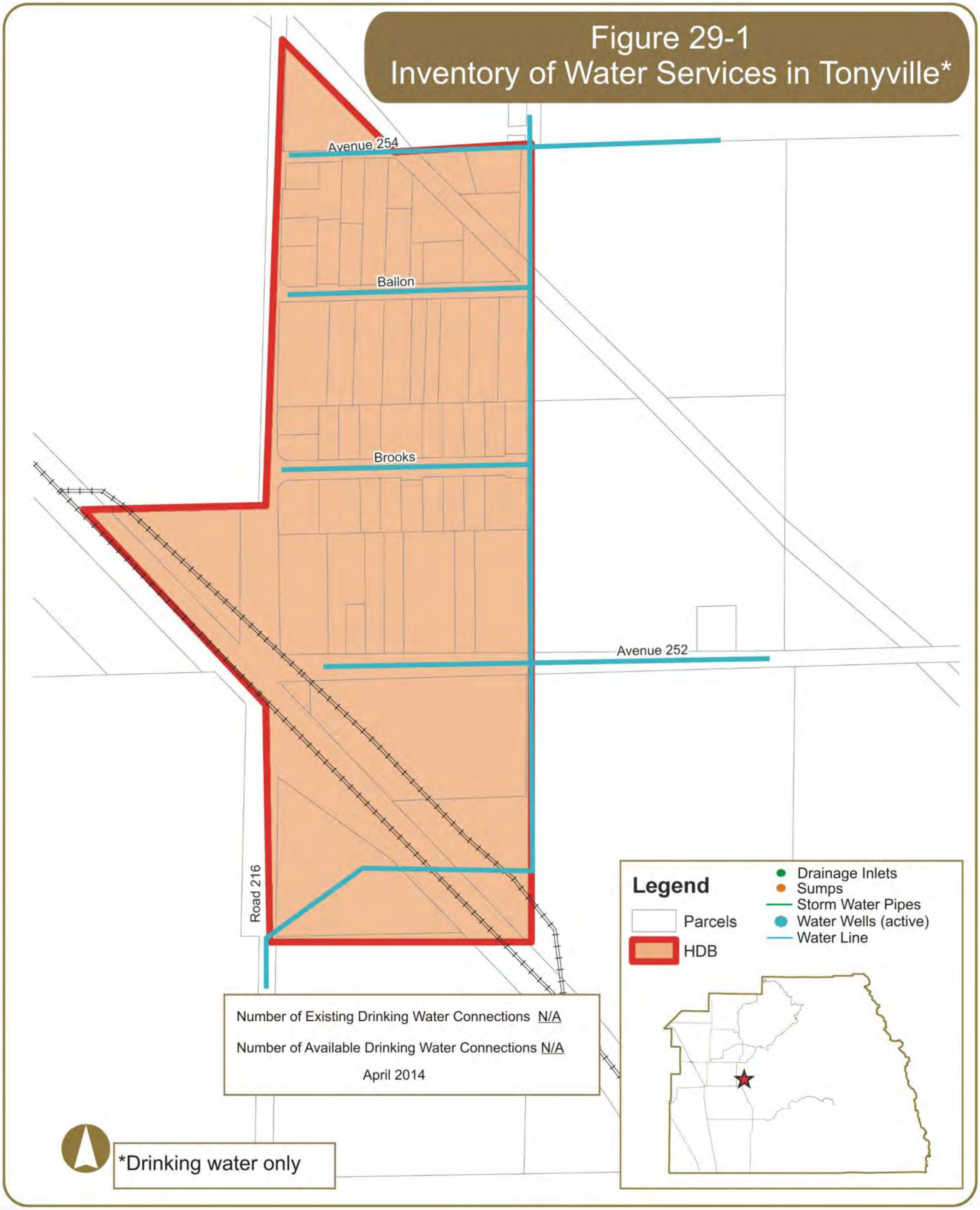


Figure 29-1
Inventory of Water Services in Tonyville*
Avenue 254
Ballon
Brooks
Avenue 252
Road 216
Legend
Parcels
HDB
Drainage Inlets
Sumps
Storm Water Pipes
Water Wells (active)
Water Line
Number of Existing Drinking Water Connections N/A
Number of Available Drinking Water Connections N/A
April 2014
*Drinking water only

29.4 Roads

There are several roadways in Tonyville that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 29-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 29-2 graphically displays this information on a map.

TABLE 29-2
Roads in Need of Medium Repair in Tonyville

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 254	Parkside Avenue to Road 217 (End)	CHIP
2	Parkside Avenue	Brooks Avenue to Avenue 254	CHIP

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

29.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Tonyville.

29.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Tonyville.

29.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 29-3 identifies the location of existing street lights that are maintained by Tulare County, in Tonyville, as well as their specifications. Figure 29-2 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type "W" represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 29-3
Existing Street Lights in Tonyville

Specifications of Existing Street Lights								
No.	East-West Roadway	North-South Roadway	Location	Pole	Lumens	Pole Type	Arm Direction	Utility
1	Avenue 252	Road 216	NE Corner	2272808E	5800	W	W	SCE
2	Avenue 254	Road 216	NE Corner	N/A	5800	W	W	SCE
3	Ballon Avenue	Road 216	NE Corner	562195E	5800	W	W	SCE
4	Ballon Avenue	Road 217	East dead end (N side)	5720287E	5800	W	S	SCE
5	Brooks Avenue	Road 216	NE Corner	2272807E	5800	W	W	SCE
6	Brooks Avenue	Between Road 216 and Road 217	North side	1428827E	5800	W	S	SCE
7	Brooks Avenue	Road 217	East dead end (N side)	722203E	5800	W	S	SCE

(Source: Tulare County Public Works, March 2013)

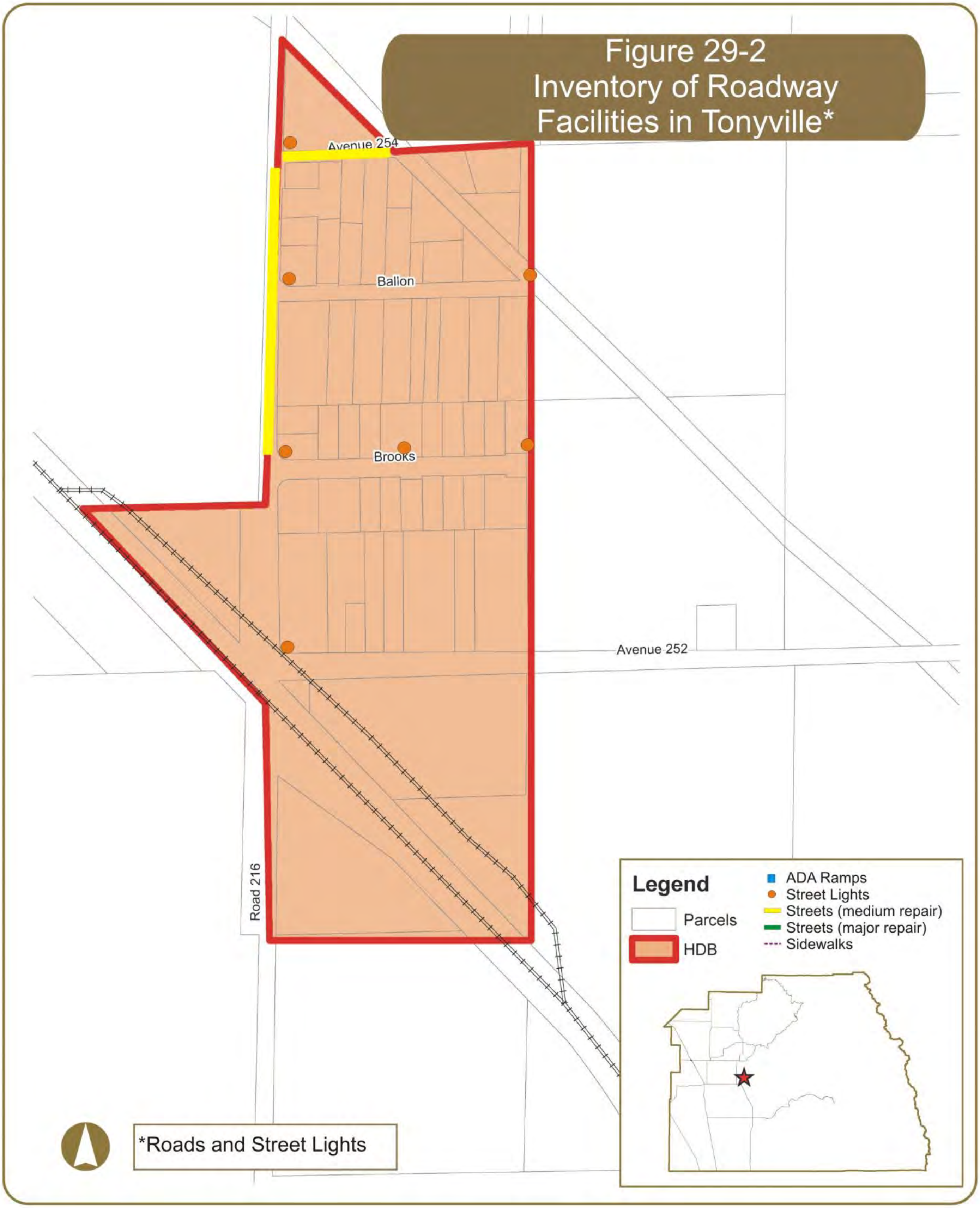


Figure 29-2
Inventory of Roadway Facilities in Tonyville*
Avenue 254
Ballon
Brooks
Avenue 252
Road 216
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

30. HAMLET OF WAUKENA

30.1 General Information

Waukena is a census-designated place located in the western portion of Tulare County. It is generally bounded by Road 24 in the west, Curti Road in the east, and north and south of Avenue 192 and encompasses 0.9 square miles of land. It is directly served by State Route (SR) 137.

Based on the 2010 Census, the population in Waukena was 108. Similar to other communities in Tulare County, the population of Waukena is racially diverse with 80% White, 0% African American, 3% Native American, 0% Asian/Pacific Islander, 18% from other races, and 0% from 2 or more races. 42% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 45 housing units located within Waukena, of which 41% are owner-occupied and 59% are renter-occupied.

30.2 Domestic Water & Wastewater

Domestic water service in Waukena is provided by Tulare County. Waukena does not have sanitary sewer service and relies on individual or community septic systems. Information related to the number of water connections, as well as mapping of the water system, is currently unavailable.

30.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Waukena does not currently have a storm drainage system.

30.4 Roads

There are several roadways in Waukena that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 30-1 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 30-1 graphically displays this information on a map.

TABLE 30-1

Roads in Need of Major and Medium Repair in Waukena

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Balaam Drive	Dawkins Drive to Avenue 192	GRX
2	Dawkins Drive	Stanley Drive to Balaam Drive	CHIP
3	Road 28	Avenue 192 to Stevenson Drive	GRX

OLAY – overlay resurfacing operation	ACST – asphalt reconstruction
CHIP – chip seal	RCST – cold mix reconstruction
GRX – grind and remix	

(Source: County of Tulare Public Works, 2012)

30.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there is one ADA compliant curb ramp located within Waukena and is listed in Table 30-2 and displayed in Figure 30-1.

TABLE 30-2
Existing ADA Curb Ramps in Waukena

Location of Existing ADA Ramps			
No.	**East-West Roadway**	**North-South Roadway**	**Location**
1	South of Stanley Drive	Harmon Road	West Side

(Source: County of Tulare Public Works, August 2013)

30.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The County and VRPA Technologies surveyed existing sidewalks within the Community. Table 30-3 identifies the location of existing sidewalks in Waukena. Figure 30-1 also displays this information graphically. The sidewalks represented in Table 30-3 and Figure 30-1 do not distinguish between ADA compliant sidewalks and noncompliant sidewalks. The majority of sidewalks represented below were constructed prior to current ADA guidelines and would be considered non ADA compliant facilities. Such noncompliant facilities would require complete reconstruction to be considered ADA compliant.

TABLE 30-3

Existing Sidewalks in Waukena

Location of Existing Sidewalks			
No.	**Roadway**	**Limits**	**Location**
1	Harmon Road	Stanley Drive to 300' south	West side
2	Stanley Drive	Dawkins Drive to Harmon Road	South side

(Source: County of Tulare Public Works and VRPA Technologies, February 2014)

30.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 30-4 identifies the location of existing street lights that are maintained by Tulare County, in Waukena, as well as their specifications. Figure 30-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 30-4

Existing Street Lights in Waukena

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	Dawkins Drive	Balaam Drive	SW Corner	1486	9500	W	N	PG&E

(Source: Tulare County Public Works, March 2013)

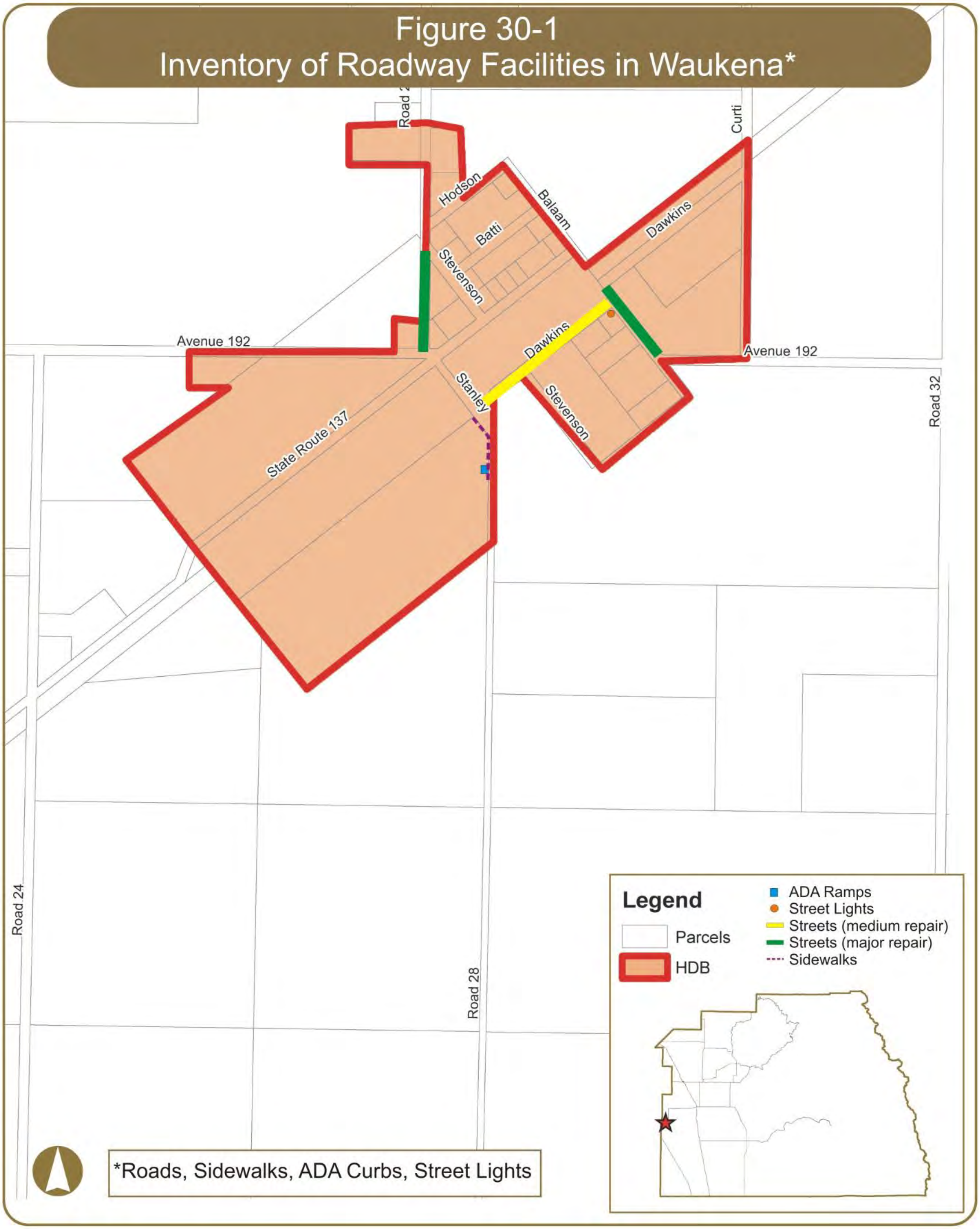


Figure 30-1
Inventory of Roadway Facilities in Waukena*
Road 28
Curti
Hodson
Balaam
Batti
Dawkins
Stevenson
Avenue 192
Avenue 192
Dawkins
Stanley
Stevenson
State Route 137
Road 32
Road 24
Road 28
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads, Sidewalks, ADA Curbs, Street Lights

31. HAMLET OF WEST GOSHEN

31.1 General Information

West Goshen is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Avenue 304 in the south, railroad tracks in the north, 1st Avenue in the west, and west of Markham Road in the east and encompasses 1.2 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in West Goshen was 511. Similar to other communities in Tulare County, the population of West Goshen is racially diverse with 54% White, less than 1% African American, 2% Native American, 1% Asian/Pacific Islander, 38% from other races, and 4% from 2 or more races. 70% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 1243 housing units located within West Goshen, of which 52% are owner-occupied and 48% are renter-occupied.

31.2 Domestic Water & Wastewater

Domestic water service in West Goshen is soon to be provided by the California Water Service Company (Cal Water). West Goshen does not have sanitary sewer service and relies on individual or community septic systems. Table 31-1 shows the number of existing water connections, the capacity of the system, and the number of additional connections the system can accommodate for new development (Tulare County, January 2014). Mapping of the water system is currently unavailable.

TABLE 31-1

Existing Water & Wastewater Connections in West Goshen

Description of Existing Infrastructure					
Drinking Water*			Waste Water *		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
88	70	0	Septic only	--	--

* Data current as of January 2014

31.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

West Goshen does not currently have a storm drainage system.

31.4 Roads

There are several roadways in West Goshen that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 31-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 31-1 graphically displays this information on a map.

TABLE 31-2

Roads in Need of Major and Medium Repair in West Goshen

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Avenue 308	Road 48 to Road 52	GRX
2	Road 48	Avenue 308 to Avenue 309	GRX
3	Road 52	Avenue 308 to Avenue 309	CHIP

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

31.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within West Goshen.

31.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within West Goshen.

31.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

There are currently no street lights located within West Goshen.

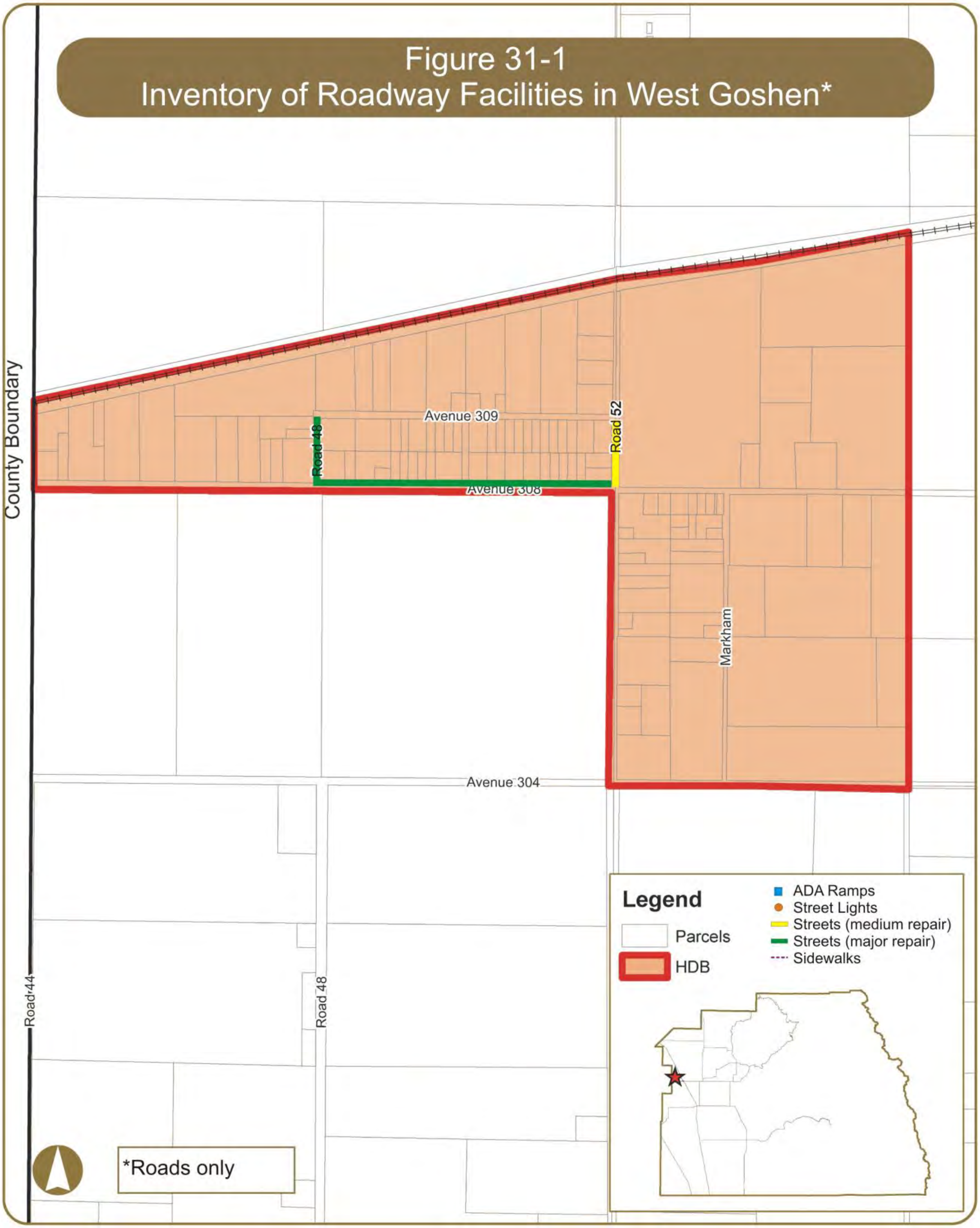


Figure 31-1
Inventory of Roadway Facilities in West Goshen*
County Boundary
Avenue 309
Road 48
Road 52
Avenue 308
Markham
Avenue 304
Road 44
Road 48
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads only

32. HAMLET OF YETTEM

32.1 General Information

Yettem is a census-designated place located in the northwest portion of Tulare County. It is generally bounded by Road 140 in the west, Road 144 in the east, and north and south of Avenue 384 and encompasses 0.2 square miles of land. It is not directly served by any State Route.

Based on the 2010 Census, the population in Yettem was 211. Similar to other communities in Tulare County, the population of Yettem is racially diverse with 23% White, 2% African American, 0% Native American, 0% Asian/Pacific Islander, 70% from other races, and 5% from 2 or more races. 94% of the population is Hispanic or Latino of any race.

According to the 2010 Census, there are approximately 62 housing units located within Yettem, of which 26% are owner-occupied and 74% are renter-occupied.

32.2 Domestic Water & Wastewater

Domestic water and sewer service in Yettem is provided by Tulare County. Table 32-1 shows the number of existing water and sewer connections, the capacity of each system, and the number of additional connections the systems can accommodate for new development (Tulare County, January 2014 and Housing Element, May 2012). Mapping of the sewer and water systems is currently unavailable.

TABLE 32-1

Existing Water & Wastewater Connections in Yettem

Description of Existing Infrastructure					
Drinking Water*			Waste Water **		
No. of Existing Connections	Capacity	Available	No. of Existing Connections	Capacity	Available
69	596	527	69	193	124

* Data current as of January 2014

** Data current as of May 2012

32.3 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Yettem does not currently have a storm drainage system.

32.4 Roads

There are several roadways in Yettem that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

Table 32-2 lists the roadways in need of repair, the limits, and type of maintenance strategy proposed. Figure 32-1 graphically displays this information on a map.

TABLE 32-2

Roads in Need of Major and Medium Repair in Yettem

Road Maintenance Strategies			
No.	**Roadway**	**Limits**	**Repair Code**
1	Road 140	Avenue 380 to SR 201	RCST
2	Road 140	SR 201 to Avenue 392	GRX

OLAY – overlay resurfacing operation
CHIP – chip seal
GRX – grind and remix
ACST – asphalt reconstruction
RCST – cold mix reconstruction

(Source: County of Tulare Public Works, 2012)

32.5 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Yettem.

32.6 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals. However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

There are currently no sidewalks located within Yettem.

32.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

Table 32-3 identifies the location of existing street lights that are maintained by Tulare County, in Yettem, as well as their specifications. Figure 32-1 also displays this information graphically. The below table specifies the locations, the pole number, lumens, pole type, arm direction and utility provider. Pole numbers can be arbitrary and are used to match the pole specifications with its location. Lumens measure the amount of light emitted from the bulb (the more lumens the brighter the light). The pole type “W” represents a wood post for which the light is commonly shared with a Utility provider. Similarly, "M" represents metal and "C" represents concrete.

TABLE 32-3
Existing Street Lights in Yettem

Specifications of Existing Street Lights								
No.	**East-West Roadway**	**North-South Roadway**	**Location**	**Pole**	**Lumens**	**Pole Type**	**Arm Direction**	**Utility**
1	SR 201	Road 140	North Side	1460	9500	W	S	PG&E
2	SR 201	Road 142	North Side	N/A	9500	W	S	PG&E
3	SR 201	Road 144	NW Corner	1459	9500	W	S	PG&E

(Source: Tulare County Public Works, March 2013)

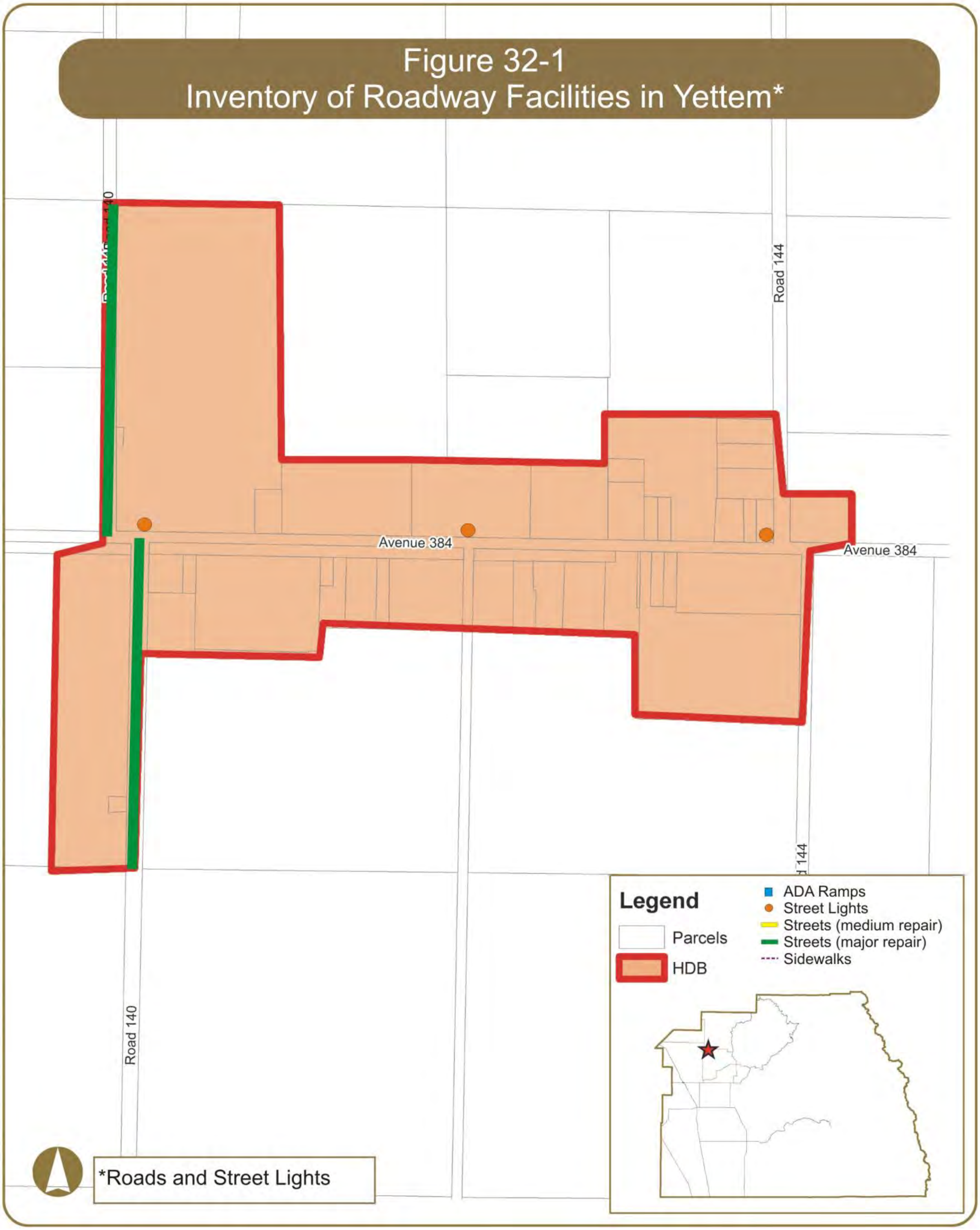


Figure 32-1
Inventory of Roadway Facilities in Yettem*
Road 144
Avenue 384
Avenue 384
Road 140
Legend
Parcels
HDB
ADA Ramps
Street Lights
Streets (medium repair)
Streets (major repair)
Sidewalks
*Roads and Street Lights

33. Matheny Tract

33.1 General Information

Matheny Tract is located one mile south of the City of Tulare generally located south of Avenue 216 (Paige Avenue), east of Road 96 (Pratt Street) and west of I Drive and State Route 99. Matheny Tract is located just west of industrial land uses and a Union Pacific Railroad line running through Tulare County. Physically, the Community of Matheny Tract is divided by agricultural fields that separate approximately 256 households in North Matheny from 80 households in South Matheny. The Matheny Tract Community is predominantly surrounded by agricultural land.

Along the eastern boundary, running parallel to South “I” Drive is an irrigation ditch, above ground power lines and the Union Pacific Railroad tracks. Also visible to the east is the City of Tulare corporation yard. Above ground power lines run parallel to Pratt Road that acts as the western boundary. The City of Tulare’s Wastewater Treatment and Reclamation facility is located about ¾ miles northwest of Matheny Tract. In addition, an industrial area is located immediately northeast of the Community.

There is a canal within Tulare Irrigation District (TID) service area that bisects North and South Matheny. The Oakland Colony Ditch runs in a north south direction through North Matheny along the Canal Street corridor and extends in an east-west direction between North and South Matheny. There are two east-west crossings of the Oakland Colony Ditch - one along Wade Avenue and the other along Addie Avenue - in North Matheny.

Matheny Tract is an unincorporated Community located south of the City of Tulare with a population of approximately 1,212 and 320 households. The total land area is 0.043 square miles (2,820.5 people per square mile) and the elevation is 269 feet above sea level. Matheny Tract is also designated as a disadvantaged Community, which is, “a census designated place that has household median incomes that are less than 80% of the statewide household median income.

The Census reported that the racial makeup of Matheny in 2010 was 651 (53.7%) White, 44 (3.6%) African American, 24 (2.0%) Native American, 4 (0.3%) Asian, 0 (0.0%) Pacific Islander, 436 (36.0%) from other races, and 53 (4.4%) from two or more races. Hispanic or Latino of any race was 890 persons (73.4%). The average household size was 3.79.

(For more detailed information regarding Matheny Tract and source material for this chapter see Draft Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-1
Aerial Photo of Matheny Tract

(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Age attributes in Matheny show that the population in 2010 included 459 people (37.9%) under the age of 18, 120 people (9.9%) aged 18 to 24, 330 people (27.2%) aged 25 to 44, 204 people (16.8%) aged 45 to 64, and 99 people (8.2%) who were 65 years of age or older. The median age was 26.9 years.

Household characteristics estimated in 2010 by the Census indicate that there were 344 housing units, of which 155 (48.4%) were owner occupied, and 165 (51.6%) were occupied by renters. The homeowner vacancy rate was 0.6%; the rental vacancy rate was 4.5%. 525 people (43.3% of the population) lived in owner occupied housing units and 687 people (56.7%) lived in rental housing units.

Matheny Tract is identified as a disadvantaged Community that lies adjacent to and outside of Tulare's city limit and 2035 urban development boundary (UDB). It is, however, included within the City of Tulare's sphere of influence (SOI). A SOI is typically the planning boundary outside of an agency's legal boundary (such as the city limit line) that designates the agency's probable future boundary and service area. The establishment of an SOI area does not authorize development or expansion. Alternatively, an SOI area allows an agency to perform studies and initiate long-term planning through a comprehensive master planning process to ensure proper and orderly future growth.

As a result of long-term planning, domestic water services in Matheny Tract is anticipated being connected to the City of Tulare's water system after historically using a system of groundwater wells. Approximately 10 years ago, water pressure began to decline, while arsenic levels rose, making the water unsafe for human consumption. Arsenic levels of 15.7 micrograms per liter, which exceeds the State minimum of 10 micrograms per liter, have been reported in Matheny Tract. The City of Tulare and Self-Help Enterprises, a local non-profit housing group, obtained State funding to improve the Matheny Tract's water infrastructure and connect it to the City of Tulare's water infrastructure. This system is anticipated to be fully connected in 2014.

The County of Tulare is currently working on a project, funded by a Proposition 84 planning grant, to connect the Matheny Tract to the City's wastewater system. This is also a result of the long-term planning process and comprehensive master planning that has been occurring for several decades involving the City of Tulare, the County of Tulare, Matheny Tract residents, and public and private non-profit advocacy groups.

33.2 Domestic Water & Wastewater

The Pratt Mutual Water Company (PMWC) water system was originally installed in the early 1960s. The system is currently operated under the California State Department of Health Services (DHS) Water Permit No. 03 ‐ 88 ‐ 019, dated August 11, 1988. The water system is classified as a Community water system. PMWC operates and maintains the Matheny Tract Community Water System. The system presently serves approximately 276 unmetered services according to the Draft Mitigated Negative Declaration for the Pratt Mutual Water Company Water System Improvement Project and Consolidation with the City of Tulare (City of Tulare Planning Department ‐ 2014).

The water supply for PMWC is provided by three shallow wells that have been in service for several decades. Well No's 1 and 2 were drilled in 1961 to depths of 325 feet and 250 feet respectively. Well #3 was drilled in 1976 to a depth of 400 feet. All well sites have hydro ‐ pneumatic tanks and feed directly into the distribution system. Water is chlorinated at the active well sites. There is no emergency backup power supply at any of the well sites.

PMWC has received multiple Notices of Violation from the California DHS for system violations and failure to comply with reporting requirements. In 1999 and 2000, multiple violations were issued to PMWC for exceeding the Maximum Contaminant Levels (MCL) for total coli form and nitrate. PMWC was required to add chlorination facilities to each of the active wells as a result of the violations.

In 2002, Well #2 was condemned by DHS due to high nitrate levels. Well #2 is the shallowest well and may be influenced by septic systems and agricultural operations in the area. The two wells that remain in service have nitrate levels below the MCL.

In recent years, the groundwater elevation has dropped causing water shortages. On multiple occasions, the Community was temporarily without water service. Consequently, pumps in the active wells were lowered to accommodate the lower groundwater elevation. In December of 2003, PMWC requested a moratorium from further development in the Community to restrict any additional demands on the system. Draft Mitigated Negative Declaration for the Pratt Mutual Water Company Water System Improvement Project and Consolidation with the City of Tulare (City of Tulare Planning Department ‐ 2014)

PMWC has also experienced an increasing number of problems with the distribution system. The occurrence of water main leakage and breakages requiring repair have increased during the last several years. The distribution system continues to have multiple problems including needed repairs, aged and under‑ sized water mains, sub‑standard fire hydrants, and an inadequate number of isolation valves.

The water system has increasingly experienced problems associated with water quality and supply over the last few years. The PMWC has been issued violations for being out of compliance with state and federal drinking water standards and permit requirements. The arsenic levels in the source water needs to be reduced. The DHS requirements effective in January of 2006 require arsenic levels to be less than 10 ug/L based on water quality testing records.

The PMWC water system must be improved to provide water that is in compliance with drinking water standards with sufficient capacity to serve the Community. There are two primary health concerns that need to be addressed:

1. Arsenic concentrations in excess of the MCL.
2. Unreliable water supply that does not provide adequate flow and system pressure.

Reliable water supply needs to be established for the Community. The Community has experienced periods of water outages due to a declining water table, which has resulted in lowering of the pumps. The system capacity was reduced when Well #2 was shut down and now depends on two of the original three wells to meet water demands. As a result, the existing wells are less capable of providing adequate system pressures. When Well #2 was shutdown the southern portion of the water system was left vulnerable to a breakage in the 6‑inch water main, which is the only source of water. In addition, no backup power or water supply is available for the two operating wells.

Many problems in the PMWC water system need to be addressed, including water quality, supply and distribution. The system is currently out of compliance with the new limits on arsenic. PMWC needs a reliable water supply that meets the drinking water standards.

The City of Tulare and Self‑Help Enterprises, a local non‑profit housing group, obtained State funding to improve the Matheny Tract's water infrastructure so it can be connected to the City of Tulare's water infrastructure. This system is anticipated to be connected in 2014.

33.3 Domestic Wastewater

Matheny Tract is currently unsewered and operates on a system of individual septic systems. The Community was developed and most homes were built in the 1930s and 1940s. Existing on‑site septic systems are generally old and require maintenance. There are two main parts of a septic system: the tank and the drainfield. The septic tank allows solid materials to settle and for bacteria to break them down. Liquid, or effluent, are passed on to the drainfield, where waste materials are broken down by bacteria in the soil.

As septic systems become antiquated, as many are in Matheny Tract, maintenance and repairs of the service line is costly. Proper maintenance for septic systems, such as regular septic tank pumping and inspections along with proper use of disposal (i.e., what is and what is not put down the drain), prolongs the life of the septic system. However, the cost of pumping septic tanks to maintain functionality presents a financial burden to the low - income residents of Matheny Tract where pumping costs can be upwards of $300 per occurrence. The City of Tulare wastewater treatment plant is located less than a mile from Matheny Tract, and a Tulare sewer collection line of sufficient size to serve the Community was recently installed in Pratt Street.

In 2012 Tulare County RMA applied for a grant to connect Matheny Tract residents to the City of Tulare Wastewater Treatment Plant. According to Self Help Enterprises, the grant has been awarded (for planning activities); it is supplemented by a grant from the Strategic Growth Council. Between the two, everything needed from initial outreach through CEQA and final design/construction documents will be funded.

33.4 Storm Drainage

A storm drainage system is designed to drain excess rain and groundwater (from roads, sidewalks, etc.) to some point where it is discharged into a channel, ponding basin, or piped system. The system itself typically consists of pipes connecting inlets and is facilitated by curbs and gutters, manholes, and sumps. The operation of the system consists of runoff being collected in the inlets and transported by pipes to a discharge location. Manholes provide access to storm drain pipes for inspection and cleanout. A sump is a shallow, artificial pond designed to infiltrate storm water through permeable soils into the groundwater aquifer. It does not typically discharge to a detention basin.

Storm drainage systems should be designed so they have adequate capacity to accommodate runoff that enters the system for the design frequency and should also be designed considering future development. An inadequate roadway drainage system could result in the following:

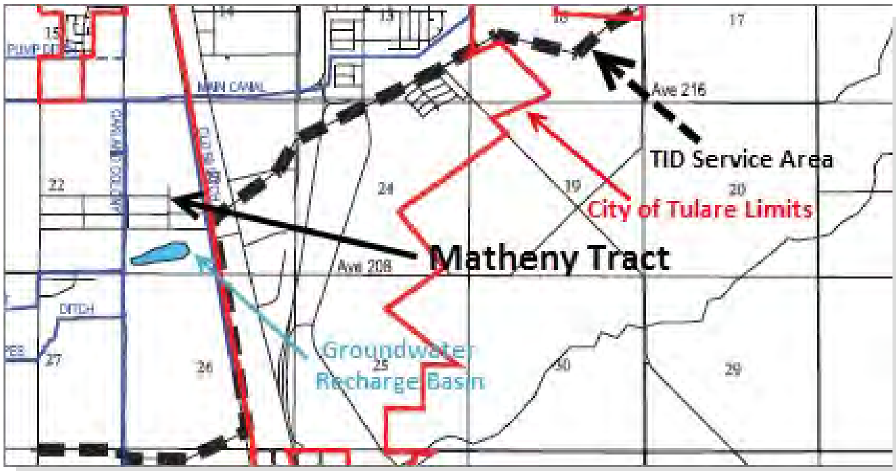
- ✓ Water overflowing the curb and entering adjacent property leading to damage
- ✓ Accelerated roadway deterioration and public safety concerns may occur due to excessive water accumulation on roadways
- ✓ Over saturation of the roadway structural section due to immersion will lead to pavement deterioration

Matheny Tract currently has a limited storm water system, which is served by Tulare Irrigation District (TID). The purpose of TID is to obtain and deliver surface water supplies for the purpose of agricultural irrigation in the District and for groundwater recharge efforts within the basin underlying the District. The District must also operate and maintain 330 miles of canal and approximately 30 miles of pipeline along with 1,110 acres of groundwater recharge/regulation basins.

In Matheny Tract (northern portion), the Oakland Colony Ditch bisects the Community running in a north-south direction between Ruth Street and Canal Street. Figure 33-2 identifies Matheny Tract, the Oakland Colony ditch, a groundwater recharge basin, TID service area and the City of Tulare limits. According to TID, the Oakland Colony Ditch is used primarily for irrigation and flood control purposes. An existing pump station is located the northeast corner of Addie Avenue/Canal Street that pumps surface water into the ditch.

Excessive runoff from the Oakland Colony Ditch is directed to a groundwater recharge basin located south of North Matheny. An additional basin is located to the east of the current basin for large flood events.

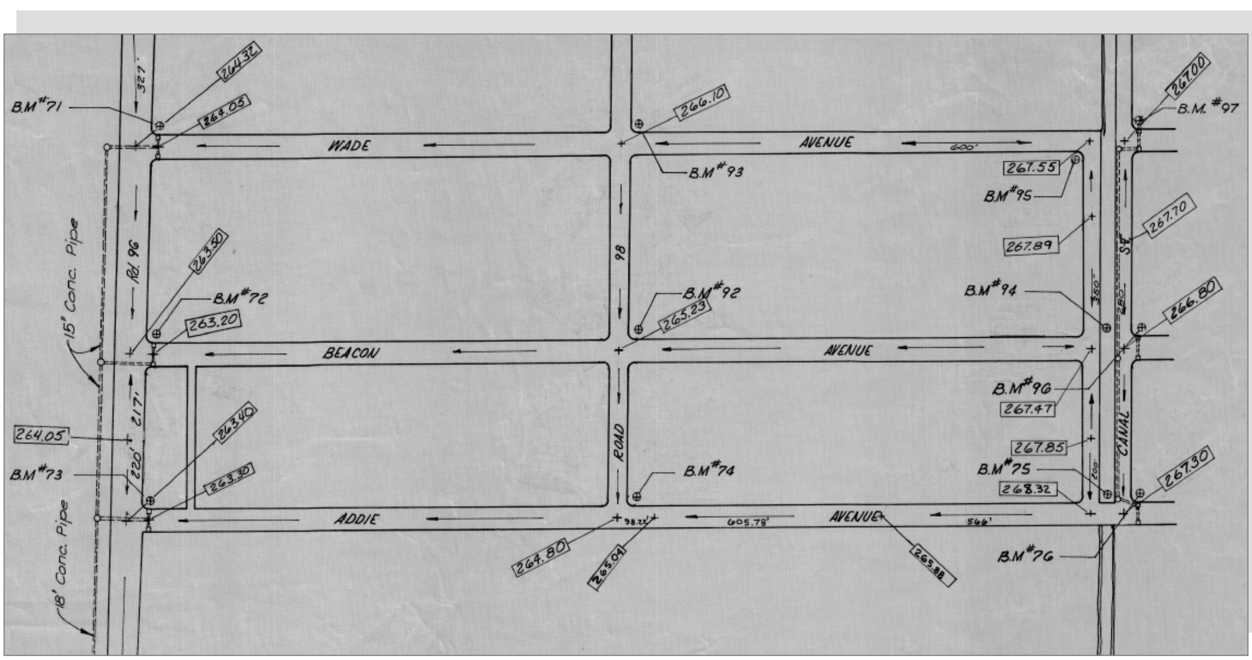
Figure 33-2
Tulare Irrigation District Service Area Near Matheny Tract



(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Tulare County has completed initial base mapping for Matheny Tract. Files obtained from RMA include surveying data with bench mark locations and top of curb or pavement elevations in North Matheny. In addition, existing concrete pipes and directional flow arrows are mapped as shown in Figure 33-3.

Figure 33-3
Storm Water Survey of North Matheny Tract



(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

It was also indicated by TID that trash accumulation in and around Oakland Colony Ditch in the Matheny Community is a serious concern. Any future efforts to underground the ditch with a grate to exclude trash and other debris would be a maintenance issue to prevent obstruction of water flow. Additional costs would have to be offset with a maintenance agreement between the property owners and the beneficiaries of such improvements to safety and aesthetics, if desired.

33.5 Roads

Tulare County also has road classifications that are used to determine how the road is constructed, i.e., typical cross section (median, travel lanes, curb, gutter, sidewalk, shoulder, etc.), pavement structure, design speeds, grades, super elevation, sight distance, horizontal alignments, intersections, etc.. Tulare County has four road classifications as summarized below:

<u>Class 1 Roads</u>: a cul-de-sac or minor residential street so designed that it cannot serve more than 50 lots, the primary function of which is to provide access to abutting property.

<u>Class 2 Roads</u>: a minor residential street so designed that it cannot serve more than 120 lots, the primary function of which is to provide access to abutting property.

<u>Class 3 Roads</u>: a minor residential collector street that has ore is expected to have the dual purpose of providing access to abutting property and of carrying traffic from Class 1 and Class 2 Roads to roads in the County Select System.

Select System Roads: All State Highways, Federal Aid Secondary Routes, arterials and collector roads existing or unconstructed, that are designated for inclusion in the Select System by the Board of Supervisors with the approval of the State Department of Transportation.

Currently in Matheny Tract, there are only roads that are built within a two-lane right-of-way for Class 1, 2 and 3 Roads.

Based upon field reviews, the roads in Matheny Tract are generally in poor to fair condition, lack continuous curbs, gutters and side walks, are poorly lit at night, lack crosswalks, are susceptible to flooding i.e., lack drainage and provide limited opportunity for walking and bicycling beyond the vehicle travel surface.

There are several roadways in Matheny Tract that are in need of repair. Over time, roadway pavement can become damaged or begin to fail due to fatigue, aging, or surface abrasion. The binding agent within road pavement becomes rigid and less flexible as time passes and the surface of the pavement may start losing aggregates. If timely maintenance does not occur, potholes will start to occur within the road.

If the road is still structurally sound, a bituminous surface treatment, such as a chip seal or surface dressing can prolong the life of the road at low cost. Such repairs are considered medium if the maintenance strategy consists of:

- ✓ Chip seal - surface treatment in which the pavement is sprayed with asphalt and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with cracks not associated with heavy loads

Some roadways require more extensive repairs such as resurfacing, grinding, remix and or reconstruction. These repairs are considered major if the maintenance strategy consists of:

- ✓ Grind and remix - process by which construction materials are recycled and reused to add structure to roadways
- ✓ Overlay resurfacing operation - consists of grinding off selected areas of old asphalt, patching any potholes, placing a fabric (in some cases), placing and compacting hot mix asphalt pavement, and adjusting any street hardware
- ✓ Asphalt reconstruction - consists of excavating the entire roadway, placing and compacting rock beneath the roadway, and placing and compacting hot mix asphalt
- ✓ Cold mix reconstruction - similar to asphalt reconstruction except cold mix asphalt is used. It is commonly used as patching material and on lower volume service roads

33.6 ADA Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 included design requirements for persons with disabilities in the public rights-of-way. Curb ramps are an important part of making sidewalks and street crossings accessible to people with disabilities (especially those who use wheelchairs). An ADA compliant curb ramp is a short ramp cutting through or built up to a curb. It consists of the ramp itself which is sloped to allow wheelchair access from the street to the sidewalk and flared sides that bring the curb to the level of the street.

Curb ramps are most typically found at intersections, but can also be located near on-street parking, transit stations and stops, and midblock crossings. Title II regulations require curb ramps at existing and new facilities.

The County of Tulare completed a survey of ADA compliant ramps within the communities in August 2012. According to the survey, there are no ADA compliant curb ramps located within Matheny Tract.

33.7 Sidewalks

Sidewalks are typically separated from a roadway by a curb and accommodate pedestrian travel. They improve mobility for those with disabilities and are also an important part of walking routes to schools. They provide the space for pedestrians to travel within the public right-of-way while being separated from vehicles and bicycles.

The 2010 California Building Code identifies a clear width minimum of 48 inches for sidewalks. This clear width minimum is the walkway width that is completely free of obstacles and not necessarily the sidewalk width. However, the 48 inch minimum does not provide sufficient passing space or space for two-way travel. Therefore, the guidelines state that for sidewalks less than 5 feet in clear width, passing lanes (wide enough for wheelchairs) shall be provided at 200-foot intervals.

However, the clear width may be reduced to 3 feet if the enforcing agency determines that compliance with the 4-foot clear sidewalk width would create an unreasonable hardship due to right-of-way restrictions, natural barriers, or other existing conditions.

The presence of curbs, gutters and sidewalks (CG&S) varies significantly between the communities in Tulare County. Some street segments within the Matheny Tract have curbs and fewer segments have sidewalks; however, several segments have no curbs, gutters or sidewalks. Figure 33-4 display Existing Curbs and Sidewalks in three sub-areas in Matheny Tract (Northwest Area, Northeast Area and Southwest Area). As indicated in the Figure, many gaps and non-contiguous sections for both curbs and sidewalks exist.

Matheny Tract currently consists of existing sidewalks within the Community; however, many of these existing sidewalks are fragmented or are in relatively poor condition and need to be replaced entirely because they have deteriorated past the point where spot repairs are feasible or cost effective. The photograph to the left shows an existing street with driveways and a partial sidewalk. Many of the existing non-contiguous sidewalks are proposed to be replaced entirely in order to have uniformity and to be in compliance with current County Standards.

33.7 Street Lights

Street lights are typically located at the edge of roadways on top of utility poles. They are illuminated at night and improve the visibility and safety of the roadway and sidewalk by increasing motorist visibility and and improving nighttime pedestrian security. They can also reduce nighttime pedestrian crashes by increasing the awareness of drivers relative to pedestrians.

The County typically provides street lighting at major road intersections in the communities but does not provide mid-block lighting as is typical within cities. Matheny Tract has street lighting at 10 locations. Overhead utility poles are prevalent in Matheny Tract. These utility poles provide electricity and telephone service to residences and businesses in Matheny Tract and are located within the County right-of- way. Figure 33-5 display Existing Utilities Poles, Fire Hydrants and Street Lights in three sub-areas in Matheny Tract (Northwest Area, Northeast Area and Southwest Area). *[Note: New fire hydrants were being installed at various locations in 2014 that are not shown in these Figures].*

Figure 33-4
Existing Curbs and Sidewalks of Matheny Tract

(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-4 cont.

Existing Curbs and Sidewalks of Matheny Tract

(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-4 cont.
Existing Curbs and Sidewalks of Matheny Tract

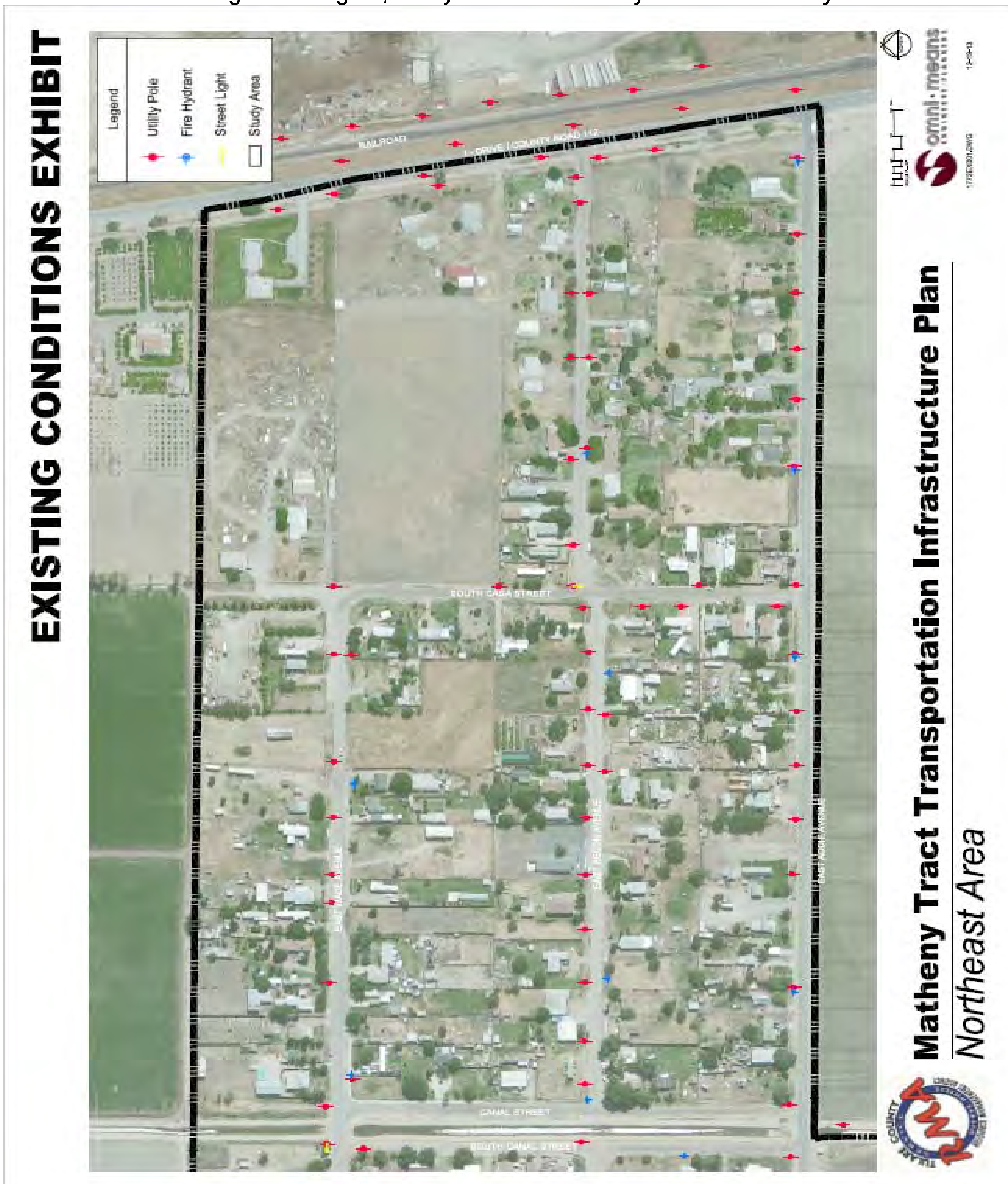
(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-5
Existing Street Lights, Utility Poles and Fire Hydrants of Matheny Tract

(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-5 cont.

Existing Street Lights, Utility Poles and Fire Hydrants of Matheny Tract



(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

Figure 33-5 cont.
Existing Street Lights, Utility Poles and Fire Hydrants of Matheny Tract

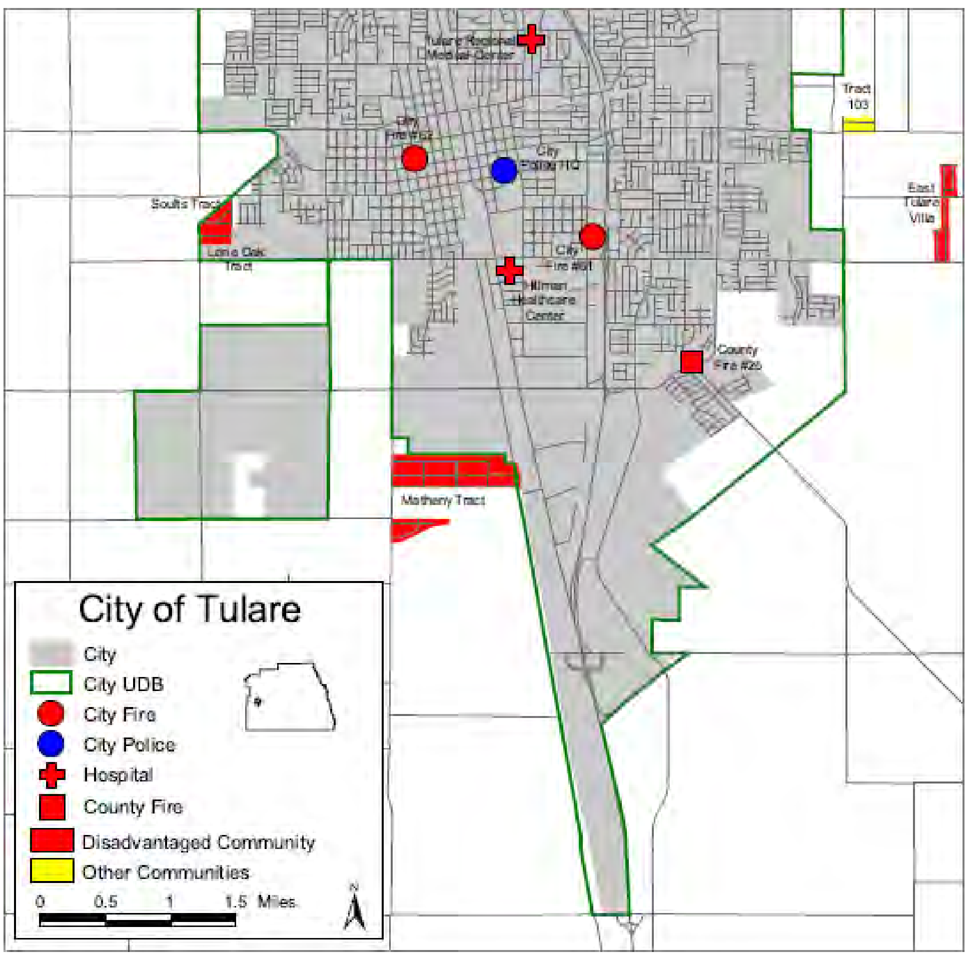
(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)

33.8 Fire Protection

Tulare County and all of the incorporated cities have a mutual‐aid agreement for fire protection services. The proximity of the nearest City or County fire station varies significantly between the unincorporated communities. There are three City fire stations and one County fire station in the Tulare area. County Fire Station #25 is within Tulare City limits. County Fire Station #25, located at Foster Drive/Turner Drive, is the closest station to Matheny Tract (two miles) and is shown in Figure 33-6.

Eleven fire hydrants are found within Matheny Tract. These fire hydrants are located within the County right-of-way. Figure 33-5 display Existing Utilities Poles, Fire Hydrants and Street Lights in three subareas in Matheny Tract (Northwest Area, North east Area and Southwest Area).

Figure 33-6
Emergency Services for Matheny Tract



(Source: Matheny Tract Transportation and Infrastructure Plan, Omni Means September 2014)