

Chapter 2
**EXISTING
CONDITIONS AND
CONSTRAINTS**

ABOUT THIS CHAPTER

This chapter provides an overview of the existing **land use and infrastructure** along the SR 108 Corridor (Corridor). The chapter offers background information to better assess future land use and transportation demand and infrastructure needs. The existing conditions discussed in this chapter provide the basis for developing streetscape improvement concepts for SR 108 (Chapter 4 of this Plan) and development concepts for opportunity sites (Chapter 5). Following the discussion of the existing land use and infrastructure, the chapter provides a broad overview of the **development constraints and barriers to infill development**. This discussion of constraints is exemplified by specific existing conditions and survey responses received by the Planning team.

EXISTING LAND USE

Within the Cities of Modesto, Riverbank, and Oakdale, existing land use along SR 108 is predominantly commercial retail and office, although there is residential development and a range of civic uses, as well. A more detailed description of existing conditions follows.

MODESTO

Aside from the downtown area, much of Modesto’s existing commercial development is focused on major north-south thoroughfares, such as McHenry Avenue (SR 108), Coffee Road, and Oakdale Road. Additional commercial areas exist around the intersection of Standiford Avenue and Tully Road, east of SR 99, and north of Yosemite Avenue (SR 132). Commercial uses are predominant along McHenry Avenue, accounting for approximately 75% of the total acreage for properties with frontage on SR 108. Roughly 10% of the acreage along the Corridor is currently occupied by professional offices, with miscellaneous other uses accounting for the balance. Approximately 3% of the property with frontage on SR 108 is vacant and additional property is underutilized.

RIVERBANK

SR 108 was Riverbank’s primary commercial corridor prior to the construction of large-scale uses along Claribel Road in a development known as “Crossroads.” Downtown Riverbank remains an important area for commerce. Single-family residences line the western portion of SR 108. Commercial and professional offices become predominant between Oakdale Road and Sierra Street. North of Sierra Street, there are industrial uses and a church. East of the railroad, other than Cardozo Middle School, the predominant use is commercial. As with all the cities, more recently developed areas have larger-scale commercial development, while more historic areas have smaller-scale, more neighborhood-oriented businesses. For properties directly adjacent to SR 108, approximately 30% of the acreage is in commercial use, approximately 30% is vacant, 15% is public/quasi-public, and 10% is residential.

OAKDALE

In Oakdale, SR 108 (F Street) is the primary commercial corridor. Entering Oakdale from the west, there are primarily residential properties on either side of SR 108. Commercial uses become predominant at approximately Lee Avenue. Between Lee Avenue and the eastern City limits, most of the property is in commercial use, although there are also several office properties and civic uses. Properties with frontage on SR 108 are smaller west of 8th Avenue. East of 8th Avenue, commercial uses are oriented more to the traveler than surrounding neighborhoods. Overall, for properties with frontage on SR 108, 40% of the total acreage is in commercial use (including retail and lodging). Civic uses and single-family



residential development account for approximately 20% of the total acreage of properties directly adjacent to SR 108. Roughly 10% of the land is vacant and additional properties are underutilized.

EXISTING INFRASTRUCTURE

Infrastructure conditions are presented in the material that follows, along with a summary of the impact of infrastructure constraints on vacant and underutilized properties. The cities could help to facilitate investment along the Corridor by directing resources to addressing these infrastructure constraints.

CITY OF MODESTO

For the City of Modesto, AECOM reviewed the Wastewater Collection System Master Plan (2007), Water System Engineer’s Report (2010), Draft Storm Drainage Master Plan (2008), the Domestic Wastewater Near Term Capacity Study (2006), and the Engineer’s Report Justification and Cost Allocation for Proposed Wastewater Collection System and Treatment Plan Improvements (2007).

SEWER SYSTEM

Two trunk systems serve the majority of the SR 108 corridor, both of which are in need of increased capacity. Improvements to the Downtown trunk system will provide additional capacity for flows from the southern end of SR 108. Figure 2-1 shows each sewer system constraint and highlights vacant or underutilized properties affected by the constraint. Codes are used to illustrate the location of constraints and affected properties. For example, “MS-1” means Modesto Sewer Constraint Area #1.

Modesto Sewer 1 (MS-1)

The Rumble Trunk and sub-trunks serve northern Modesto, including sites along SR 108 north of Kavanagh Avenue. The existing 10- and 12-inch trunks are planned for upsizing to a 15-inch diameter trunk. Assuming existing flows in the 10- and 12-inch lines are at 0.85 of the capacity, increasing to 15-inch pipes would increase capacity by approximately 45 to 60%.¹ This level of capacity increase could accommodate development of between 225 and 400 acres of residential development, 390 and 690 acres of mixed-use development, 430 to 760 acres of commercial development, or some combination of these uses.

¹ The City’s Wastewater Collection System Master Plan (2007) provides estimates of flow for different pipe sizes at 0.85 of capacity on Table 3.2. It appears there is a typo, however, for the flow for a 10-inch pipe at 0.85 of capacity – this should be 0.73 million gallons per day (MGD) rather than .073 (as shown). Table 3.14 provides estimates of dry weather flow for different land uses by acreage. The estimates of acreage above simply compare the assumed capacity increases with sewer demand by acreage for different land uses, as provided in Modesto’s Master Plan.

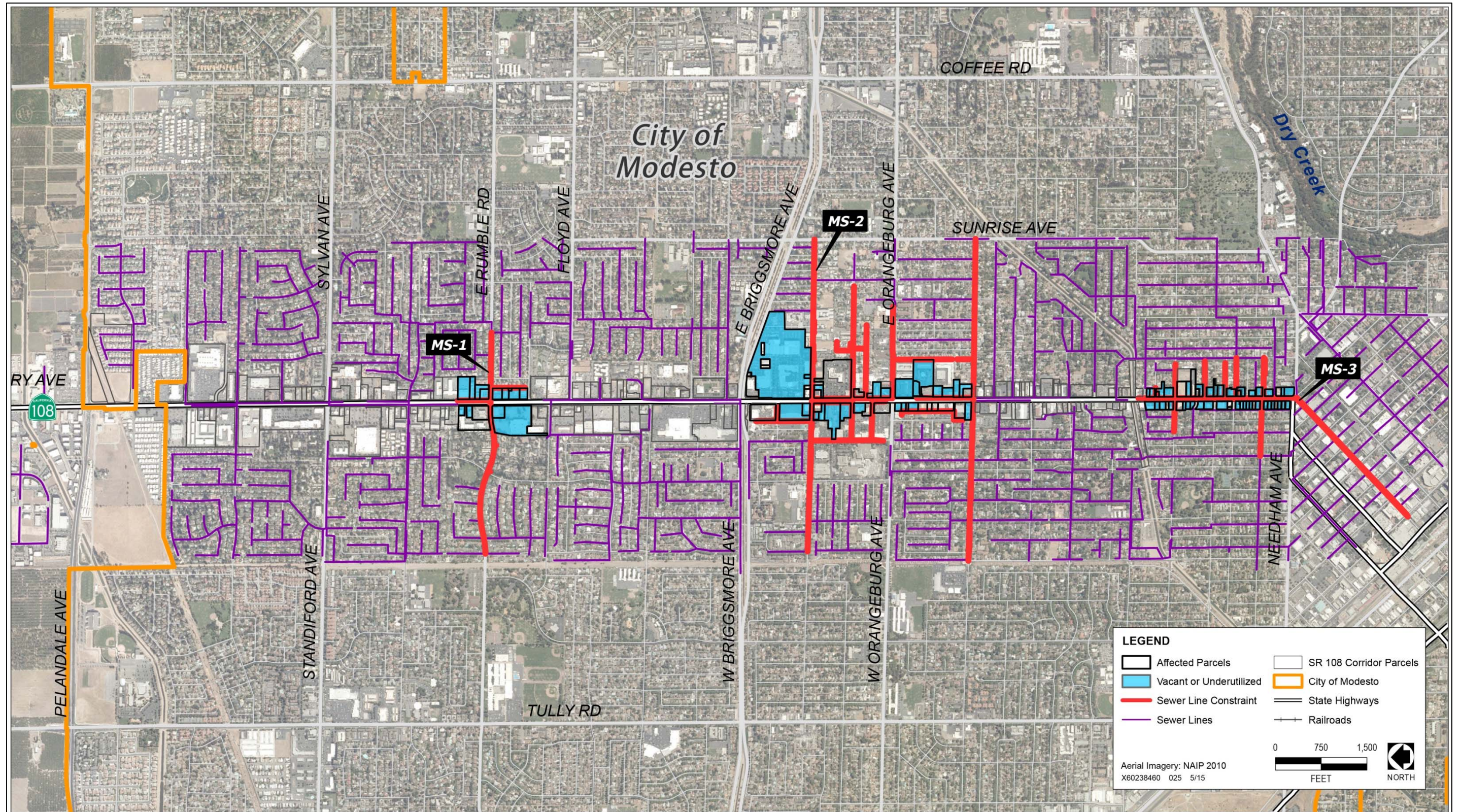


Figure 2-1: Sewer System Constraints, City of Modesto

Source: City of Modesto, 2013



This additional capacity does not take into account infill and infiltration, which occurs in some locations more than in other locations. This potential constraint could affect approximately 14 underutilized/vacant acres along SR 108, as shown on Figure 2-1.

MS-2

The Emerald Trunk carries flows north to south from sewer tributaries that serve parcels along SR 108 between Leveland Lane and Fairmont Avenue. The Emerald sub-trunk along Briggsmore Avenue experiences surcharging as a result of capacity deficiencies and storm water inflow. While the removal of storm drain cross-connections will partially alleviate surcharging, additional deficiencies persist under peak wet-weather flow (PPWF) conditions. If storm water cross-connections are not removed, there is a risk the Emerald Trunk and its tributaries could overflow during a 10-year, 24-hour storm event. This potential constraint could affect approximately 44 underutilized/vacant acres along SR 108, as shown on Figure 2-1.

Planned improvements to the sub-trunk include the replacement of 15 and 18-inch pipes along Tully Road with 21-inch pipes, and the replacement of a 15-inch pipe with an 18-inch pipe along Briggsmore Avenue, scheduled between FY2023-2024 and FY2026-2027 at a total cost of \$2,637,000. These improvements would improve capacity by roughly 50% in areas served by these facilities (including sites along SR 108).

MS-3

Sites along the southern end of SR 108 connect to the J Street trunk that serves part of Downtown Modesto. This potential constraint could affect approximately 11 underutilized/vacant acres along SR 108, as shown on Figure 2-1. The 12-inch diameter J Street trunk surcharges under peak flows and is planned for replacement with an 18-inch pipe from 12th Street to Jones Street at a cost of \$848,000.

STORM DRAINAGE SYSTEM

The SR 108 Corridor is primarily served by a piped storm drain system, which runs from Sylvan Avenue south to Morris Avenue and discharges into Dry Creek. The area served by this system does not exhibit problems with flooding and is generally free of constraints. Figure 2-2 shows the location of each storm drainage system deficiency and highlights vacant or underutilized properties that may be affected by the constraint. “MSD-1” means Modesto Storm Drainage Constraint Area #1.

MSD-1

The area north of Sylvan Avenue has historically experienced flooding, especially near the intersection of SR 108 and East Union Avenue. This potential constraint could affect approximately 18 underutilized/vacant acres along SR 108, as shown on Figure 2-2. This area is served by rockwells, which drain runoff into a 50-foot deep pit for on-site infiltration. The Storm Drainage Master Plan (2008) considers the installation of positive storm drain systems in areas served by rockwells a first priority, which includes “hot zones” located along SR 108 and their connecting watersheds.



MSD-2

The southernmost end of SR 108, from Stoddard Avenue to Downey Avenue, is served by a piped storm drain that flows into the system that serves Downtown Modesto and has limited capacity. This potential constraint could affect approximately six underutilized/vacant acres along SR 108, as shown on Figure 2-2.

A hydraulic capacity analysis identified several improvements that would be necessary to increase capacity and accommodate projected development. This includes the G Street line, which supports flows from lower McHenry Avenue, and which will need parallel infrastructure to handle additional flows from reinvestment and new development in Downtown, and additional flows from infill development in the southern portion of SR 108.

MSD-3

Sewer system cross-connections can be problematic since they burden the sewer conveyance system and wastewater treatment plant with additional flows. The cross-connection near SR 108 that needs to be removed is located just south of Hintze Avenue. According to the 2008 Storm Drainage Master Plan (page 3.10), “removing the cross connections to the sanitary sewer system and installing the proposed interim storm drainage infrastructure will eliminate the need to discharge stormwater directly into the sanitary sewer system, [however] it is likely that some of the affected areas will still experience some degree of periodic flooding until the proposed downstream improvements are constructed.”

WATER DISTRIBUTION AND STORAGE

The water distribution system analysis identified deficiencies under peak hour demand, minimum 40 psi, and maximum day plus fire flow demand, minimum 20 psi. Figure 2-3 shows the location of each water distribution or storage deficiency and highlights vacant or underutilized properties that may be affected by the constraint.

MW-1

Of the 34 simulated fire flow locations tested in development of the Storm Drainage Master Plan, 22 did not meet the minimum residual pressure of 20 psi under maximum day plus fire flow demand conditions. Test location 18 achieved 760 gpm of the required 4,000 gpm due to small pipe diameter. This potential constraint could affect 14 underutilized/vacant parcels along SR 108, as shown on Figure 2-3.

This area requires localized pipeline upsizing and looping to achieve minimum fire flows and could affect sites along SR 108 between Roseburg Avenue and Helen Avenue on the eastern side.

MW-2

The transmission lines along Sylvan Avenue and McHenry Avenue have been recommended for upsizing to 12 inches to more efficiently circulate the water through the service area’s system. This potential constraint could affect approximately 37 underutilized/vacant acres along SR 108, as shown on Figure 2-3.

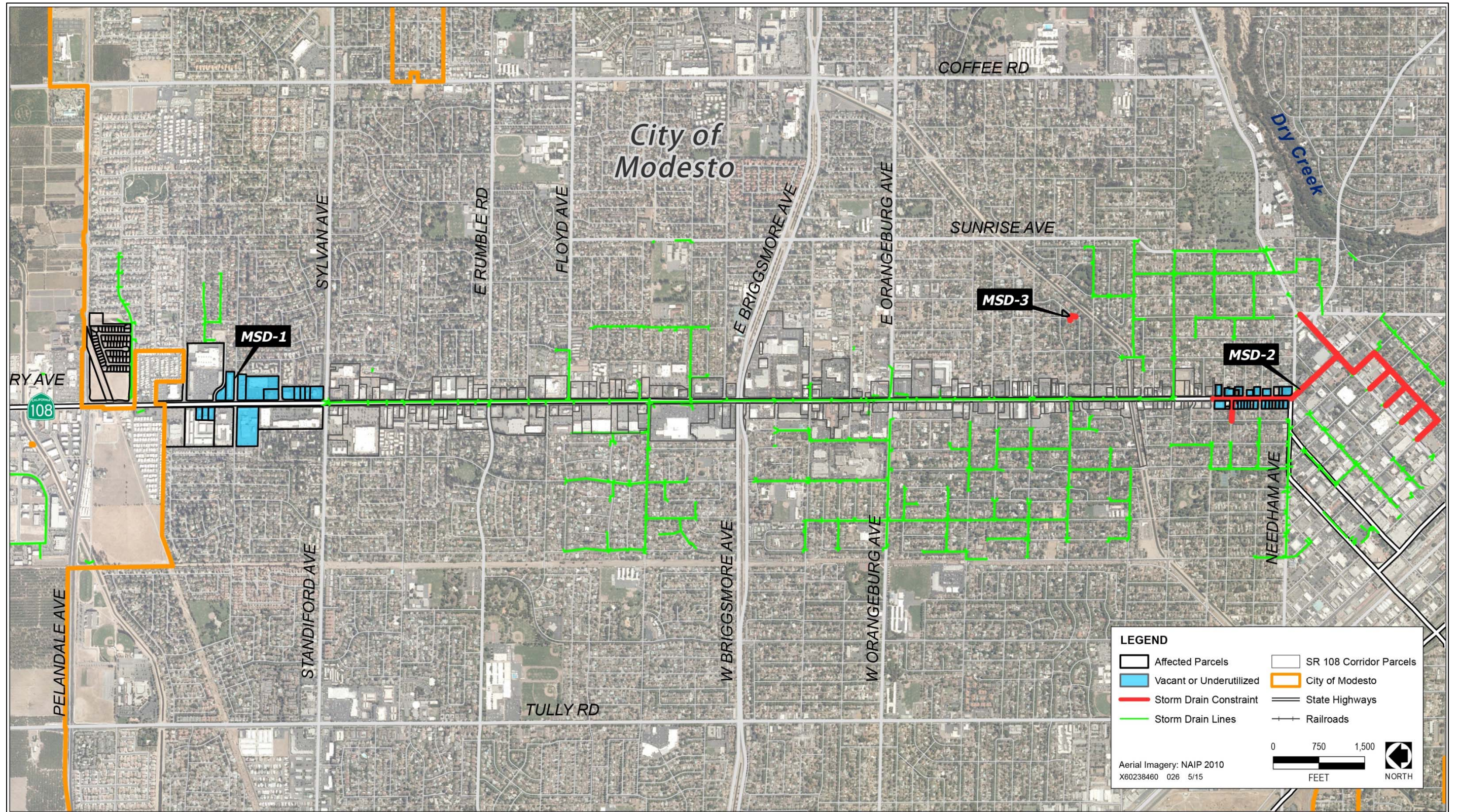


Figure 2-2: Storm Drainage System Constraints, City of Modesto

Source: City of Modesto, 2013



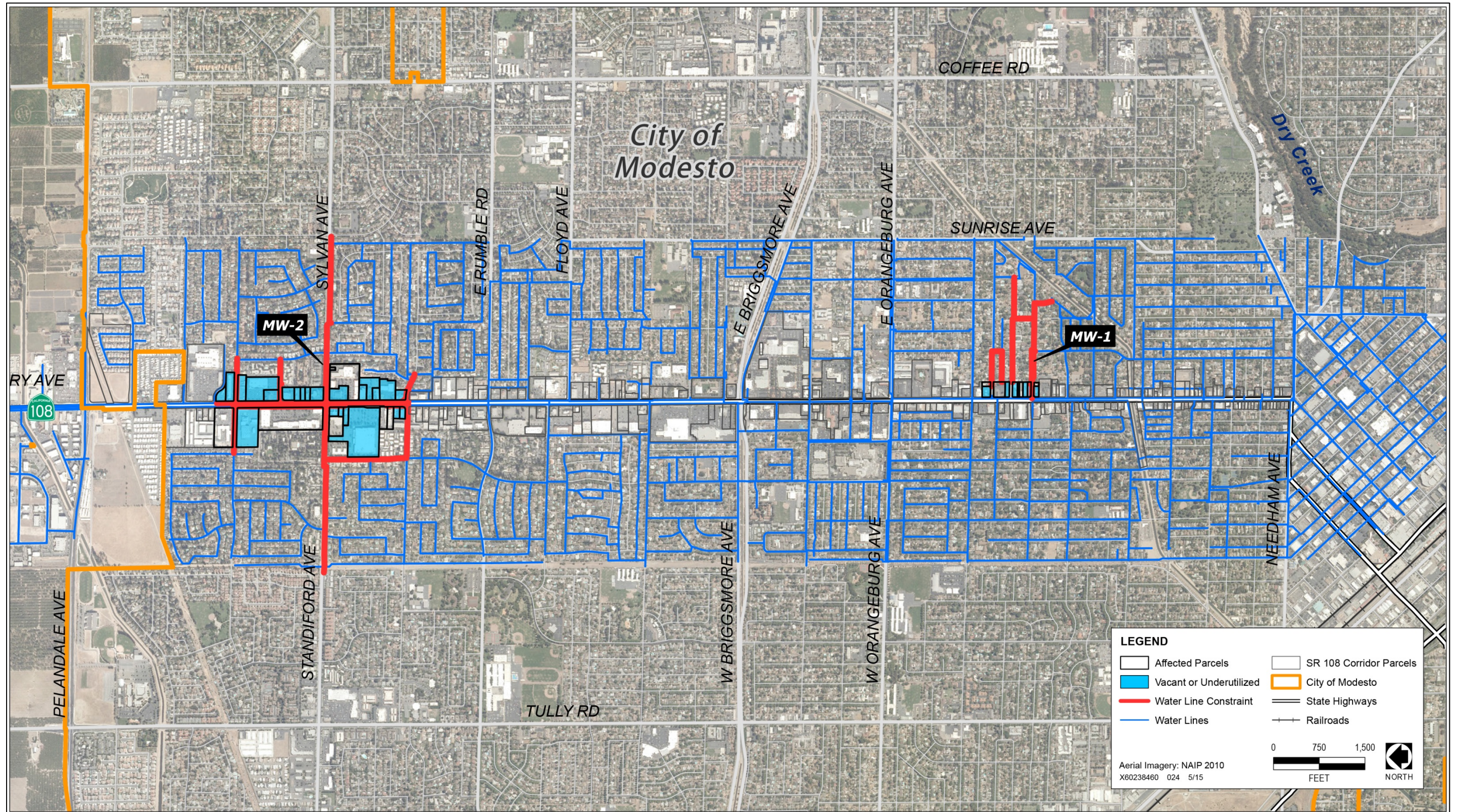


Figure 2-3: Water Distribution and Storage Constraints, City of Modesto.

Source: City of Modesto, 2013

CITY OF RIVERBANK

AECOM reviewed the City of Riverbank 2007 Sewer Collection System Master Plan, City of Riverbank Storm Drain System Master Plan 2008, City of Riverbank Water Supply Study and Water Master Plan 2007, and supporting documents for the 2011 Capital Improvements Plan.

SEWER SYSTEM

An evaluation of the sewer collection system was performed to determine pipe segments that may exceed 70% flow/design capacity. Figure 2-4 shows the location of each sewer system deficiency and highlights vacant or underutilized properties that may be affected by each constraint.

RS-1

A sewer pipe (Segment ES-4) north of the intersection of SR 108 and Estelle Avenue is flowing at 140% of design capacity under peak wet weather flow conditions. Increased demand may exacerbate capacity deficiencies for segments along Estelle Avenue south of Rio Verde (ES-5), and Estelle Avenue south of SR 108 (ES-2). This potential constraint could affect approximately 17 underutilized/vacant acres along SR 108, as shown on Figure 2-4.

RS-2

Segment ZP-18, located at Zerillo Park, collects and relays flows to the wastewater treatment plant from systems to the south and west, including systems that serve sites along SR 108. This segment is flowing at 102% with peak wet weather flows. The City anticipates a new 30-inch trunk line to the wastewater treatment plant to address capacity issues in this area with buildout of the General Plan.

RS-3

A 27-inch trunk pipeline that relays flows to the wastewater treatment plant across the Stanislaus River is operating above design capacity and is in need of replacement. This potential constraint could affect approximately 28 underutilized/vacant acres along SR 108, as shown on Figure 2-4. A new river crossing, which would include a pedestrian/utility bridge, is estimated to cost \$4,423,000. This is characterized in Riverbank's 2007 Sewer Collection System Master Plan as a longer-term, "development-driven" improvement.

RS-4

The Condray-First Street project was recently completed, which includes a 30-inch central trunk line connected to an 18-inch line that extends to Patterson Road and ultimately would connect to the future Roselle Avenue force main. Development of the former cannery site (an approximately 30-acre site adjacent to Downtown Riverbank) would involve a proposed 16-inch force main on Talbot Avenue that would connect to a 24-inch trunk and would alleviate future capacity issues, while serving redevelopment of the cannery area. The cost of the 24-inch pipeline that would connect to the cannery area is \$833,000.



STORM DRAINAGE SYSTEM

Analysis of the existing storm drain system identified system failures that could be exacerbated by infill development along SR 108. Figure 2-5 shows the location of each storm drainage system deficiency and highlights vacant or underutilized properties that may be affected by the constraint.

RSD-1

The Candlewood Area System serves the neighborhood northwest of SR 108, running along Candlewood Avenue to an outfall on the Stanislaus River. System failures are common in the far western corner at Woodhaven Place, which experienced surcharging conditions for the 10-year, 5-year and 2-year events due to a relatively flat grade. There are three areas along SR 108 where storm drain interconnections contribute additional flows to the Candlewood Area System from the system that serves the neighborhood to the south of SR 108, exacerbating system failures and flooding conditions. These areas include: (1) the intersection of Patterson Road and Oakdale Road; (2) a manhole at Estelle Avenue and Patterson Road; and (3) the intersection of Jackson Avenue and Patterson Road.

The City plans to analyze the source of the contributing flows to the system and devise alternatives for reducing flooding in the areas served by this system. Improvements to the storm drain outfall are planned for 2014-2015 at a cost of \$830,200.

RSD-2

The installation of two new storm drain basins and connecting pipeline are recommended along the railroad tracks to serve the industrial corridor at the City's center, including the cannery area. The industrial corridor does not currently have storm drain infrastructure in place and is a major source of inflows that exacerbate system failures, especially the former cannery area. This potential constraint could affect approximately 28 underutilized/vacant acres along SR 108, as shown on Figure 2-5.

Construction of a centralized storm drain system, which would include a new basin just north of SR 108 and outfall to the Stanislaus River, would alleviate pressure on the storm drain and sewer system. The total estimated cost for a storm drainage system for Central Riverbank is \$7,300,000.

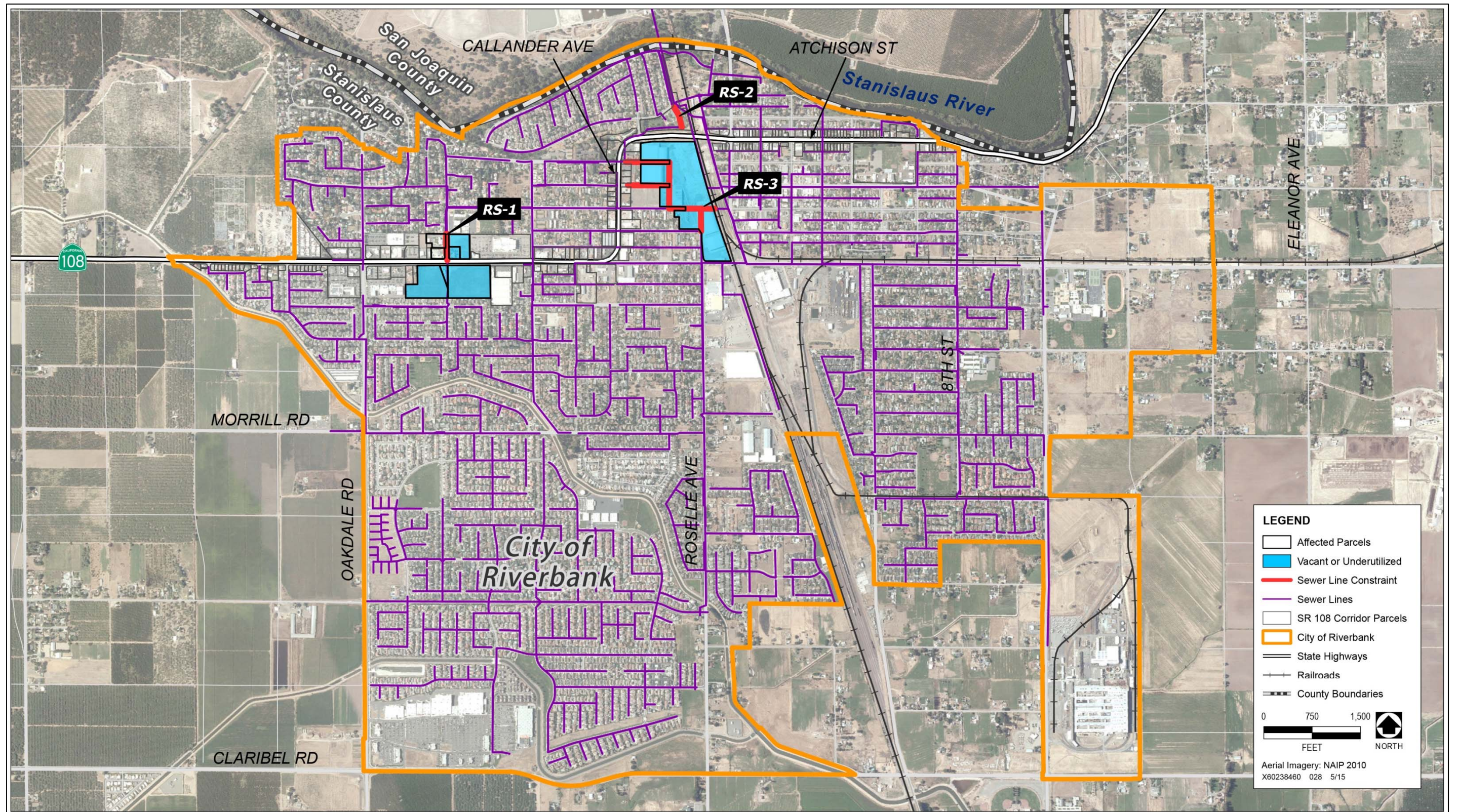


Figure 2-4: Sewer System Constraints, City of Riverbank

Source: City of Riverbank, 2013



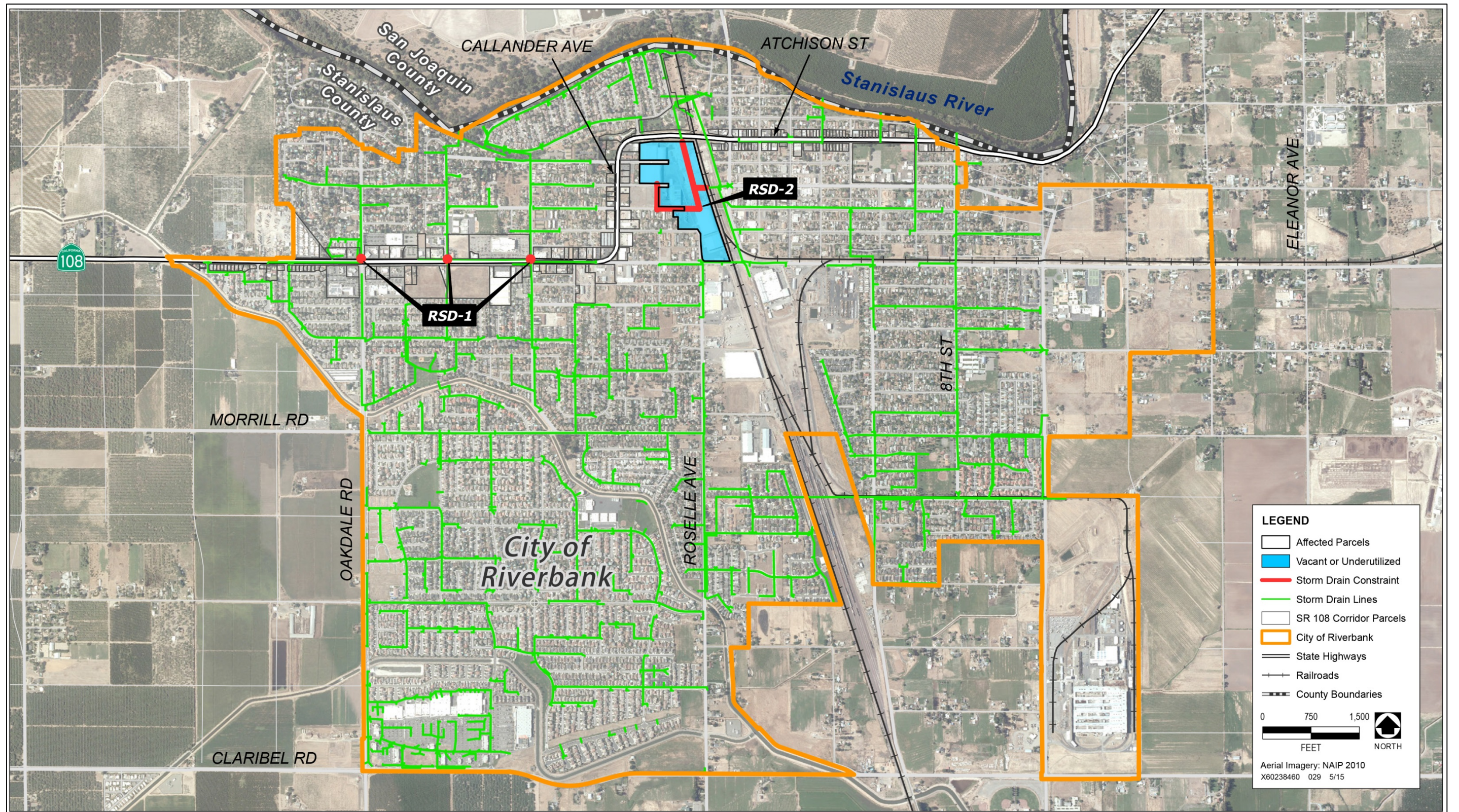


Figure 2-5: Storm Drainage System Constraints, City of Riverbank

Source: City of Riverbank, 2013

WATER DISTRIBUTION AND STORAGE

For the most part, the water distribution system is able to sufficiently meet maximum day demand and fire flow demands. The primary constraints identified are insufficient industrial fire flows and a need to increase water supply facilities to serve buildout of the General Plan. Figure 2-6 shows the location of each water distribution or storage deficiency and highlights vacant or underutilized properties that may be affected by the constraint.

RW-1

Fire flow simulations were performed for all industrial areas to test the maximum day plus fire flow demand. The testing point identified as J-B3-10 is located at dead end of Stanislaus Street and serves the former cannery area, the largest single infill opportunity site in Riverbank.

The system was not able to achieve maximum day plus fire flow simulations, providing only 1,400 gpm of the minimum required 3,500 gpm. It is recommended that future developers loop the existing 8-inch pipeline in Stanislaus Street to the existing 6-inch pipeline (P-B3-50) at the end of Sierra Street. The former cannery property traditionally operated from its own well and upgrades may be necessary to achieve adequate pressures and fire flows. This potential constraint could affect approximately 28 underutilized/vacant acres along SR 108, as shown on Figure 2-6.

RW-2

Water supply simulations for Central Riverbank at General Plan buildout indicate that an additional 2.16 MG well is required to meet reserve capacity and maximum day demand. Of the 15,586,683 gpd that will be required 13,370,400 gpd are currently available. A booster pump station is needed, as well as an additional 2 MG storage facility. The estimated cost of the new well is \$2,320,000, while the tank is estimated to cost \$3,560,000.

CITY OF OAKDALE

For the City of Oakdale, AECOM reviewed the Sewer Master Plan for the City of Oakdale (1990), City of Oakdale Storm Drainage Study (1981), Water Master Plan (2003), City of Oakdale General Plan Technical Background Report Infrastructure Chapter (2009), and the Capital Improvements Program (CIP) (2011).

The City is in the process of updating infrastructure master plans for each system and developing a long-term capital improvement program. The following analysis discusses capacity deficiencies that have been identified in available master plans and identifies areas where general improvements are planned in the short-term CIP.



SEWER SYSTEM

The 1990 Sewer Master Plan for the City of Oakdale identifies system-wide capacity deficiencies, as well as localized deficiencies along the system's main trunks. In order to serve the city at full development, major facilities were needed that would carry over 5½ times the average flow in 1990 and cost \$8.6 million (in 1990 dollars). These facilities included a new river crossing to provide redundancy for the existing pipeline and carry additional flows, as well as a new trunk system for the south and west areas. However, this master plan is dated. An updated set of potential constraints is presented below based on available information.

OS-1

Surcharging has been observed at the Oak Avenue Trunk, which extends south on Oak Avenue and east along G Street and H Street, and was said to have limited capacity at the downstream end due to a flat slope. Additionally, it was noted that peak wet weather flows (PWWF) exceed system capacity, even without accounting for the major storm water inflows that were known to occur. A new trunk along Lee Avenue was proposed to provide relief to the Oak Avenue System.

OS-2

The Kimball Trunk extends east from Kimball Street and south along the Sierra Avenue trunk to convey flows from all areas east of the railroad tracks to the wastewater treatment plant. Deficiencies were identified for the Sierra Trunk due to a flat slope, and major inflows along H Street which caused surcharging between Fourth Avenue and Sierra Avenue. When the Sierra Trunk was at or near capacity, the Oak Avenue Trunk collected excess flows, exacerbating the capacity issues mentioned above. Two additional branches were proposed to increase the Kimball Trunk System capacity and serve the northeast area near D Street.

STORM DRAIN SYSTEM

The Storm Drain Master Plan (1981) describes a storm drain system that is generally undersized to handle storm water flows, with drainage issues noted south of F Street (SR 108) and on either side of the Southern Pacific Railroad tracks.

OSD-1

Western Oakdale is served by a system that runs along Bryan Avenue and Stanislaus Avenue. As of 1981, this system was generally undersized to serve the area. A collection system and pump were proposed to connect at Oak Avenue and flow north along Lee Avenue, relieving pressure on the School Street system.

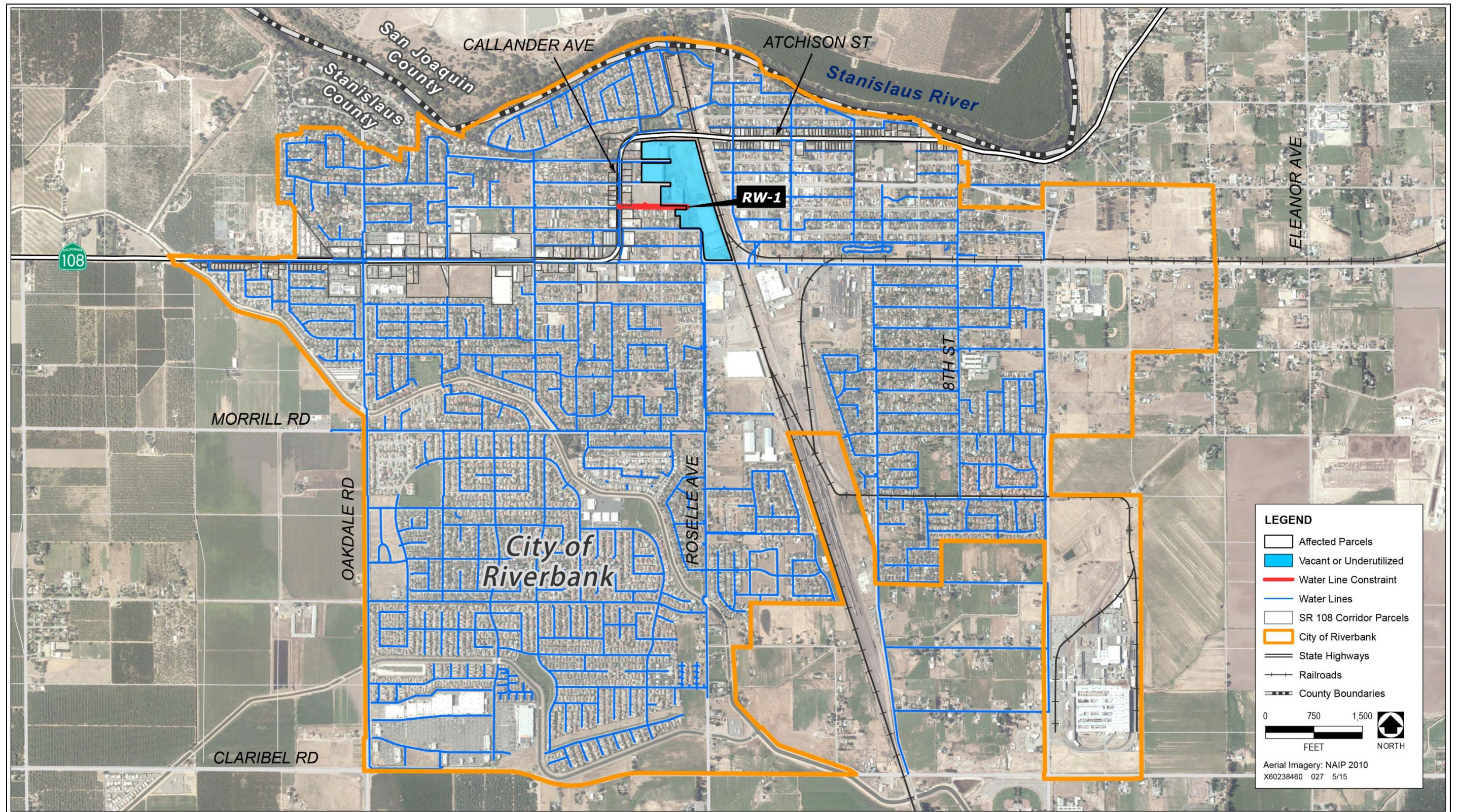


Figure 2-6: Water Distribution and Storage Constraints, City of Riverbank

Source: City of Riverbank, 2013



OSD-2

Storm water flows tended to back up near South Street and Center Street. Flooding in this area created additional backup in the Oakdale High School Area and potentially sites along SR 108 between Gilbert Avenue and South Wood Avenue. As mentioned in the “Sewer System” section, inflows to the Sierra Trunk exacerbated flooding issues for the Oak Avenue Trunk system.

OSD-3

A new trunk line and outfall were recommended to serve the Downtown area, east of the railroad that would run through Fourth Avenue and Old Stockton Road, with collection laterals along D Street, G Street, and H Street. This trunk line would provide relief until a new trunk is constructed.

WATER DISTRIBUTION SYSTEM

The Water Master Plan (2003) identifies storage capacity issues that affect the entire system, as well as some locations with fire flow related deficiencies. While many of these improvements apply generally to all development, they would also ensure supply was available to serve development along SR 108.

OW-1

Older 4-inch mains are not large enough to sustain pressures above the minimum required 20 psi under fire flow conditions and should be replaced with 6-inch mains or greater across the entire system.

OW-2

Peak-hour demand pressures were generally sufficient across the system, with the exception of the Downtown area, which achieved at maximum 38 psi of the required 40 psi. Recommended improvements to address this constraint include modifications to pressure reducing valves on D Street and G Street.

OW-3

Well and storage supply did not meet maximum day demand with power outage with fire flow conditions or peak-hour demand. Recommended improvements to meet existing demand include a new well with 1,500 gpm capacity or a new storage reservoir. To ultimately serve future development at buildout, a total of 11 new 1,500 gpm wells are required, as well as grid mains and two storage reservoirs.

OW-4

The existing 0.5 MG steel storage tank was recommended for an inspection and possible replacement due to age and condition. Well 2 was identified as being in need of replacement due to age and condition. Additional recommendations across the system include implementation of a valve exercising program and replacement of all well pedestals with 18-inch concrete pads.



SHORT-TERM CAPITAL IMPROVEMENTS PROGRAM

The City has a Short-Term Capital Improvements Program (CIP) which describes, generally, the location of planned improvements and their approximate cost. The projects listed in the CIP do not include project specific details. The project sites listed below fall along or near the SR 108 corridor and were pulled from a longer list of planned improvements:

1. Third Avenue (E to F): \$310,000
2. Church Avenue CDBG Project: \$343,000
3. North Second Avenue (E to North): \$759,000
4. Sixth Avenue (F to G): \$145,000
5. E Street (First to Yosemite): \$410,000
6. G Street (Grove to Yosemite): \$435,000
7. Gilbert Avenue: \$535,000
8. Laurel Avenue (F to Poplar): \$225,000
9. Lee Avenue (F to Poplar): \$633,000
10. South Second Avenue (G to J): \$290,000
11. North Sierra Avenue (C to F): \$469,000
12. South Third Avenue (F to J): \$620,000
13. Wood Avenue (F to J): \$528,000

The CIP mentions several improvements that are either completed, in progress, or planned in the near-term.

In 2009 the City began work on the wastewater treatment plant to accommodate for the increase in flows that are anticipated with future development. Sanitary sewer cross connections are being eliminated as existing streets are being rebuilt or improved. The City installed a new well and two 0.6 MG storage tanks in 2010 and 2011. Between 2011 and 2012, the City upsized several 4-inch transmission mains to relay appropriate fire flows.

INFILL DEVELOPMENT CONSTRAINTS

Recently, several agencies and organizations have been conducting research to identify the primary constraints for infill development in California. While this information is helpful, the Planning Team wanted to gain an understanding of the most important site-specific and Corridor-specific constraints affecting reinvestment potential along SR 108. With this information, the Plan can present development strategies and incentives that would promote reinvestment along the Corridor.

The Corridor includes a considerable amount of vacant and underutilized land – so, why has development not occurred in these locations? There could be a number of contributing factors, including physical conditions (e.g., size, shape), infrastructure deficiencies (e.g., inadequate sewer

service), regulatory barriers (e.g., zoning and development standards), and market factors, such as developer preferences and, importantly, the availability of unconstrained land elsewhere in the cities.

Rather than just relying on internal expertise, the Planning Team wanted to survey the development community. The Planning Team conducted a detailed survey of real estate professionals, developers, affordable housing experts, and other relevant industry representatives, to gain further insight on challenges to infill development along the Corridor. Highlights are presented in this chapter and a detailed summary of the interview questions and developer responses are available in the Appendix.

PHYSICAL CONDITIONS

SMALL AND IRREGULAR PARCELS

Development on smaller parcels cannot benefit from the economies of scale that larger new developments enjoy. Infill parcels may also be oddly shaped, narrow, or shallow, or have challenges for access. In many cases, it may be necessary to aggregate two or more parcels in order to accommodate a viable project, which can increase development costs and risk.

This Plan offers design solutions for small, shallow, and irregular parcels and demonstrates how parcels may be aggregated and developed along SR 108 (see Chapter 5). For example, the 10-acre opportunity site north of Bowen Avenue in Modesto is created by aggregating 6 irregular parcels of varying sizes to form a viable development site. Figure 2-7 shows existing parcels and a viable mixed-use development concept. Other examples of opportunity sites and development concepts are available in Chapter 5.

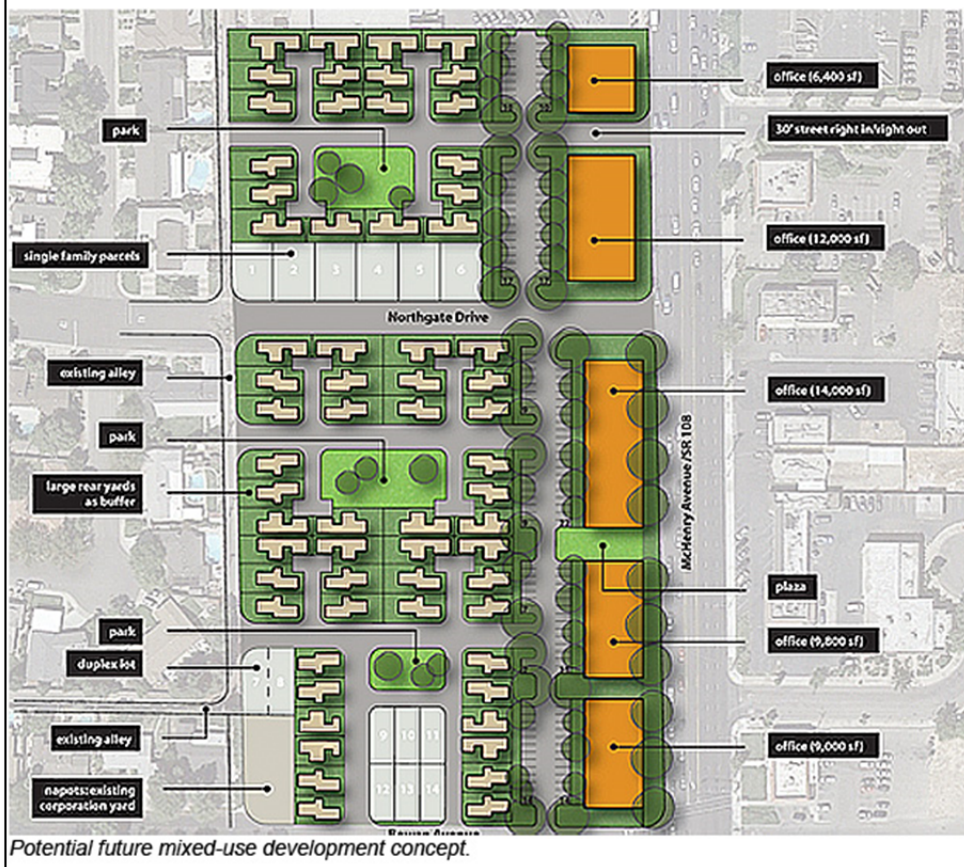
SITE CONDITIONS

Infill sites often have other characteristics that make development challenging. Some sites may be former commercial or industrial uses that require certain levels of cleanup (e.g., former gas stations or heavy industrial areas) before redevelopment is permitted. There are state and federal programs to help finance site cleanup in advance of redevelopment. In other instances, sites may be constrained as a result of liens on the property resulting from unpaid fines or taxes. See the discussion on potential funding sources in Chapter 7.





Existing parcels North of Bowen Avenue.



Potential future mixed-use development concept.

Figure 2-7: Reinvestment Opportunity Site North of Bowen Avenue, Modesto

INFRASTRUCTURE DEFICIENCIES

Antiquated or inadequate infrastructure can impede development of vacant infill parcels and redevelopment of underutilized parcels. Constrained sites could remain perpetually underutilized without a clear plan for financing necessary improvements. Developers are wary of hidden infrastructure costs.

Infrastructure improvements for development projects are often funded by impact fees or requirements to construct and dedicate infrastructure. While this approach works for larger greenfield projects or larger master planned areas, it can present challenges, particularly for smaller infill projects.

Survey respondents in the SR 108 planning process mentioned that it would be helpful for cities to assist with improvements to sidewalks, streetscapes, access, and other elements of the right-of-way and adjacent areas to set the stage for future development.

Inadequate infrastructure was identified as the #1 “Roadblock to Infill Development in California” by the California Infill Builders Association.

Many prime locations for infill development suffer from weak demand for housing due to deteriorating and/or unappealing sidewalks and streets, lack of public transit, insufficient or aging utilities, and underperforming schools in city centers..... public infrastructure is rarely built in accordance with a broader planning vision in mind—it is generally controlled by engineering and/or public works departments rather than planning departments. Affected areas require significant public investments in infrastructure to make infill projects profitable and attract for private financing, especially with respect to incremental projects.

- The Top Roadblocks to Infill **Development in California, California Infill Builders Association.**

REGULATORY BARRIERS

LAND USE REGULATIONS

Zoning and other regulations on allowable land use can represent a constraint to infill development. Some zoning codes have favored suburban large-scale developments and encouraged creation of auto-oriented, single-use districts. By strictly regulating allowable uses, density, and development intensity, zoning codes can inadvertently create constraints for compact and mixed-use projects. While such an approach may be appropriate for certain neighborhoods where change is not anticipated, a more flexible approach could help to promote economic development in areas suitable for infill areas, areas with existing and planned transit, and districts that are over zoned or overdeveloped with retail, especially along major transportation corridors, such as the Corridor.

Regulations that create single-use districts can prevent developers from efficiently responding to market demand. If the supply of land designated for commercial use outstrips local market demand for commercial uses, there could be an unintended disincentive to develop or redevelop commercial properties. Allowing low-activity uses (equipment rental yards, self-storage, etc.) in prominent commercial corridors and restrictions on floor area ratio or other measures of development intensity can impede corridors from evolving into more vibrant places that serve, and are better connected with adjacent residential neighborhoods.



The infill constraints survey conducted to support this Plan identified the need for flexible zoning that allows a mix of uses as a way to promote reinvestment along the Corridor. Survey respondents acknowledged the importance of having complementary uses on adjacent sites. For example, there is an advantage to having housing development located near shopping, parks, transit, groceries, schools, medical services, the workplace, and other destinations. Survey respondents agreed that mixed-use zoning would *not* need to apply to entire segments of the Corridor, and may be more effective if targeted in areas that would be more attractive for compact residential development in a mixed-use environment. Cities and other public agencies can focus investments in these same targeted areas to provide streetscape enhancements, transit connectivity, bicycle/pedestrian facilities, street trees and other landscaping, and other amenities in order to help facilitate such development.

DEVELOPMENT CODES

Development regulations created with greenfield development in mind can include height limits, minimum lot sizes, setbacks, and landscaping requirements that may have the unintended consequence of rendering smaller, irregularly-shaped infill parcels undevelopable. Off-street parking requirements can pose a substantial barrier to infill development and effectively reduce the development yield, which could adversely affect some potential infill projects.



However, a history of excess parking also creates opportunities. Some areas along Corridor have enjoyed prime visibility from the Highway and experienced automobile-oriented commercial development. In the past, conventional retail stores have placed relatively large parking areas in front of the stores. Some intersections along the Corridor have expansive parking areas that could instead accommodate buildings, gathering spaces, and other more active spaces. Examples include south of the intersection at Union Avenue, around the intersection with Roseburg Avenue, and the intersection with Bowen Avenue in Modesto; and intersection at Jackson Avenue in Riverbank (see aerial photos to the left). Intersections of major roadways are a relatively attractive location for commercial development and existing surplus parking fields represent an opportunity for reinvestment, economic development and revenue generation.

Development standards should also encourage horizontal mixed-use development. For example, deeper infill sites along the Corridor can accommodate higher-density residential uses located behind commercial uses that front SR 108. Instead of requiring deeper setbacks (such as 25 to 46 feet front

setback as required in Riverbank when residential is adjacent commercial development) on potential redevelopment sites along the Corridor, higher-density residential may serve as a transition between commercial uses adjacent to the Highway and residential neighborhoods on each side of the Corridor. Even with shallower properties, there could be opportunities for smaller-scale horizontal mixed-use to reduce instances of commercial uses backing up directly to single-family homes.

ENTITLEMENT PROCESS

The entitlement review process can introduce risk and cost to the development process. Too much time spent in project review can increase holding costs, for example. In the case of infill projects, where margins are typically narrower to begin with, this can make the difference between feasible and infeasible projects. The review process can introduce a new barrier in infill settings compared urban fringe locations due to the presence of vocal neighbors.

The survey conducted to support this Plan identified a streamlined permitting process as an incentive for infill development. The timeline for entitlements was mentioned as important. Compliance with the California Environmental Quality Act (CEQA) is one example of a part of the process that can be time consuming and otherwise introduce risk. If this aspect, along with other elements of the review process can be expedited for targeted reinvestment areas, this could help encourage infill development.

IMPACT FEES

Development impact fees can represent a substantial development cost. Larger-scale projects may have a relatively easier time incorporating fees into financing of the project relative to smaller and infill projects.

In the survey of developers and real estate professionals, impact fees were a frequently mentioned as a potential constraint to development. Infrastructure deficiencies in the vicinity of infill sites may sometimes necessitate replacement of infrastructure to support development. However, passing along these costs to infill development could discourage private reinvestment, especially when dealing with smaller sites and relatively thin margins.

Impact fees for infill areas can be reduced, as appropriate, to take into account the presence of existing infrastructure (e.g., transportation, sewer, water, stormwater, etc.). In addition, there are several grant and financing programs available to support infrastructure improvements (please see Chapter 7 of this Plan). Oftentimes, such improvements occur in infill settings, and impact fees in the same areas can be further reduced to take into account outside funding sources. Fee waivers or fee deferrals could help attract private investment in infill areas that strengthen the economy and improve fiscal health in the long run.

See more detailed discussion about potential solutions to overcome the regulatory barriers discussed above in Chapter 6 of this Plan.



LOCAL SUPPORT AND MARKET DEMAND

One of the most important factors for private development is local support (or the lack of organized local opposition) and market demand. During the survey, local support was discussed both in terms of support from City staff and decision makers, as well as from the community and neighborhoods groups. In this and other surveys, community support or opposition is mentioned as one of the most important factors for infill development.

City staff assistance with the development review process was also mentioned as being an important element for supporting infill development. Most of the survey respondents mentioned that they rely extensively on staff to help identify and address community support related issues.

Market demand was discussed by many respondents as critical for development decisions. An important aspect of stimulating local market demand is by recognizing the development capacity within each city's planning area. One part of this equation is considering lands available for development in infill locations and within the existing City limits versus land that could be provided within Spheres of Influence (but outside City limits) for development. There is a finite amount of demand, and too much surplus land may have the effect of steering development toward the fringe, as opposed to infill locations. This notion was also supported by survey respondents who discussed the demand for housing (including affordable housing), and non-residential development. One respondent noted that in order to support infill development along SR 108 and other parts of these communities, it will be important to manage the amount of growth at the fringes of the communities (in order to fulfill demand in infill settings).

See more detailed discussion about future land use scenarios and market demand in Chapter 3 of this Plan.