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Executive Summary

The Dry Creek Greenway will be an approximately 4.25-mile multi-use path along portions of Dry, Cirby and Linda Creeks in Roseville, California. When completed, the path will be a key local and regional transportation and recreation facility serving the City of Roseville, as well as southern Placer County and northern Sacramento County. It will be a shared use, non-motorized path connecting neighborhoods, parks, schools, businesses, natural areas, and the on-street bikeway system. Much of the corridor has been used historically for both recreation and transportation, and today it continues to be used for these purposes along both improved and unimproved segments.

As Roseville continues to grow, this path will serve as an important transportation corridor as well as a recreational amenity for the region's residents and visitors. It will also function as a maintenance and emergency access road for the City Environmental Utilities Department and the Roseville Fire Department. It will provide a safe route for walkers, joggers, cyclists, and wheelchair users to access parks and other paths. This path will be especially important for the children who attend Cirby Elementary School, Sierra Gardens Elementary School or Eich Intermediate School.

This document outlines the existing conditions, alignment options, design options, and cost estimates for paved path from Riverside Avenue and Darling Way to the City limits just south of Old Auburn Road. For planning purposes, this phase of the Dry Creek Greenway path alignment was divided into twelve segments, numbered from west to east. The segments were created to facilitate the presentation and analysis of the path conditions, and in no way constitute segments for construction phasing.

The Stakeholders' Representative Group selected the preferred alignment presented in this document based on criteria that included consideration of property owners, path users, public safety, environmental concerns and municipal operations. Consensus could not be reached for a 500-foot segment of the Greenway between Riverside Avenue and Machado Lane and a 1,200-foot segment of the Greenway near Sunrise Avenue. Alternatives for each of these segments are presented here. The roadway crossing recommendations presented are based on factors such as average daily traffic counts, road alignment, and visibility. The planning-level cost estimates accounted for costs of roadway crossings, creek crossings, improvements to existing facilities, pathway materials and installation, and trailhead design and construction. Costs of potential environmental and creek flow studies and right-of-way acquisition were not included in the estimate. The total estimated cost for implementation of a 10-foot wide asphalt path along this corridor is estimated to be roughly $6 million.

A phasing plan was developed to ensure a logical sequence of implementation that provides a high degree of success as each phase is built. Implementation includes six phases, and considers public support, funding opportunities, creek and roadway crossings, and connections to schools, parks, neighborhoods, on-street bikeways, and trailheads.

Existing Conditions

This section describes the current status of the Dry Creek Greenway corridor. The discussion focuses on an assessment of relevant background information and site conditions that influenced the alignment development and design recommendations.

Study Area

The study area for the Dry Creek Greenway Planning & Feasibility Study is comprised of approximately 4.25 miles of variable width creek corridor along portions of Dry, Cirby, and Linda Creeks. Segments of unimproved natural surface paths and paved bike paths, some of which do not meet current design standards, exist within the study area. The current planning effort evaluates the creek corridor from Riverside Avenue and Darling Way to the City limits just south of Old Auburn Road. Potential alignments on both sides of the creeks are considered. Portions of the corridor have been historically used for recreation and transportation, and today it continues to be used for these purposes along both improved and unimproved segments.

Existing Plan Review

Several adopted planning processes have helped guide the vision and development of this plan for the Dry Creek Greenway path. An extensive review of planning documents included:

- City of Roseville 2020 General Plan
- City of Roseville Bicycle Master Plan (2008)
- City of Roseville Bicycle Master Plan, Initial Study/Mitigated Negative Declaration (2008)
- Roseville Creek and Riparian Management and Restoration Plan
- City of Roseville Design Standards, Section 13, Bikeways
- Roseville Bicycle/Pedestrian Pathway Draft Environmental Impact Report (1988)
- The Placer County Bikeways Master Plan
- The Placer County Regional Bikeway Plan
- Dry Creek Vision Plan – Draft
- The City of Roseville Design Standards

The Dry Creek Greenway Planning & Feasibility Study was undertaken in context with the policies and standards of these documents.

Population Growth

The population of the city of Roseville has increased more than 150 percent in the recent years, from 44,685 residents in 1990 to an estimated 112,343 as of January, 2009. The increased population has resulted in increasing demands on the existing transportation systems, including bikeways.

Land Uses

Zoning

An existing bike path easement follows a sewer line along Linda Creek west of Sunrise Avenue.

The majority of the project is located within property zoned as floodway. Path development is a permitted use in the floodway zone. Parcels adjacent to the study area are primarily residential, but also include commercial and office uses and several existing or planned parks. Planned or partially constructed developments are located along three segments of the proposed multi-use path, one along the south side of Linda Creek at the southeast corner of Rocky Ridge Drive and Cirby Way, another along the north side of Linda Creek on either side of Champion Oaks Drive, and a third at the southeast corner of Linda Creek and Old Auburn Road.

A flood control bypass channel and a detention basin are located along the south side of Linda Creek east of Rocky Ridge Drive. Commercially-zoned properties are concentrated along Sunrise Avenue to the north and south of the study area along Linda Creek. Commercial areas are also found near the western part of the study area along Riverside Avenue between Darling and Cirby Ways. Zoning along the entire corridor is shown on Existing Conditions maps, page 6.

Land Ownership

Most of the property along the corridor is publicly owned.

Most of the property along the creek corridor is publicly owned and managed by the City of Roseville. However, there are some locations where the planned alignment passes through private property and may require right-of-way acquisition.

Established fence lines do not always follow the property lines. In a few locations this discrepancy results in public use of private land and in other locations, fences surround public land. In these areas construction of a multi-use path will require adjustment of existing fence lines to correspond with property lines. In such cases,

appropriate notice and early consultation will be required to deal with required fence line adjustments.

Destinations

Important destinations for bicyclists and pedestrians in the city include schools, particularly elementary and middle schools, residential areas, parks, commercial centers, and cultural destinations. The opportunities and constraints section following will discuss these destinations in greater detail.

Flood Control Facilities

Reinforced concrete flood walls along Linda Creek near Sunrise Avenue

Following flood events in 1986, 1995, and 1997, the City of Roseville implemented projects to reduce the risk of flooding within the Dry Creek watershed. The Cirby-Linda-Dry Creek Flood Control Project included: construction of reinforced concrete flood walls along property boundaries along much of the corridor, construction of detention basins and bypass channels, and clearing of debris. Flow areas provided under existing bridges and through existing culverts provide little if any excess flood capacity.

Public Outreach

This study used a community based planning approach with an emphasis on public outreach. The purpose of this effort was to develop a locally preferred alternative for trail routing and road crossings that fit the context of the surrounding neighborhoods and adequately address the challenges of trail development. The public outreach efforts included:

- Mass mailing to over 900 property owners along the open space corridor
- An online public opinion survey
- Two public open houses
- Six Stakeholder Representatives Group meetings
- Field walks with interested groups and persons, including the Stakeholder Representatives Group and neighborhood associations
- Attendance at several neighborhood meetings

The online survey was created to gauge community interest in the Dry Creek Greenway path and to understand the concerns of area residents with regards to the proposed path. The survey was posted on the City of Roseville website and emailed to interested parties. A paper version of the survey was also created and distributed at the public workshop held in December. The survey was open from the middle of November through December 2008 and was completed by 216 people.

The majority of survey respondents indicated that active transportation (bicycling, walking), recreational opportunities, improved physical fitness and health, and reduced exposure to auto traffic are the primary benefits of open space paths. Nearly 60% of survey respondents said they would use the proposed path at least 1-3 times per week.

Safety and security was identified as the primary concern with the proposed Dry Creek Trail. After hours activity and exposure of trail users to auto traffic were also identified as concerns. The most commonly desired trail amenity was connections to other trails. Other desired trail amenities included wide shoulders for walking or jogging, waste receptacles, restrooms, and directional signs.

The complete survey summary is provided in Appendix F.

Biological Report

A biological resources study report was prepared for the corridor to provide general guidance for developing path alternatives. (The complete report and accompanying biological resource maps are provided in Appendix A.) Recommendations from that report were intended to minimize short-term and long-term impacts on biological resources that occur in the creek corridors. They also serve to minimize the cost of potential future mitigation associated with the acquisition of state and federal permits.

Biological resource constraints identified in the report are related to the riparian, woodland, and wetland habitats found within the undeveloped creek corridor. The following biological resource issues will need to be considered when further developing path alignments in the corridor:

- **Special-status species.** These include species listed as threatened under the federal Endangered Species Act, federal species of concern, California Department of Fish and Game state listed species, and California Endangered Species Act "fully protected species". As part of the California Environmental Quality Act (CEQA) compliance phase and to comply with the 2008 Bicycle Master Plan Initial Study/Mitigated Negative Declaration, the City will retain biologists to conduct additional, detailed biological surveys for these species.
- **Waters of the United States and Waters of the State.** Dry, Cirby, and Linda Creeks and Strap Ravine and two unnamed tributary streams are considered waters of the United States and waters of the State and are therefore subject to state and federal regulation. Adjacent seasonal and perennial wetlands are also subject to state and federal regulation. A wetland delineation would be conducted in the future on the preferred path alignment to document waters of the United States and support acquisition of state and federal permits.
- **Sensitive Natural Communities.** The study area supports sensitive natural communities, including mixed riparian forest, willow riparian scrub, and valley oak woodland. These sensitive natural communities occur throughout the creek corridors and complete avoidance may be difficult.

- **Native Oak Trees.** Native oak trees greater than six inches in diameter at breast height (dbh) are protected under the City's Tree Preservation Ordinance. To the extent possible, these large valley oak trees should be avoided during the path design phase because they provide important habitat and aesthetic values.
- **Mitigation/Restoration Sites.** Mitigation/restoration sites within and adjacent to the study area include compensatory mitigation sites, floodplain restoration sites, and native oak tree mitigation fund planting sites. Because these sites were established to offset biological effects from other projects, the sites may be subject to performance standards and other requirements.

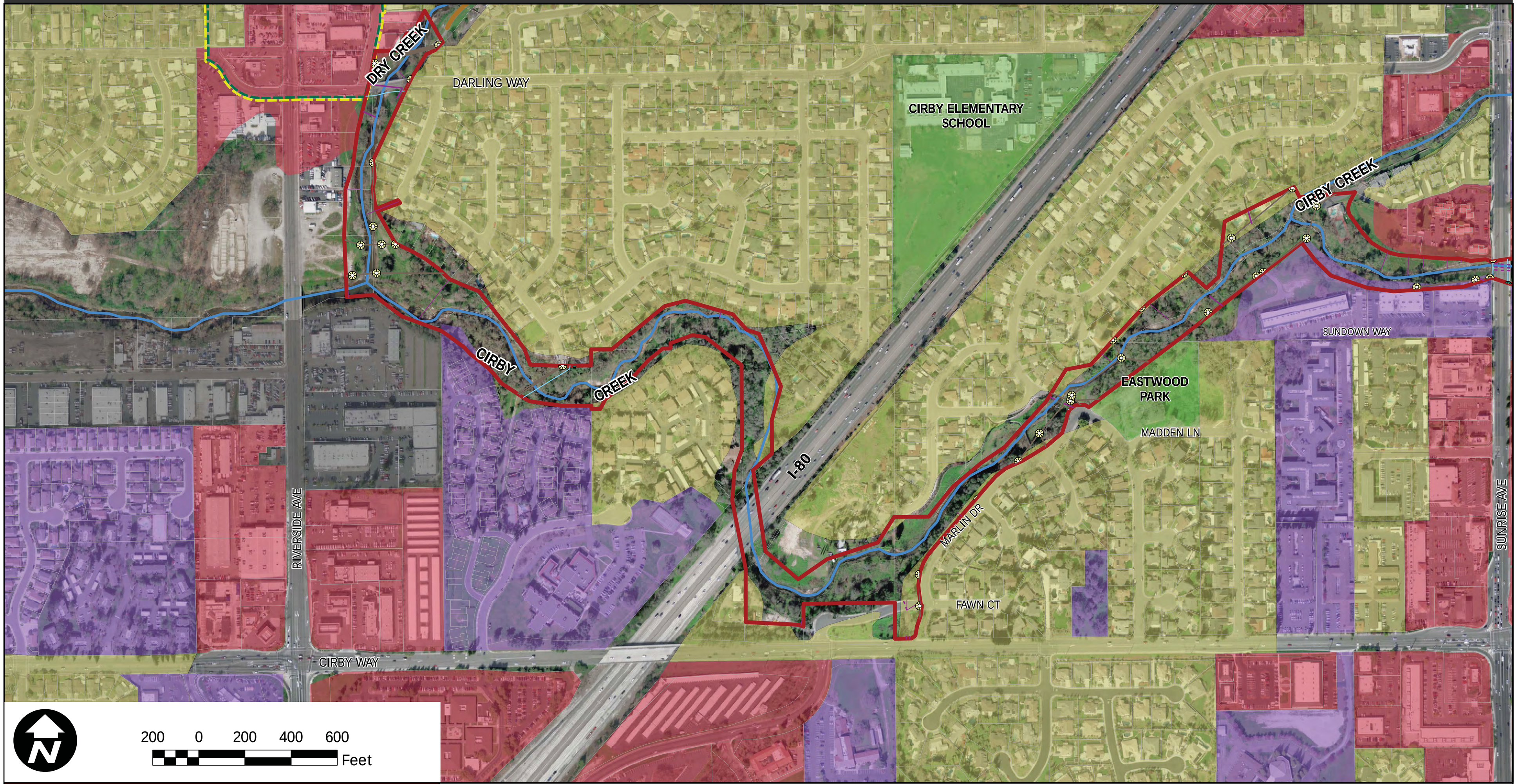
Key findings of this report include:

- **Biological Communities.** The study area supports both important and common biological communities. Important natural communities include valley oak woodland, mixed riparian forest, willow riparian scrub, and seasonal and perennial wetlands. Important biological communities are habitats considered sensitive because of high species diversity, high productivity, unusual characteristics, limited distribution, declining status, or a combination of these attributes. The only common biological community in the study area is annual grassland. Common biological communities are generally not protected by environmental regulation unless the specific site is habitat for or supports sensitive species.
- **Special-Status Species.** No special-status plants have been previously documented in the immediate project vicinity, and no suitable habitat for these species was located in the study area during field surveys. Although no special-status wildlife have been recorded by the California Natural Diversity Database (CNDDB) in the study area, suitable habitat does occur for valley elderberry longhorn beetle (VELB), Swainson's hawk, white-tailed kite, western red bat, Yuma bat, and pallid bat. Two special-status fish species (Central Valley steelhead and fall/late fall-run Chinook salmon) have been documented in the three creeks that occur in the study area.

Avoidance and minimization of impacts on sensitive biological resources will be accomplished by considering certain design guidelines during the alternatives development phase. To avoid long-term impacts on sensitive biological resources and potential high compensatory mitigation costs, the following guidelines were factored into the alternatives development:

- Locate the multi-use path and creek crossing in areas that minimize long-term erosion and sedimentation in the creeks.
- Avoid removal of large Valley Oak trees that provide high biological and aesthetic value.
- Avoid removal of elderberry shrubs and associated habitat for the federally listed VELB.
- Minimize riparian vegetation removal, particularly native shrubs and trees immediately along the creek bank. These species provide high quality shade and cover for wildlife and fish species.

Roseville Dry Creek Greenway Planning & Feasibility Study



Existing Conditions - West Segment - Map 1

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Data Provided by:
City of Roseville, California

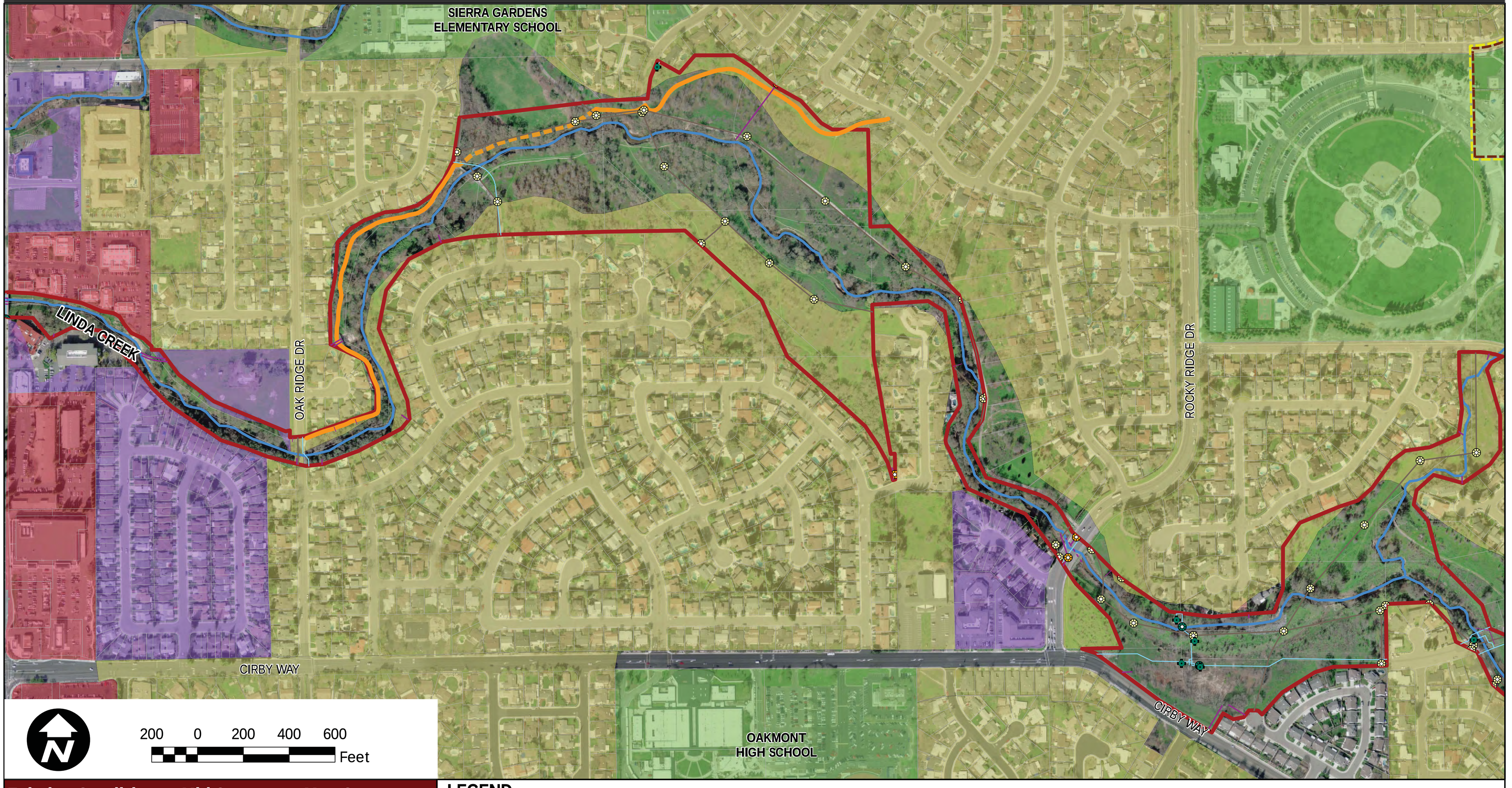
Map Prepared by:
Alta Planning+Design October, 2008

LEGEND

- Substandard Bikeways
- Bikeways to Remain
- Under Construction
- Creeks
- Infill Planning Area
- Riverside Gateway P.A.
- Southeast Planning Area
- Roseville City Limits
- Commercial
- Industrial
- Public / Open Space
- Planned Development
- Residential
- Manhole - Storm*
- Manhole - Water*
- Manhole - Sewer*
- Hydrant
- Culvert
- Lateral - Storm*
- Main - Storm*
- Main - Water*
- Main - Waste Water*

*Shown only within the study corridor

Roseville Dry Creek Greenway Planning & Feasibility Study



Existing Conditions - Mid Segment - Map 2

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Data Provided by:
City of Roseville, California

Map Prepared by:
Alta Planning+Design October, 2008

LEGEND

- Substandard Bikeways
- Bikeways to Remain
- Under Construction
- Creeks
- Infill Planning Area
- Riverside Gateway P.A.
- Southeast Planning Area
- Roseville City Limits
- Commercial
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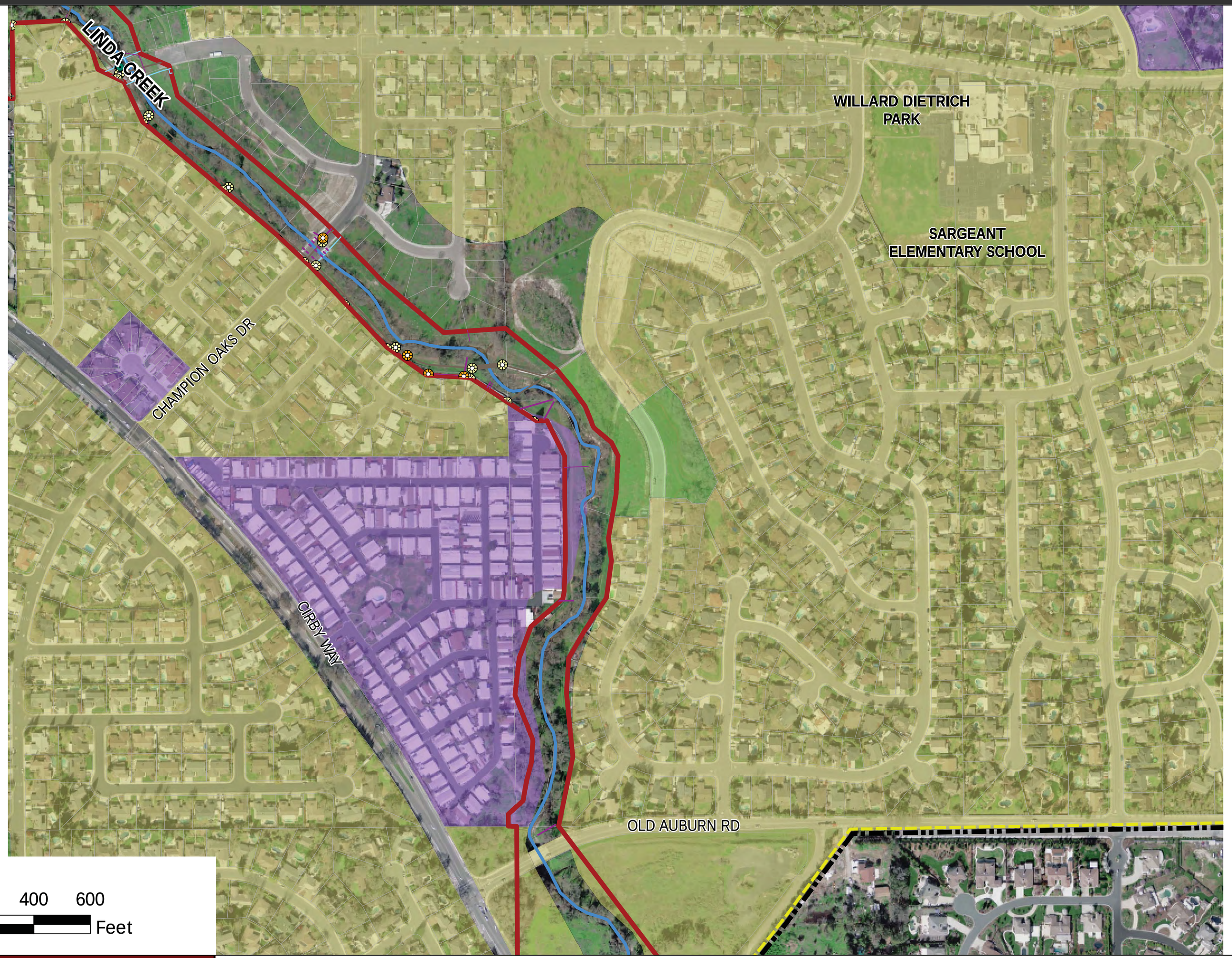
- Manhole - Water*
- Manhole - Sewer*
- Hydrant
- Culvert
- Lateral - Storm*
- Main - Storm*
- Main - Water*
- Main - Waste Water*

*Shown only within the study corridor

Roseville Dry Creek Greenway Planning & Feasibility Study



200 0 200 400 600 Feet

Existing Conditions - East Segment - Map 3

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Data Provided by:
City of Roseville, California

Map Prepared by:
Alta Planning+Design October, 2008

LEGEND

- Substandard Bikeways
- Bikeways to Remain
- Under Construction
- Creeks
- Infill Planning Area
- Riverside Gateway P.A.
- Southeast Planning Area
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- Commercial
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- Manhole - Water*
- Manhole - Sewer*
- Hydrant
- Culvert
- Lateral - Storm*
- Main - Storm*
- Main - Water*
- Main - Waste Water*

*Shown only within the study corridor

Opportunities & Constraints

The proposed Dry Creek Greenway multi-use path is an important step towards completing a network of off-street multi-use paths in Roseville and the region. The path will provide alternative routes and encourage bicycling and walking trips to schools and parks, as well as connecting residential and commercial areas. This section highlights some of the important opportunities for encouraging bicycling, providing key connections, and using existing publicly-owned land, as well as identifying potential constraints for the project.

Purpose and Need Statement

The following Purpose and Needs Statement was drafted by the Stakeholders Representatives Group:

> The Dry Creek Greenway multi-use path is envisioned as a paved, off-street path along Dry, Cirby, and Linda Creeks that will provide residents a place for bicycling, walking, running, and dog-walking, for fun, education, recreation, health, and transportation.
>
> The Dry Creek Greenway pathway is a vital component of the City of Roseville Bikeway and Trail system because it will provide a safe, comfortable, convenient, and highly connected bike route as an alternative to using City streets in an area of the City that is underserved by bicycle facilities. The Dry Creek Greenway path will connect schools and businesses to residential neighborhoods. The path will also provide important regional connections as it is part of a series of existing and planned paths that will form a loop around the greater South Placer/Sacramento area.
>
> Challenges for the project include neighborhood compatibility, limited availability of right-of-way, roadway crossings, existing utilities, and environmental factors. To address these challenges, the City convened a group of Stakeholders to represent a broad array of community interests. In addition, the City hosted public workshops and other public meetings to give the public an opportunity to provide input. The purpose of this effort was to develop a locally preferred alternative for trail routing and road crossings that adequately addresses the challenges and fits within the context of the neighborhoods.

Methodology

The Dry Creek Greenway Planning & Feasibility Study project team gathered data for this opportunities and constraints report using the following methodologies:

- **Biological Review.** Biological analysis was conducted by a team from ICF Jones & Stokes using a combination of document review, field review, and data analysis.

- **Field Research.** The project team conducted extensive fieldwork during four visits to the Dry Creek study area using a combination of field notes and digital photography to document opportunities and constraints in the project area.
- **Document Research.** The project team conducted document research in order to determine the location of some opportunities and constraints. Documents reviewed included relevant plans, maps, historical documents, and environmental impact reports.

Opportunities

Opportunities are defined as unique conditions that will facilitate implementation of the Dry Creek Greenway path, and/or enhance the operations and user experience of the path.

Demographics

The Dry Creek Greenway trail has the potential to benefit all of Roseville's residents. However, there are three groups of people who may experience an enhanced benefit from the transportation opportunities a path would provide: children, elderly and adults without vehicles who depend on non-motorized transportation and transit. Because children and many elderly people cannot drive, they are largely dependent on others for their transportation needs. In 2005, children under the age of 18 made up a quarter (25.7 percent) of the population of Roseville. People over the age of 65 comprised an additional 13.3 percent of the population[1]. A comprehensive pathway system linked by the proposed Dry Creek Greenway will improve recreational and transportation options for the entire population of Roseville, and will be particularly beneficial to the population who travel by foot, bicycle, skateboard, and other non-motorized mobility devices.

Parks

The study area is in close proximity to a number of parks, including Maidu Regional Park. Bike lanes on Rocky Ridge Drive currently provide an on-street connection from the study area to Maidu Regional Park. A spur path could be provided, connecting to the paved paths in Maidu Regional Park. Other nearby parks include Eastwood Park and Willard Dietrich Park. There are also plans to install walking paths on an open space parcel near Linda Creek and West Colonial Parkway. Both Eastwood Park and the planned park on West Colonial Parkway would be adjacent to the proposed path, potentially providing direct access to both. There is also an opportunity to provide an on-street connection to Willard Dietrich Park near Sargeant Elementary school. Much of the corridor passes through pastoral settings of oak woodland, ranchland, and riparian settings, offering opportunities for a variety of recreational pursuits.

[1] U.S. Census Bureau, 2006 Population Estimates, Census 2000, 1990 Census: http://factfinder.census.gov

Commercial Centers

There is an opportunity to connect the proposed path to commercial centers at the crossing of Sunrise Avenue. However, at this location the flood wall on the north side of Linda Creek presents a constraint to accessing commercial activities north of the alignment. Similarly, restricted right-of-way and existing development adjacent to the creek on the south side of the creek will make creating connections on this side challenging.

Community Partnerships

Partnerships with community groups, adjacent neighborhood associations, and schools will be critical to ensuring a successful pathway system. Many of these groups are already active users of the corridor and may be willing to help establish the site as a special place for residents and visitors to Roseville.

Existing connection at Machado/Hernandez Lanes

Schools

The proposed path will provide a significant opportunity to encourage bicycle and walking trips to the schools in proximity to the study area. Studies of school travel patterns indicate that students are more likely to walk or bike to school if they can travel less than one half-mile, and that middle school students are more likely to walk or bike farther[2]. While some neighboring schools – Eich Intermediate School (Sierra Gardens Drive), Sierra Gardens Elementary School (Oak Ridge Drive), Maidu Elementary School (Johnson Ranch Drive), and Saint Rose Elementary School (Vine Avenue) – are already connected to the study area via signed bicycle routes or off-street paths, most of the schools – Oakmont High School (Cirby Way), Sargeant Elementary School (Ridgecrest Way), Cirby Elementary School (Darling Way), and Christian Life Academy (Coloma Way) – currently are not.

Neighborhoods

The study area passes through the Hillcrest, Cresthaven, Cirby Side, Meadow Oaks, Sierra Gardens, Maidu, South Cirby, and Cherry Glen neighborhoods. Opportunities exist to provide access points from existing residential neighborhoods at several locations.

- Darling Way
- Machado/Hernandez Lane (existing)
- Machado Lane (east end)
- Jo Anne Lane
- Coloma Way (existing pedestrian bridge)
- Balboa drive (existing)
- McLaren Drive
- North Cirby Way
- Meadow Lane
- West Colonial Parkway

[2] Schlossberg, Marc, Jessica Greene, Page Paulsen Phillips, Bethany Johnson, and Bob Parker. (2006). School Trips: Effects of Urban Form and Distance on Travel Mode. *Journal of the American Planning Association.* 72 (3) 337-346.

- Marlin Drive, Woodlake Lane (existing)
- Dana Way, Meadowlark Way (existing)
- Olga Way
- Spahn Ranch Road

Path System and On-Street Bikeway Network Connections

The proposed Dry Creek Greenway path has the opportunity to provide numerous connections to the local and regional path systems and the existing bicycle-pedestrian network in Roseville.

Path Systems

Just as hierarchy and connectivity is important in roadway systems, consideration for hierarchy and connectivity should be considered when planning a pathway system. Connectivity to a local and regional path system strengthens individual pathways.

The potential connections from the proposed path to the Sacramento regional path system and Roseville's local path system are summarized in Figure 1.

A Class I bikeway connects to Eich Intermediate School, Sierra Gardens Elementary School, and the Sierra Gardens Neighborhood east of Oakridge Drive. In 2010, the City of Roseville plans to construct a trail segment that will connect the Saugstad Creek Path to Darling Way.

Figure 1. Potential Connections to the Local and Regional Path Systems

Path	Connections	Facility Type
Local Paths		
Oak Ridge Drive Multi-use Path	Eich Intermediate School	Class I
Miners Ravine Path (Incl. Harding Royer Path)	Recreation Loop	Class I
Saugstad Creek Path	Saugstad Park	Class I
Regional Paths		
American River Parkway	Sacramento Region	Class I
Ueda Parkway	Sacramento Region	Class I
Sacramento Northern Path systems	Sacramento Region	Class I
Dry Creek Parkway	Southwest Placer County	Class I

On-Street Bikeways

Several streets surrounding the study area are a part of Roseville's on-street bikeway network (see Figure 2). Darling Way, at the western end of the study area, and Oak Ridge Drive are classified as Class III bikeways.

The eastern half of the study area crosses several streets with Class II bike lanes. These include Champion Oaks Drive, Old Auburn Road, and South Cirby Way. South Cirby Way is equipped with bike lanes between Rocky Ridge and Old Auburn. East of Old Auburn, the bike lanes are intermittent to the Citrus Heights city limit.

Figure 2. Potential Connections to Roseville's On-street Bikeway Network

Street	Facility Type
Darling Way	Class III Bikeway
Oak Ridge Drive	Class III Proposed
Champion Oaks Drive	Class II Bikeway
Old Auburn Road	Class II Bikeway
South Cirby Way	Class II Bikeway

Existing Creek Crossings

There are three existing non-vehicular creek crossings in the study corridor. From west to east they are:

- **Pedestrian bridge over Cirby Creek south of Eastwood Park.** The existing pedestrian bridge over Cirby Creek is narrow (approximately 5' wide) and would be inadequate for the pathway without improvements, but provides a valuable connection between the northern and southern portions of the Cirby Side Neighborhood.
- **Pedestrian bridge over Linda Creek between the existing pathway east of Oak Ridge Drive and the Meadow Oaks Neighborhood at Woodlake Lane.** The bridge connecting the corridor to the Meadow Oaks Neighborhood at Woodlake Lane was built in 1997, is 10-feet wide, and provides an opportunity to connect to the path along the south side of Linda Creek between the crossing and Rocky Ridge Road. However, a decal on the bridge states that this span has a 2-ton load limit, which would make it inadequate for most fire-fighting equipment and many maintenance vehicles.
- **Maintenance bridge over Strap Creek east of Rocky Ridge Drive near York Court.** The maintenance crossing of Strap Creek utilizes the body of a railroad flat car and likely meets structural requirements and has adequate width for a pathway, but improvements would need to be made including adding safety rails and upgrading the bridge deck and approaches.

Constraints

Constraints are defined as conditions that may negatively impact the feasibility, enjoyment, and/or operation of the Dry Creek Greenway path.

Steep Topography

Along most of the corridor there is sufficient space above the creek bank to build a pathway. There are a few areas indicated on the Opportunities and Constraints maps (pages 20, 22, and 24) where the creek banks are very steep and the corridor is constrained. Most of the areas of steep slope occur west of I-80. Creek crossings may be necessary to avoid these locations. In areas where slopes are steep on both banks of the creek, engineered solutions will need to be evaluated. In most situations, the grade difference between the potential path alignments and back yards of existing residences will provide privacy for residences along the corridor.

Road Crossings

Darling Way

Darling Way is a two-lane residential collector connecting the Hillcrest neighborhood to Riverside Avenue. It has moderate traffic volumes and a 25 mph posted speed limit. The City currently has plans for a path connection to the north side of Darling Way from a soon-to-be-constructed path heading north from Darling Way. The existing cross section is shown in Figure 3.

Darling Way Bridge over Dry Creek

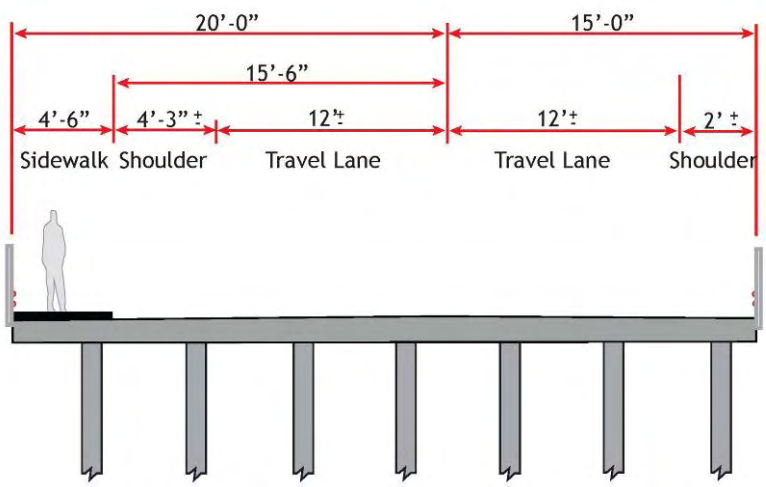


Figure 3. Darling Way – Existing Conditions

Interstate 80

Cirby Creek is channelized under Interstate 80 with armored benches on both banks of the creek. The bench on the west bank is approximately 10 feet narrower than the bench on the east bank. The approach to the crossing from both sides will be below the road grade, mitigating the significant traffic noise and providing ample vertical clearance for a path. The crossing will create a connection between the Cirby Side and Hillcrest neighborhoods.

I-80 Bridge over Cirby Creek

Sunrise Avenue

Sunrise Avenue is a busy five lane arterial with heavy traffic volumes. Signal spacing is adequate to allow for an at-grade crossing, but installation of a signal could result in traffic delays that would need to be evaluated with a traffic impact study.

Vertical clearance under the bridge is adequate for a path, and a 10-foot armored bench was built along the north bank of the creek for maintenance vehicle access as part of a floodway improvement project. However, the floodwall along the north side of the creek is immediately adjacent to the bench and almost 20 feet high, limiting connection opportunities between the greenway and businesses along Sunrise Avenue. In addition, a path along the north side would be subject to frequent inundation, requiring careful consideration of drainage issues.

Sunrise Avenue Bridge over Linda Creek

Mitigation plantings were done along the bench as part of the original improvement project. These plants may need to be relocated in order to use the bench for a path. East of Sunrise Avenue, the bench leads to a maintenance ramp adjacent to the bypass tunnel outlet.

Alternatively, a path could be constructed under the existing bridge along the south bank of the creek. Similar to the Darling Way undercrossing option, this would have the benefit of potentially increasing the flow area under the bridge.

At Sunrise Avenue, any crossing option is likely to be both expensive and require significant compromises in user desirability.

Oak Ridge Drive

Oak Ridge Drive is a low-traffic residential collector with a posted speed limit of 25 mph. The existing pathway connects at-grade to the east side of Oak Ridge Drive. A retirement community on the west side of Oak Ridge included a graded area for the path along the north bank of the creek.

Existing utilities suspended from the existing bridge over Linda Creek preclude the path from crossing under Oak Ridge Drive. In addition, if the path crosses under Oak Ridge, the recently-constructed flood walls east of Oak Ridge Drive would have to be modified for the path to reconnect to the existing bike path. Sight distance, a slight hill to the south, and the proximity of a stop sign controlled intersection with Rampart Drive will complicate design of an at-grade crossing at this location. With crossing enhancements, the moderate traffic volumes and speed make this a good candidate for an at-grade crossing.

Oak Ridge Drive Bridge over Linda Creek

Rocky Ridge Drive

Rocky Ridge Drive is a 4-lane arterial roadway with relative high traffic levels and speed. Linda Creek passes under Rocky Ridge Drive through a five-cell, reinforced concrete box culvert. Currently, most people who walk along Linda Creek from Eich and Sierra Gardens schools utilize sidewalks to get to the signalized intersection of Rocky Ridge and Cirby, which is several hundred feet south of Linda Creek. This signal is too close to the creek crossing to install a signalized path crossing at Rocky Ridge Drive.


Rocky Ridge Drive multi-cell box culvert at Linda Creek

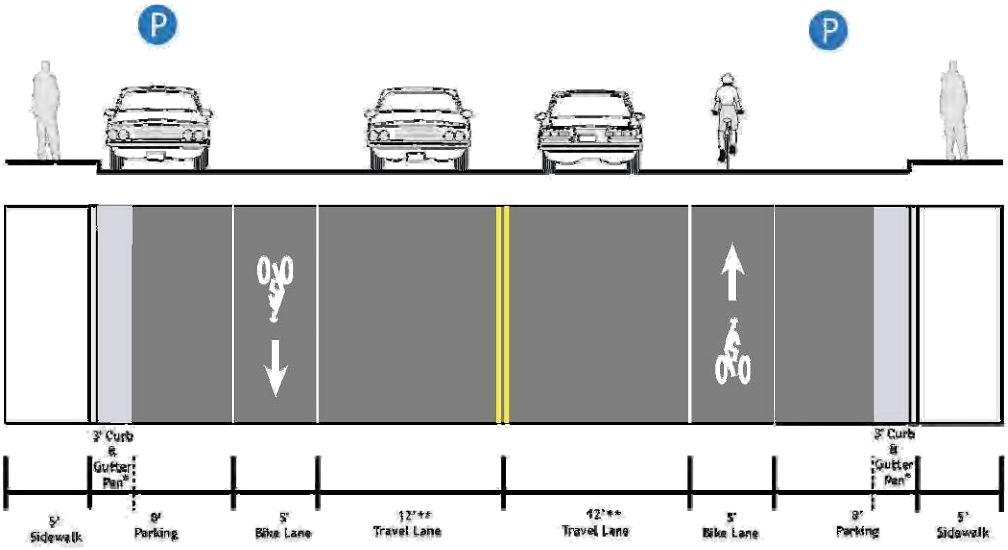
An opportunity exists either to utilize the western-most cell of the existing box culvert for a path, or to install a sixth cell to either side of the existing ones to create an under-crossing. Hydrological models of the proposed culvert modifications would have to be developed to determine the impact a partial flood wall would have on creek flows.

This segment of Rocky Ridge Drive is characterized by high traffic volume, traffic speed, restricted sight distance due to the curvature and gradient of the road on both sides of Linda Creek, and the proximity of two uncontrolled intersections (Condor Court and Mallard Lane). These features restrict the opportunities for crossings.

Champion Oaks Drive

Champion Oaks (see Existing Conditions Figure 4, page 12) is a wide neighborhood collector street with recently-installed bike lanes. Linda Creek passes through several corrugated metal pipe culverts under Champion Oaks.


Champion Oaks Drive multi-cell culvert at Linda Creek



* Rolled Curb, vertical over culverts
** Lane width approximate

Figure 4. Champion Oaks Way – Existing Conditions

Old Auburn Road

Old Auburn Road is constrained by the proximity of the creek crossing to the Cirby Way intersection and the speed and volume of traffic on Old Auburn. Limited clearance below the Old Auburn Road Bridge will make constructing a path under this structure challenging and somewhat costly, but with retention of the abutment slopes and appropriate drainage details, there appears to be adequate headroom to fit a path under the bridge. An at-grade solution would direct path users to the signal to cross Old Auburn at Cirby Way. Crossing Old Auburn connects the pathway to bike lanes on Cirby Way

Old Auburn Road Bridge over Linda

Land Ownership

The right-of-way is constrained in several areas because of land ownership, in some cases a combination of land ownership and topography. These areas include:

- Along Riverside Avenue, west side of Dry Creek
- Along Hernandez Lane (south of Darling way), east side of Dry Creek
- Near south end of Machado Lane and along Juanita Way, north side of Cirby Creek
- South/southeast of I-80, both sides of Cirby Creek
- Along Marlin Drive

- East and West of Sunrise Boulevard along both sides of Linda Creek
- East of Oak Ridge
- Along Blue Jay Drive, south/west side of Linda Creek
- West of Rocky Ridge Road, north side of Linda Creek
- East of Rocky Ridge Road, south side of Linda Creek
- Near Larkin Drive, north side of Linda Creek

The City of Roseville owns the majority of the land in the study area, but there are several locations where right-of-way acquisition may be required. Existing path easements exist north of Eastwood Park, west of Sunrise Avenue, and south of Old Auburn Road. Maps of property ownership and required acquisition for the preferred alternative are provided in Appendix B.

Flooding

As previously mentioned, the Dry Creek Basin is subject to periodic flooding. Substantial portions of a path within this corridor are likely to be under water for periods during the winter as water levels in the creeks fluctuate. The path will be constructed with flooding in mind. Under-crossings will be especially vulnerable to flood events. Hydraulic modeling is required during the preliminary design phase to quantify potential impacts.

Several bridges over Dry, Cirby, and/or Linda Creeks will be required along the path. In most locations, city-owned property is not available to construct bridges that would clear the 100-year flood plain. In these cases, hydraulic modeling will be used to ensure that bridge designs do not result in an increase in floodwater elevations. These bridges should be designed to sustain inundation with minimal damage, similar to other path bridges in the Roseville pathway system. In instances where it is possible to install a bridge that would clear the 100-year flood plain, hydraulic modeling may not be required.

Utilities

The Roseville Environmental Utilities department has expressed a desire to have the proposed path on the same side of the creek as the existing sewer wherever feasible in order to improve maintenance access to sewer lines. Between the end of the existing path east of Oak Ridge Drive to Rocky Ridge Road and from the east end of North Cirby Way to Old Auburn Road, it may be practical to follow existing utility access roads. From Darling Way to Eastwood Park, this approach may not be practical because of lack of right-of-way over existing sewer lines and steep slopes. High manholes for the sewage system may need to be re-set or avoided near Eastwood Park and between Rocky Ridge and North Cirby Way.

Figure 5. Opportunities and Constraints Summary, West Segment

West Segment – Darling Way to I-80	
Opportunities	**Constraints**
• North end connection to proposed Saugstad Park Path • Existing connection to Hernandez/Machado Lanes • Proposed bypass channel between Darling Way and Riverside Ave. • Potential connection to Riverside Drive • Potential connection to Machado/Juanita • Potential connection to end of Jo Anne • Potential connection to apartment complex • Existing bench along back of apartment complex near I-80, south side of Cirby Creek • Existing bench under I-80 bridge	• Darling Way crossing • Steep and unstable banks along east side of Dry Creek • Limited right-of-way along both sides of Dry Creek • Commercial property along west side of Dry Creek south of Darling Way • Steep banks alternately along both sides of Cirby Creek • Back fences of residences at top of bank along north side of Cirby Creek

Roseville Dry Creek Greenway Planning & Feasibility Study

Opportunities & Constraints - West Segment - Map 4

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CITY OF ROSEVILLE CALIFORNIA

Data Provided by:
City of Roseville, California

Map Prepared by:
Alta Planning+Design November, 2008

1-12-2009

LEGEND

- Substandard Bike Trails
- Existing Bike Trail
- Creeks
- Study Area
- Urban Reserve
- Open Space
- Public/Quasi-Public
- Parks and Recreation

OPPORTUNITY

NEUTRAL

CONSTRAINT

N

200 0 200 400 600 Feet

Figure 6. Opportunities and Constraints Summary, Mid Segment

Mid Segment - I-80 to Sunrise Avenue	
Opportunities	**Constraints**
• Existing substandard side path along Marlin Drive • Existing pedestrian bridge across Cirby Creek between Tina Way and Marlin Drive • Potential connection to Eastwood Park • Existing bike path easement at north end of Eastwood Park • Existing bench along north side of Linda Creek under Sunrise Avenue and along floodwalls on either side of Sunrise • Access to Sunrise commercial district • Potential for signalized at-grade crossing of Sunrise	• Steep slopes along south side of Cirby Creek just east of I-80 bridge • Limited right-of-way along north side of Cirby Creek just east of I-80 bridge • Tributary to south near Marlin/Fawn Court intersection • Sunrise Avenue crossing • Narrow bench on north side under Sunrise Bridge and along flood wall • Height of floodwalls along north side of Linda creek both sides of Sunrise • Proximity to businesses along south side of Linda Creek near Sunrise • Mitigation plantings

Roseville Dry Creek Greenway Planning & Feasibility Study

Opportunities & Constraints - Mid Segment - Map 5

alta PLANNING + DESIGN

CITY OF ROSEVILLE CALIFORNIA

Data Provided by:
City of Roseville, California

Map Prepared by:
Alta Planning+Design November, 2008

1-12-2009

LEGEND

- Substandard Bike Trails
- Existing Bike Trail
- Creeks
- Study Area
- Urban Reserve
- Open Space
- Public/Quasi-Public
- Parks and Recreation
- OPPORTUNITY
- NEUTRAL
- CONSTRAINT

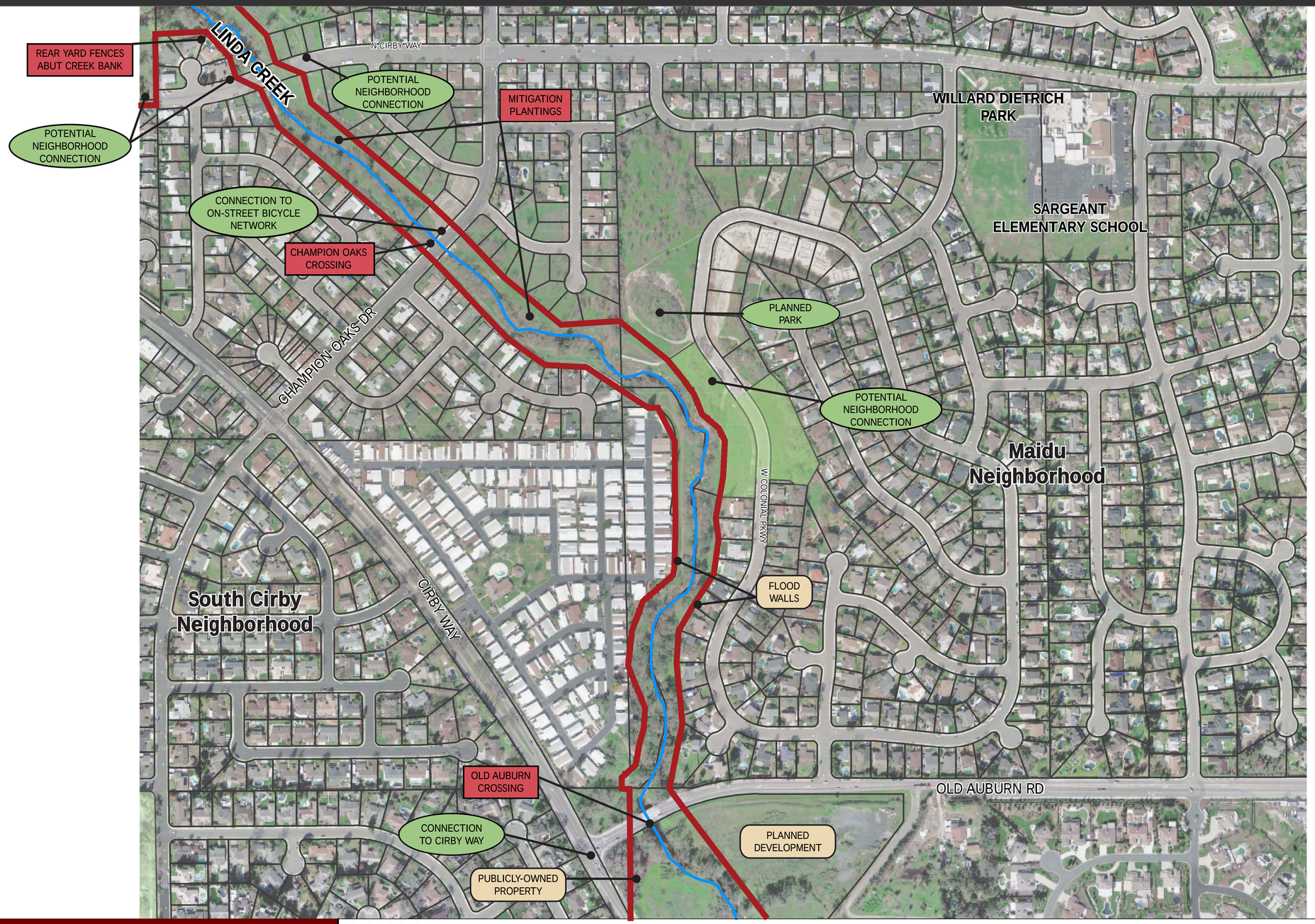
N

200 0 200 400 600 Feet

Figure 7. Opportunities and Constraints Summary, Mid Segment

East Segment - Sunrise Avenue to Rocky Ridge Drive	
Opportunities	**Constraints**
• Potential connection to retirement community • Area re-graded to accommodate future path during retirement community construction • Connection to the existing pathway at Oak Ridge • Existing bridge and neighborhood connection to Charleston • Connection to schools • Existing neighborhood connection east of Sierra Gardens Elementary • Existing footpath between Sierra Gardens and Rocky Ridge Drive • Potential connection at Dana Way • Potential connection at Blue Jay Drive	• Narrow bench east of Sunrise on north side of Linda Creek • Limited site distance at Oak Ridge Crossing • Existing path between Linda Creek and schools is steep and narrow • Existing footpath is on private property west of Rocky Ridge Drive • Limited site distance for a crossing at Rocky Ridge Drive • Rear yards close to top of creek bank southwest of Linda Creek • Mitigation plantings

Roseville Dry Creek Greenway Planning & Feasibility Study



Opportunities & Constraints - East Segment - Map 6

City of Roseville, California

Alta Planning+Design November, 2008

12-2-2008

LEGEND

- Substandard Bike Trails
- Existing Bike Trail
- Creeks
- Study Area
- Urban Reserve
- Open Space
- Public/Quasi-Public
- Parks and Recreation
- OPPORTUNITY
- NEUTRAL
- CONSTRAINT

N

200 0 200 400 600 Feet