TOWN OF WINDSOR
CLASS I BICYCLE AND PEDESTRIAN TRAILS STUDY



October 30, 2018

Accepted by Windsor Town Council November 7, 2018

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CLASS I BICYCLE AND PEDESTRIAN TRAILS STUDY

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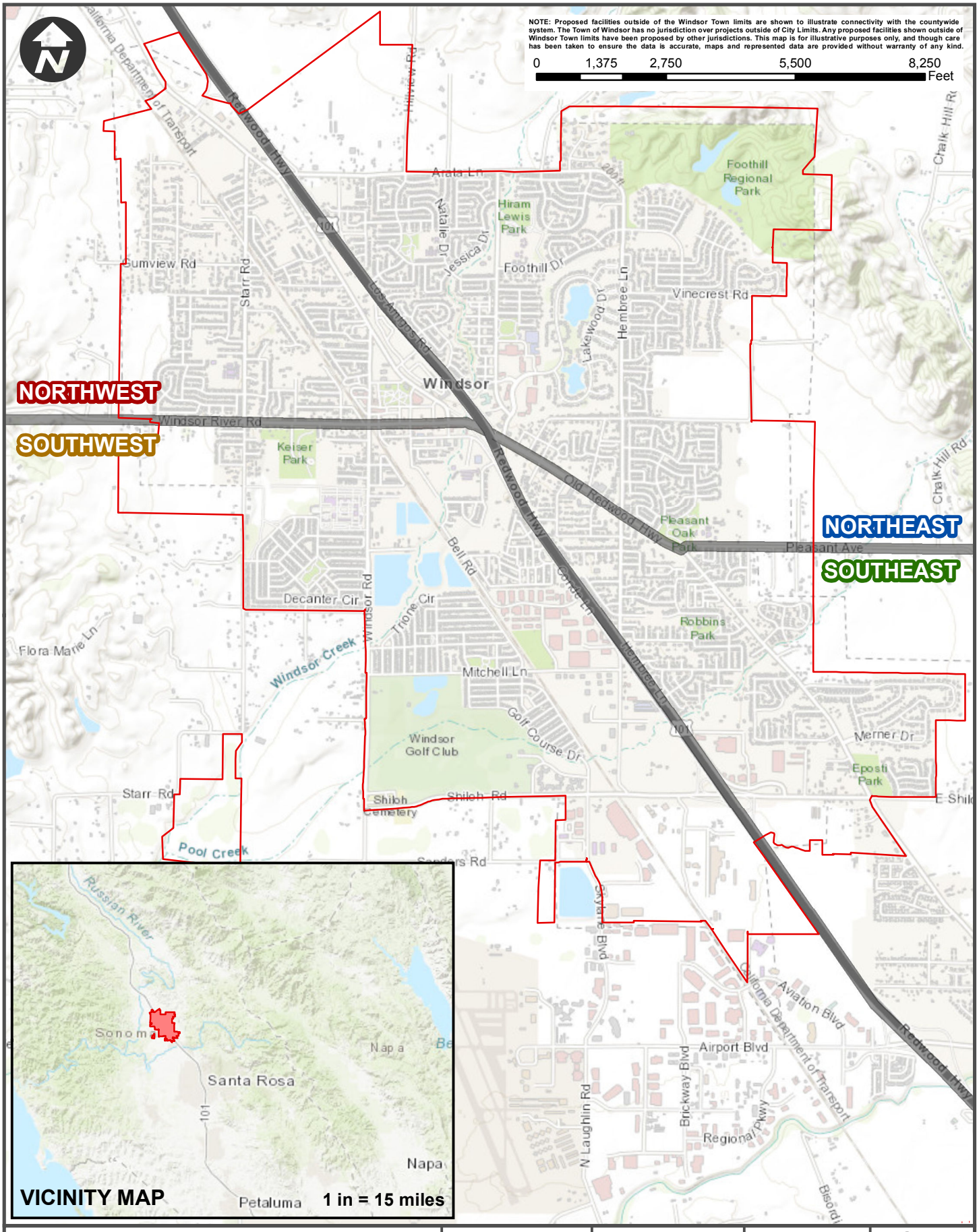
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1. INTRODUCTION



The ***Windsor Class I Bicycle and Pedestrian Trails Study*** provides guidance on trail improvements and provides recommendations for new trails within Windsor's Town Limits and surrounding areas (**Figure 1-1, Location Map**), with a focus on Class I multi-use paths ("Trail") that improve connectivity to local destinations. This Study is intended to provide an overall vision for trails within the Town and provides an in-depth focus on existing and proposed Class I trails in Windsor, builds upon the information developed in the Town's 2014 Bicycle and Pedestrian Master Plan and 2017 Parks and Recreation Master Plan and is intended to inform future updates of those plans.

This Study includes consideration of future land use, neighborhoods, destinations and a review of current and proposed on-street bike lanes and trails. To identify trail connections, the project team conducted a trail inventory of existing trails, and reviewed current planning documents including the Windsor 2040 General Plan, Parks and Recreation Master Plan and neighborhood- specific plans to identify other potential trail opportunities. Input from the public and stakeholders was instrumental to help designate potential Class I trail options for further review and analysis. The Study discusses design considerations including ADA accessibility, trail surface and sustainability, environmental considerations, implementation costs, and other features essential to a community trails network.



TOWN OF WINDSOR CLASS I BICYCLE AND PEDESTRIAN TRAILS STUDY

TOWN OF WINDSOR

QUESTA

LOCATION MAP

FIGURE 1

1.1 EXECUTIVE SUMMARY

This is a study of off-street, separated Class I trails, building on trails identified in the 2014 Bicycle and Pedestrian Master Plan, as well as other routes that exclusively serve bicyclists, pedestrians and other nonmotorized methods of travel. Although it is not a study to develop bicycle lanes, sidewalks or other facilities, it does identify some Class II and III trail connections, gaps and other improvements to facilitate bicycling and walking in and around the Town of Windsor.

This Study addresses the differing needs and priorities of bicyclists and pedestrians, and will help to define the community's non-motorized transportation and recreational needs. It incorporates newly identified connectors in Central Windsor and discusses existing barriers to non-motorized travel through Town, such as US 101, the railroad corridor and arterial streets, as well as transportation access to key activity nodes and destinations.

The Study provides recommended priorities for the Town to include specific projects in future Capital Improvement Programs or to be included as conditions of approval in land development projects. In establishing priorities, those portions of the trail and bicycle ways system that have high anticipated use, close gaps between the ends of paths, link neighborhoods and parks and key activity centers such as the Town Green and commercial areas, or can be easily implemented were given the highest priority.

What is a Class I Path? A Class I path (Trail), whether parallel to a road or distant from adjacent roads, is a path intended for use shared by bicyclists and pedestrians that is separated from an adjacent travel lane by a minimum of five feet. In some locations, physical barriers, buffers or other elements may be included in the Class I trail final design to provide physical separation and safety from the road.

As defined by Caltrans:

- *Class I bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right of way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized.*
- *Class II bikeways are bike lanes established along streets and are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities, typically striped adjacent to motor traffic travelling in the same direction. Contraflow bike lanes can be provided on one-way streets for bicyclists travelling in the opposite direction."*
- *Class III bikeways, or bike routes, designate a preferred route for bicyclists on streets shared with motor traffic not served by dedicated bikeways to provide continuity to the bikeway network. Bike routes are generally not appropriate for roadways with higher motor traffic speeds or volumes. Bike routes are established by placing bike route signs and optional shared roadway markings (sharrow) along roadways*. [1]

What is the Study Goal? The goal of the Study is a community-supported document that will be used by the Town, stakeholders and residents to guide implementation of a network of trails to serve the bicycling and walking needs of a healthy community. The Class I trails identified in this Study will be considered for adoption into updates of the Windsor Bicycle and Pedestrian Plan, General Plan and other transportation- and recreation- related policies of the Town. The Study also provides

[1] California Department of Transportation, July 2017. A Guide to Bikeway Classification.

recommendations for consideration of new trails in development projects, and may be utilized when the Town seeks grants or funding for individual projects.

The Study evaluates the community's trail network, both existing and proposed trails, in order to prioritize projects for inclusion in future Capital Improvement Programs, to pursue grant funding, and/or to be included as conditions of approval in land development projects. The trail planning effort will use elements of the 2014 Windsor Bicycle and Pedestrian Master Plan Update, 2018 Connecting Central Windsor Study, and the Windsor Parks and Recreation Master Plan Update along with other relevant efforts to develop an updated list of trail projects for review and analysis.

What's in the Study? The Study identifies and ranks potential trail segments, evaluates trail components and design strategies, and includes an environmental assessment strategy for implementation. An Implementation Program defines independent segments, evaluates preliminary costs and permitting issues, and suggests partnerships and funding strategies that can be employed to facilitate trail projects.

The 2014 Bicycle and Pedestrian Master Plan identified 17 Class I (off street) shared use trails. Building on that Plan, and through this Study, over 40 potential Class I Trail segments, several rail crossing/grade separation opportunities, and over 24 miles of new Class I Trails that could be implemented to facilitate bicycle and pedestrian travel were identified and mapped.

The Study evaluates existing conditions, analyzes site opportunities and constraints, and contains a ranking methodology based on agreed upon planning criteria in order to identify improvement priorities within a short- and long-range implementation timeline. Design guidelines, costs and funding options provide a blueprint for future trail implementation.

Community Outreach. An important component of the Study was community engagement, and four workshops and meetings were held in addition to a website that offered interactive mapping to gain insights on community trail desires. Over 800 unique users visited the website, attended workshops, or offered comments during the course of the Study.

How Will Trails Be Implemented? The Study identifies over 24 miles of trails and associated improvements that can be implemented over time to improve opportunities for off-street walking and bicycling in Windsor. Some trails may be built as components of other development projects (such as the SMART rail project, nearby street improvements, commercial development, or residential subdivisions), some may be completed as part of environmental enhancement/habitat restoration or park and recreation projects, and others will be implemented by allocating Town budget, grant funding or with project partners, based on community commitment towards a walkable Town. It is likely that not all trails will be built within the next five to ten years, but this document is intended to serve as a guideline to identify and prioritize trails opportunities, especially as development occurs within the community.

Trail Priorities and Costs. The Study includes a ranking methodology with criteria such as connection opportunity, projected use, public support, environmental sensitivity, and engineering difficulty. This information was used to develop a prioritized list of potential projects for inclusion in the Town's Capital Improvement Program, evaluation as part of development projects, and/or that can be funded for implementation as part of local, regional, state, and federal grant programs. The information can also be

used to facilitate phasing, funding, and implementation priorities within short, medium and long-range implementation schedules. The high priority projects, identified from the ranking methodology and as shown in four geographic quadrants of the Town are summarized below.

Table 1-1: Town of Windsor High Priority Class I Trails

Quadrant	Trail Number	Project Name	Estimated Cost
Northwest			
	1	SMART Northwest	$3.32M
	3A	North Starr Creek Trail	$448K
	4A	East Starr Creek Trail	$175K
	5	101 Crossing Complex	$16M-$20M
Northeast			
	21A	West Windsor Creek Trail	$421K
	22	Windsor Creek Connector	$505K
	23	Windsor Middle School	$148K
	24A	East Windsor Creek Trail	$134K
	24B	East Windsor Creek Trail	$270K
	26	Franklin Street Bridge	$292K
	29	Jensen Lane East Connector	$1M
	30	Jensen Lane Trail	$310K
Southwest			
	41A	SMART Southwest	$726K
	41B	SMART Southeast	$726K
	41C	SMART Shiloh South	$291K
	42	Conde Lane Connector	$448K
	43A	South Windsor Creek Trail	$446K
	43B	South Windsor Creek Trail	$792K
	47	Jaguar Way Connector	$384K
Southeast			
	67	Old Redwood Highway Greenway	$1.87M

1.2 Study Purpose and Need

The purpose of the Study is to provide a framework for implementation of an interconnected trail system in Windsor. Trails are needed to improve connectivity to local destinations, linking schools, Downtown and neighborhoods, increase user safety and accessibility, and enhancing quality of life for Windsor residents.

Identifying locations for off-street pedestrian and bicycle facilities is an important component of a walkable and livable community. This trail network is part of the Town's guiding vision, and builds upon the Town's 2014 Bicycle and Pedestrian Master Plan. This Study identifies specific improvements that can be funded for implementation in the Town's Capital Improvement Plan and/or by local, regional, state, and federal grant programs and contains methodology and criteria for evaluating, prioritizing and

implementing projects, and funding strategies will be consistent with existing planning criteria and policies and guidance from the Town and project stakeholders. The Study goal is to define and prioritize potential trail projects so that they can be implemented quickly, efficiently, and cost effectively.

1.2 PUBLIC OUTREACH

During the yearlong Study, four public workshops and other meetings were held to gain insight into the needs and desires of Windsor's walking and bicycling community, partner agencies, and others with an interest in Class I trails. Interaction with potential trail users, implementation partners and community members included:



- Windsor Bicycle and Pedestrian Advisory Committee
- Windsor Parks and Recreation Commission
- Two Community Workshops
- Sonoma Marin Area Rail Transit (SMART)
- Sonoma County Water Agency (SCWA)
- Web tool / Project website
- Social media outreach
- Windsor Planning Commission
- Windsor Town Council

Website. An interactive website was developed, with a web mapping tool to allow users to draw or comment on potential trail alignments. Site visitors could view potential trails and provide comments about desired destinations and safety concerns to address. With 840 unique visitors and almost 2,000 page views, approximately 50 comments were received, including:



- Provide grade-separated rail crossing(s)
- Connect to Downtown
- Provide trails along creeks, and creek crossings
- Unite the community
- Connect to SMART trail
- The SMART trail can be on either side of the tracks
- Connections/Crossings US 101, SMART, Major streets

Appendix A contains a summary of the presentations, workshop comments and website statistics.

1.3 PLANNING BACKGROUND

The Town of Windsor has adopted numerous plans and policies that are aimed at encouraging and facilitating bicycle and pedestrian travel within the community. The Study builds on the 2014 Windsor Bicycle and Pedestrian Master Plan. The Town-wide Trail and Bikeways Plan was created in 1994 as the Town General Bikeway Plan, prior to the adoption of the Windsor General Plan. The Town-wide Trail and Bikeways Plan was approved in 1999 and amended in 2002. The current Windsor Bicycle & Pedestrian Master Plan was prepared by the Sonoma County Transportation Authority in partnership with the Town of Windsor and adopted in 2008 and updated in 2014. This Section discusses some of these policies and their basis for defining and evaluating the Windsor trails network; other guiding documents (most available at http://www.windsor2040.com/) discussed in this Section include:

- Town of Windsor General Plan, Transportation and Mobility Element (2018)
- Town of Windsor Bicycle and Pedestrian Master Plan Update (2014)
- Town of Windsor Parks and Recreation Master Plan (2017)
- Connecting Central Windsor Study (2018)
- Civic Center Visioning Plan (2016)
- Windsor Station Area Downtown Specific Plan (2013)
- Windsor, CA SDAT: Old Red Going Green A Sustainable Design Assessment Team Final Report
- Shiloh Road Vision Plan (2001)
- Town of Windsor Draft Safe Routes to School Report (2012-2016)

1.3.1 TOWN OF WINDSOR 2040 GENERAL PLAN, TRANSPORTATION AND MOBILITY ELEMENT (2018)

The Transportation and Mobility Element provides the framework for decisions in Windsor concerning the transportation system. An efficient circulation system must factor all modes of travel, providing ample connections creating links locally and regionally. The existing transportation system provides for the safe and efficient movement of people and goods through all modes of transportation. This is achieved through an extensive network of streets, pedestrian and bicycle trails and pathways, and public transit corridors, including the North Coast Rail Authority corridor, which will accommodate the planned extension of the Sonoma Marin Area Rail Transit (SMART) commuter rail.

Windsor's climate and geographical location provide an excellent year-around setting for walking and bicycling (as well as other non-motorized modes such as skateboarding). The Town's expanding bicycle network integrated with recreation trails, paths, and sidewalks have created an interconnected network for both bicyclists and pedestrians. Windsor is striving to reach its goal of closing all gaps in the network, particularly on all cross-town streets, with priorities given to locations near schools and other key destinations.

The Town has demonstrated a commitment to creating a bicycle and pedestrian friendly environment with the formation of the Bicycle and Pedestrian Advisory Committee (BPAC), which is formed of Town staff and community members. This committee plays a direct role in advocating for a cohesive and integrated bicycle and pedestrian network, while providing outlets for education to the community, and seeking the necessary grant funding to complete infrastructure projects. In 2012 the Town of Windsor was nationally recognized as a "Bicycle Friendly Community" by the League of American Bicyclists, receiving a bronze award. The Town focuses not only on providing adequate infrastructure for a walkable and bikeable community, but also on education and encouragement. Policies in this section provide further support for an efficient and safe bicycle and pedestrian system that will improve connectivity and accessibility throughout Town.

Goal M-1: Multimodal Circulation System
Promote the development of an integrated, multimodal transportation system that balances the circulation and mobility needs of pedestrians, bicyclists, public transit, automobiles, and goods movement.

> *M-1.3 Development of Pedestrian, Bicycle, and Transit Facilities.* The Town shall encourage the development of facilities and services (e.g., secure long-term bicycle parking, street lights, street furniture and trees, transit stop benches and shelters, and street sweeping of bike lanes) that enable bicycling, walking, and transit to become more widely used modes of transportation and recreation.
>
> *M-1.4 Multimodal System Additions.* The Town shall require all new development that proposes or is required to construct or extend streets to develop a transportation network that complements and contributes to the town's multimodal system, maximizes connections, and minimizes barriers to connectivity.
> *M-2.4 Managing Transportation in the Right-of-Way.* The Town shall balance the needs of all travel modes when planning transportation improvements, including pedestrian and bicycle trails and pathways.

M-2.10 Bicycle and Pedestrian Connectivity. The Town shall ensure that commercial and residential development, including affordable housing projects, provides convenient and direct connections to the nearest existing bikeways, pedestrian ways, and public transit facilities.

M-2.11 American with Disabilities Act. The Town shall continue to implement the Americans with Disabilities Act when designing, constructing, or improving transportation facilities.

Goal M-4: Walkable and Bikeable Community

Provide a safe, efficient, and accessible bicycle and pedestrian system throughout Town. Policies:

M-4.1 Bicycle and Pedestrian Master Plan. The Town shall regularly update and implement the Windsor Bicycle and Pedestrian Master Plan.

M-4.2 Trail Network. The Town shall expand its network of trails throughout the town, wherever feasible, through public open spaces and easements for recreational enjoyment and for a vehicle-free route to parks, schools, and neighborhoods through walled subdivisions.

M-4.3 Trail Accessibility. The Town shall require trails to be within a short walk of most residents in order to harbor active lifestyles and offer opportunities to appreciate open space.

M-4.4 Pedestrian and Bicycling Gaps. The Town shall encourage closing the gaps in the sidewalk and bicycling network to ensure continuous pedestrian and cycling access within town, particularly the gaps in connection due to the bisecting of U.S. US 101.

M-4.5 Bicycle Infrastructure Planning. The Town shall consider the needs of bicyclists of all types (commuters, recreational riders, children, and families) in planning, developing, and maintaining a bikeway network that is safe and convenient.

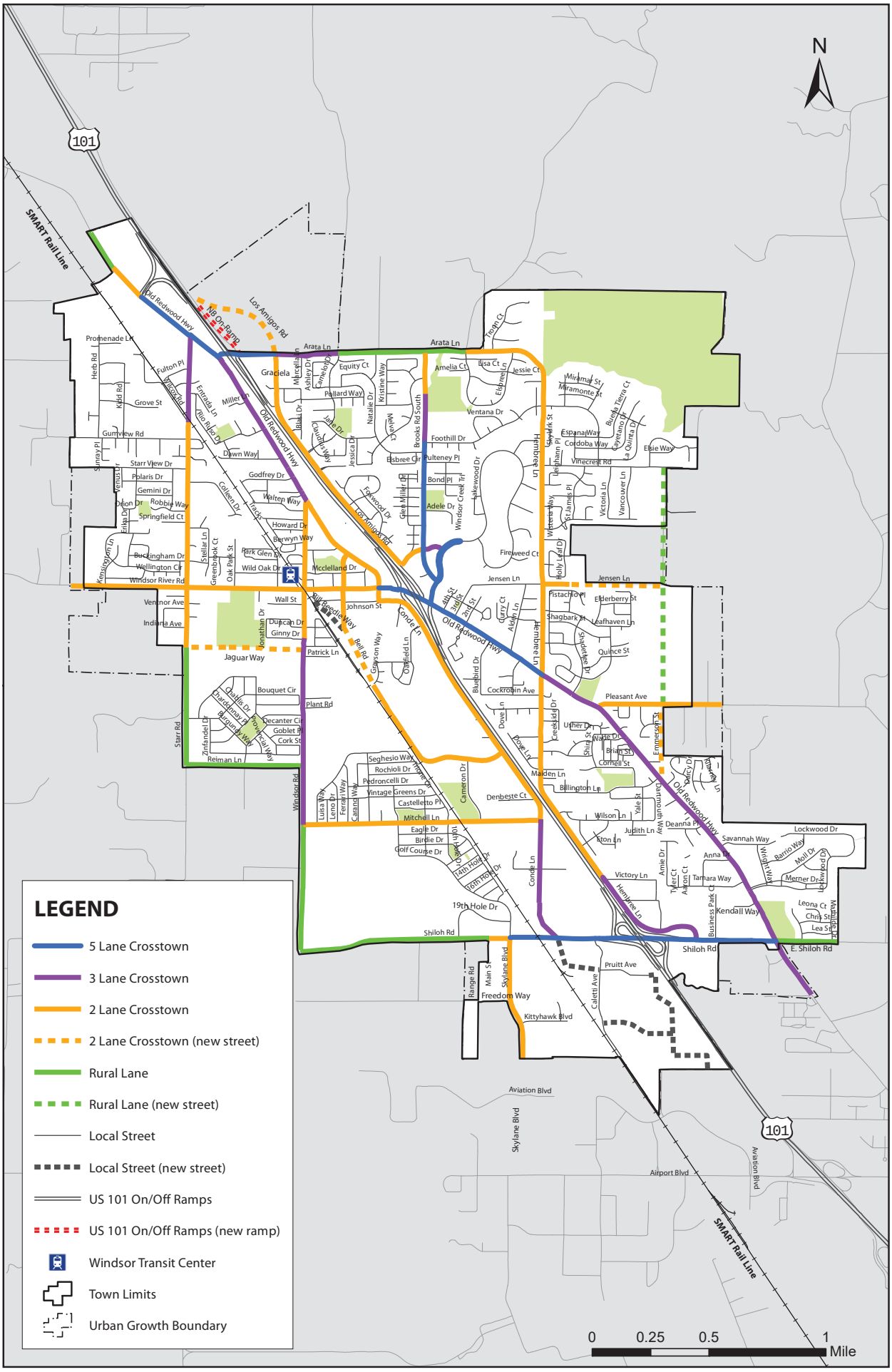
M-4.6 Bicycle Safety Improvements. The Town shall improve bicycle safety by expanding the use of separated bicycle lanes, green bicycle lanes, and adequate lighting, particularly around schools and in other areas where bicycle safety is a concern.

M-4.7 Bicycle Detection at Intersections. The Town shall require that all signalized intersections include bicycle detection and are properly marked and operational for use by bicyclists.

M-4.8 Bicycle and Pedestrian Interchange Safety. The Town shall require that bicycle and pedestrian connectivity and safety are addressed at the three US 101 interchange locations in Town.

M-4.9 Bicycle and Pedestrian Crossing. The Town shall continue to pursue a pedestrian bridge or tunnel crossing at US 101 and Old Redwood Highway.

M-4.10 Bicycle and Pedestrian Crossing Safety. The Town shall develop safe and convenient bikeways and pedestrian crossings that reduce conflicts between pedestrians, bicyclists, and motor vehicles on streets, multi-use trails, and sidewalks.



3/2017

Figure 1-2:
Town of Windsor 2040 General Plan, Transportation and Mobility Element
Adopted April 4, 2018. Prepared by Mintier Harnish

M-4.11 Bicycle Parking. The Town shall continue to require adequate bicycle parking facilities at schools, parks, shopping centers, and places of employment in both commercial and industrial areas.

M-4.12 Temporary Bicycle Parking for Events. The Town shall require that adequate temporary bicycle parking be made available at events and festivals to encourage alternative modes of transportation to and from events, helping to alleviate potential congestion.
M-4.13 Bicycle Signage Infrastructure. The Town shall install wayfinding signage, markers, and stencils on off-street paths, on-street bikeways, local roads, and State Routes to improve way finding for bicyclists, assist emergency personnel, and heighten motorist awareness.

M-4.14 Safe Routes to School. The Town shall continue to coordinate with the School District on implementation of the Safe Routes to School program to ensure a safe pedestrian and bicycling network to and from local educational facilities for all.

M-4.15 SMART Trail. The Town shall work with Sonoma Marin Area Rail Transit on the implementation of the SMART Trail which will extend a multi-use path adjacent to the SMART corridor, connecting bicyclists and pedestrians north and south from the multi-modal transit station into neighboring jurisdictions.

M-4.16 Bicycle and Pedestrian Education. The Town shall continue to provide programs that educate the community about bicycle and pedestrian safety as well as the availability of facilities for and benefits of walking and biking.

1.3.2 TOWN OF WINDSOR BICYCLE AND PEDESTRIAN MASTER PLAN (2014)

The Windsor Bicycle and Pedestrian Mater Plan, prepared by Sonoma County Transportation Authority, was developed as a component of the Sonoma County Transportation Authority's (SCTA's) Countywide Bicycle and Pedestrian Master Plan. While part of the Master Plan, the Windsor plan is also a stand-alone document to be used by the Town of Windsor to guide implementation of local projects and programs and document Town policy. It was also designed to be a component of the SCTA Countywide Bicycle & Pedestrian Master Plan to improve coordination in realizing the countywide bicycle and pedestrian system.

The Windsor plan was developed over the course of a year through the coordinated efforts of the SCTA's Bicycle and Pedestrian Advisory Committee, a focused project steering committee, Windsor staff, and input from the public through a series of public workshops and public review periods. The Project Steering Committee was established to oversee the development of the plan and consisted of representatives from the County and each of its cities. Public workshops were held throughout the County to collect input from interested members of the public. The workshops were advertised through various local and regional print media, mailings, the posting of public fliers, and government outreach efforts. The primary emphasis of this planning effort is to facilitate transportation improvements for bicyclists and pedestrians.

The primary emphasis of this planning effort is to facilitate transportation improvements for bicyclists and pedestrians. The purposes of the *SCTA Countywide Bicycle & Pedestrian Master Plan* are to:

- Assess the needs of bicyclists and pedestrians throughout Sonoma County in order to identify a set of local and countywide improvements and implementation strategies that will encourage more people to walk and bicycle;
- Identify local and countywide systems of physical and programmatic improvements to support bicycling and walking;
- Provide local agencies that adopt the Plan with eligibility for various funding programs;
- Act as a resource and coordinating document for local actions and regional projects;
- Foster cooperation between entities for planning purposes and to create Geographic Information System (GIS) maps and a database of existing and proposed facilities countywide.

To achieve these, the Plan includes recommendations for physical improvements and programs that could be developed to enhance and expand existing facilities, connect gaps, address constraints, provide for greater local and regional connectivity, and increase the potential for walking and bicycling as transportation modes.

The 2014 Plan identified 17 Class I trail segments, totaling approximately nine miles of new off-street trails. These proposed trails formed the basis for this Study, with additional trail segments identified with input from staff, community and stakeholders such as Sonoma County Water Agency and SMART.

When the adopted 2014 Plan is updated in the future, the new trail segments identified in this Study and relevant planning and policies should be incorporated into the Plan update.

1.3.3 Town of Windsor Parks and Recreation Master Plan Update 2030 (2017)

The *Parks and Recreation Master Plan Update 2030*, adopted in June 2017, is a strategic document that evaluated the existing park system, facilities and recreation programming, and identifies a planning blueprint to improve, protect and expand the Town's network of parks, facilities and recreational services for the future, including sustainable goals for appropriate maintenance and funding for existing and future development.

The Parks and Recreation Master Plan provides both a long-term vision for the Town's park system, and specific policies and standards to direct day-today decisions as well as a framework that will allow the Town to respond to new opportunities as they arise, and to ensure that adequate parks, facilities and recreation programs meet the needs of the Town's future residents, employees and Visitors.

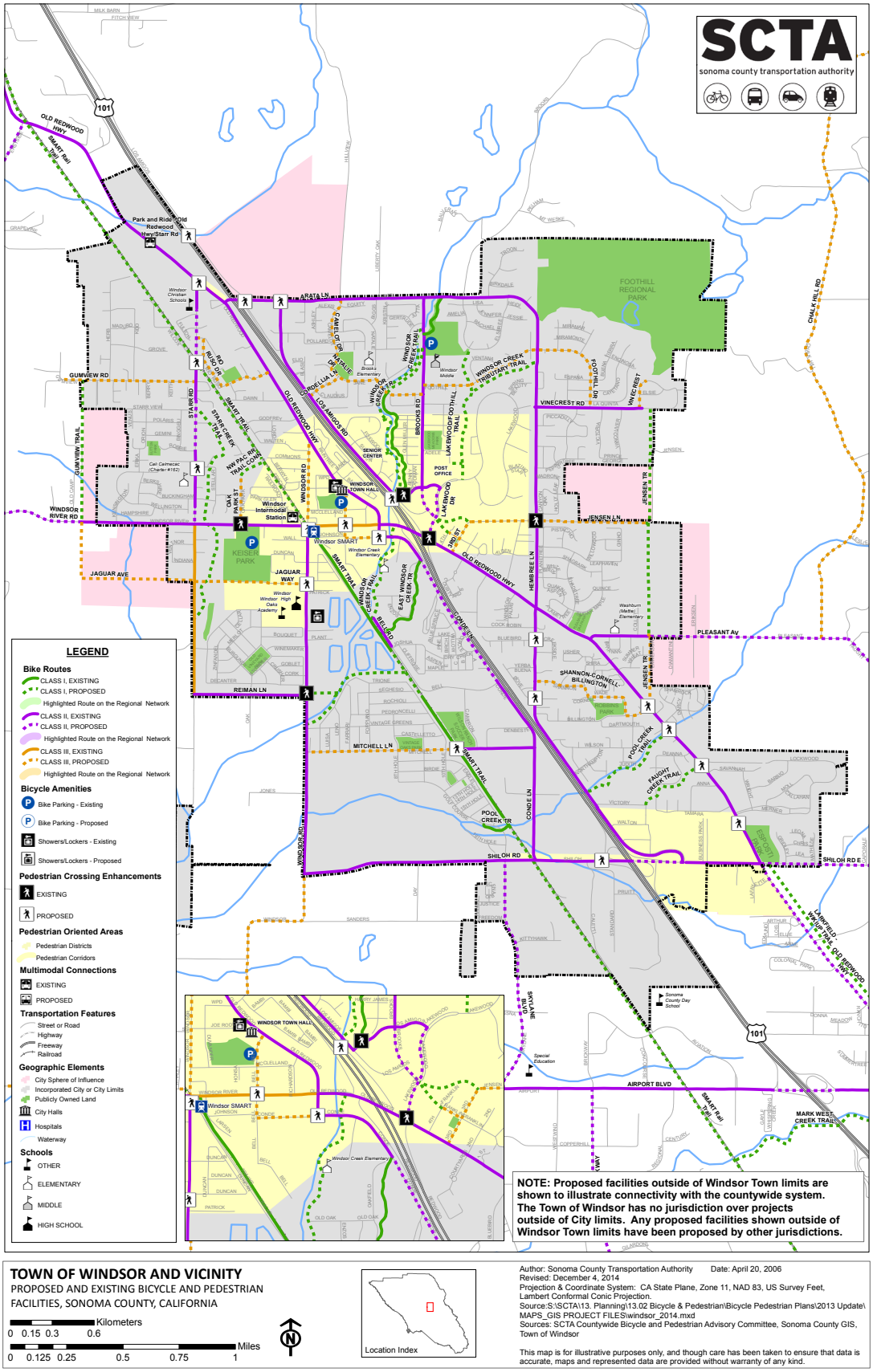


Figure 1-3:
Town of Windsor 2014 Bicycle and Pedestrian Master Plan
Adopted October 2014. Prepared by Sonoma County Transportation Authority

Goals and Policies

G3: Ensure Equitable and Convenient Access to Parks and Open Space for all Windsor Residents.
P3.1: Provide Usable Park, Trail Or Open Space Within A 5 Minute Walk Of Every Windsor Resident.

> All Windsor residents should have the opportunity to enjoy the Town's parks and open spaces within a reasonable distance of their homes... Windsor residents have access to trails through open space creek corridors, and to three regional parks:
>
> *Windsor Creek Trail*
> *East Windsor Creek Trail*
> *Pool Creek Trail*
> *Thiessen Park*
> Open Space Corridors
> *Foothill Regional Park*
> *Riverfront Regional Park*
> *Shiloh Regional Park*

Access to a park, open space or trail within ¼ mile (approximately a 5-minute walk) of every resident supports the vision for an active and healthy community…Completion of the creek corridor trails identified in Windsor's Bicycle and Pedestrian Master Plan will close many of the access gaps.

> *R3.1- Recommendations:*
> 1. As new development occurs, require future parks to be located centrally to the neighborhood(s) they serve, to maximize accessibility to all residents.
> 2. Require that new development provide park, trail or open space within 1/4 mile of future residents.
> 3. Identify a location in the General Plan Focus Area north of Arata Lane for development of a future park.
> 4. Identify a location in the southeast area of Windsor near Shiloh Road, east of Hwy. 101, for development of a future park.
> 5. Identify a location north of Jensen Avenue in east Windsor, for development of a future park.

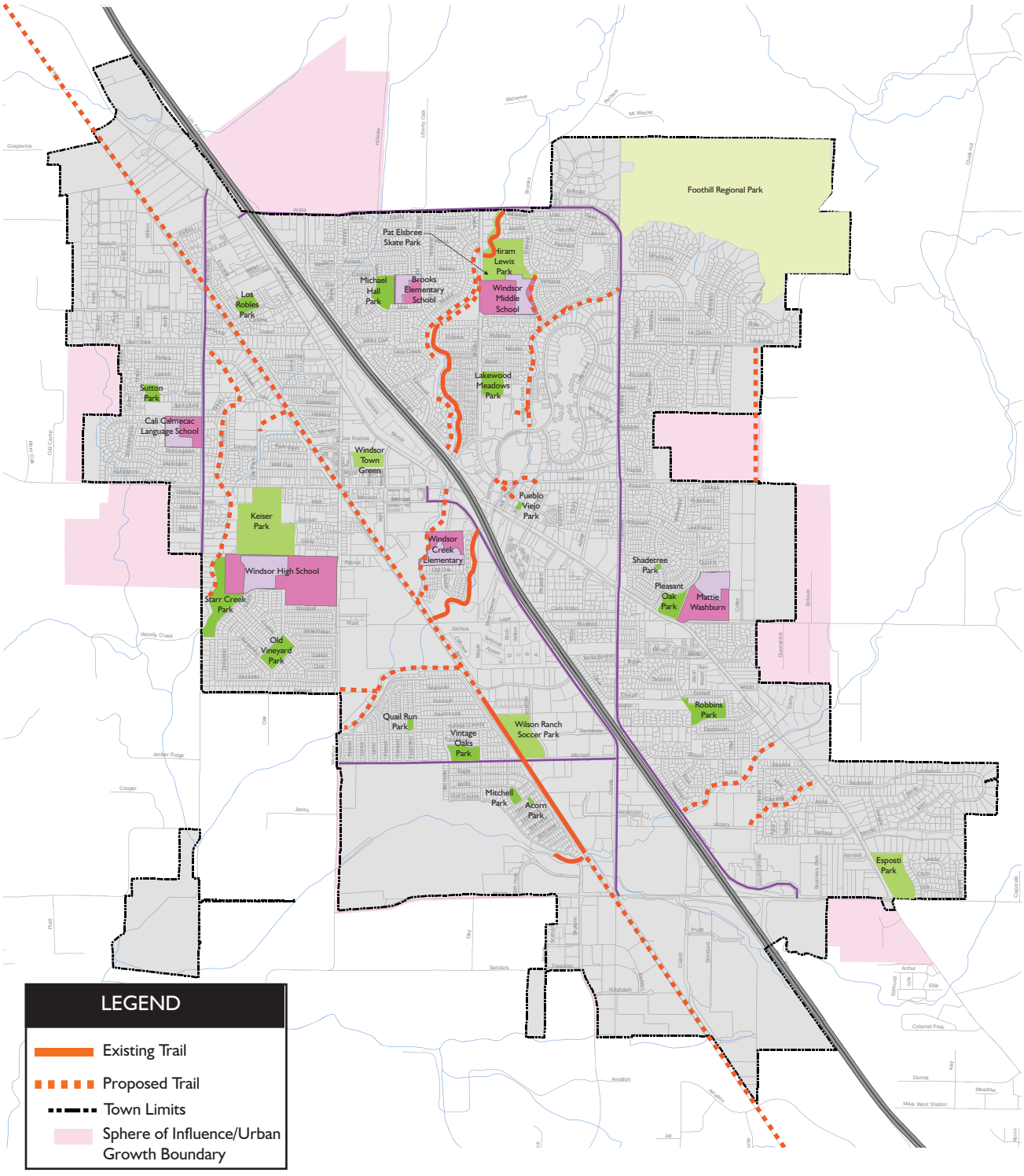


Figure 8-3: Existing and Proposed Class I Trails

Figure 1-4:
Town of Windsor 2017 Parks and Recreation Master Plan Update 2030
Adopted June 7, 2017. Prepared by Gates & Associates

P3.2: Connect parks, recreation facilities and schools via off-street bicycle and pedestrian trails.

An interconnected system enhances access for all residents, and promotes health by encouraging active transportation modes and reducing greenhouse gasses. Windsor's creek corridors provide opportunities for off-street, multi-use trails, and expanded open space corridors. A trail is an all-weather surface pathway that is the same as a Class I bikeway, which is defined by Caltrans as a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow by motorists minimized. Where the width allows, park amenities such as benches, fitness stations, art and interpretive signage should be included along the trails.

R3.2- Recommendations:

1. Complete construction of proposed Class I multi-use trails along creek corridors and along the SMART rail line, as shown in Figure 8-3 and described in Table 8-4, and the crossings recommended in the Downtown Pedestrian/Bicycle Crossing of US 101 Study.
2. Incorporate recommendations of the upcoming Department of Public Works Trail Study.

1.3.4 CONNECTING CENTRAL WINDSOR STUDY (JULY 2018)

US 101 poses a significant barrier to east-west travel in Windsor. Currently, central Windsor has only one route for cyclists and pedestrians to cross US 101. What is more, the Old Redwood Highway undercrossing is situated between busy on- and off-ramps, which present safety challenges for cyclists and pedestrians. Yet Windsor has an excellent climate for cycling and walking, an active community, and exemplary public spaces, which are significant physical and cultural assets.

The Connecting Central Windsor Study explored ways to improve bicycle and pedestrian connectivity between the east and west sides of the Town of Windsor. The Study included analyzing constraints and challenges, and then developing and assessing alternative solutions to:

- ***Facilitate Crossing****; improve the existing U.S. 101 Old Redwood Highway crossing and/or create a new dedicated bicycle/pedestrian crossing,*
- ***Improve Connectivity and Walkability****; make it easier, safer, and more inviting to walk and bike in Central Windsor in the vicinity of the U.S. 101 at Central Windsor underpass, and*
- ***Improve Urban Coherence****; identify urban design principles and active transportation design strategies to guide ongoing development of the Central Windsor area in a way that will increase urban coherence across the division created by U.S. 101.*



Figure 1-5: 2018 Connecting Central Windsor Study

Accepted July 2018. Prepared by Steven Grover & Associates

In addition to public outreach, the Study explored options for bicycle and pedestrian connectivity, including overpasses, underpasses and facility improvements. The Study includes the following recommendations:

1. Continue to work with Caltrans on the following Connecting Windsor design components in state right of way:

a. Widening of the existing U.S. 101 underpass on Old Redwood Highway with improvements as described in this study for pedestrian, cyclist, and vehicular user experience and safety;

b. A new U.S. 101 Class I shared-use pedestrian and cyclist overcrossing;

c. Bi-directional protected bike lanes on both sides of Old Redwood Highway between Conde Lane and Lakewood Drive to make it safer for cyclists to travel in both the east and west directions without crossing the roadway;

d. A new shared-use pathway on the east of U.S. 101 connecting Los Amigos Road and Old Redwood Highway.

2. Simultaneously, take the following actions on the following project components outside of state right of way:

a. Retain public ownership in perpetuity of selected Town-owned properties in Central Windsor to serve as public pedestrian-oriented open spaces and/or as mixing zones for pedestrian and cyclist transportation routes;

b. Create a pedestrian promenade between the existing Shell and Chevron gas stations to serve as public open space and as a shortcut for cyclists and pedestrians to avoid the intersection of Conde Lane and Windsor River Road;

c. Improve the pathways on west side of U.S. 101 adjacent to Windsor Creek connecting Old Redwood Highway and Conde Lane to make them more inviting and architecturally consistent with other Central Windsor public open spaces.

3. Lastly, pursue further study of the feasibility and costs/benefits for the following:

a. A slip lane from Lakewood Drive to the U.S.101 northbound on ramp to assess turning movement operations, geometrics, and the overall cost/benefit of this strategy in greater detail;

b. Signal timing or retaining Class II or III onstreet bikeways along Old Redwood Highway, between Lakewood Drive and Windsor River Road, to assess how traveling through the corridor could be made more efficient for cyclists;

c. A roundabout at the intersection of Conde Lane and Windsor River Road to determine whether a new roundabout configuration could allow pedestrian and cyclist facilities to remain adjacent to the roundabout. If the intersection cannot accommodate both facilities, the study should assess community input on how pedestrians and cyclists could more readily cross the roundabout or be detoured to avoid the intersection.

Potential project improvements were estimated to cost $16-$20 million, in 2017 dollars. Trail segments 25 (Los Amigos Connector) and 42 (Conde Lane Connector) are discussed in this Study, and could be implemented independently of the overcrossing to improve bicycle and pedestrian connectivity.

1.3.5 CIVIC CENTER VISIONING PLAN (2016)

The Civic Center Visioning Plan is the guiding document for the development of Downtown Windsor. Applicable policies include:

Circulation Network Figure 3.4: Circulation and Gateway Elements
Intent: To establish clear paths of circulation to connect Civic Center with its context.

- The critical axes laid the basis for the network of streets and pedestrian paths within the Civic Center.
- The circulation network also ensures that the existing street network from the neighborhoods west of the Civic Center is continued, for improved connectivity with the new development on the east.
- This framework also identifies opportunities for introducing gateway elements and landmarks in the Study Area, Town Green and Downtown.

Figure 3.4: Circulation and Gateway Elements



Figure 1-6: 2016 Civic Center Visioning Plan
Accepted February 2017. Prepared by WRT

1.3.6 WINDSOR STATION AREA DOWNTOWN SPECIFIC PLAN (2013)

The 2013 Windsor Station Area Plan established design and mobility goals for the Station area, and noted that the SMART line presents a barrier to east-west connectivity. The Plan states:

4.1 PEDESTRIAN AND BICYCLE CONNECTIONS

> *The Station Area has a varied and generally pleasing streetscape. In Downtown, provision of pedestrian amenities like wide sidewalks, street trees, pedestrian scaled lighting, and benches make the area very walkable, which contributes to the sense of community identity and supports retail. Nearly complete sidewalk coverage, accessible curb ramps, curb extensions, and pedestrian amenities are provided adjacent to major activity nodes such as the station, Town Green, and Windsor High School.*
>
> *However, there are several gaps in the pedestrian network and physical barriers to east-west movement. Obstacles to pedestrian and bicycle movement in the Planning Area include the Sonoma-Marin Area Rail Transit (SMART) corridor and US 101, both of which limit east-west mobility. Access across US 101 is provided on Old Redwood Highway at the Central Windsor interchange, which is constrained by gaps in the sidewalk network, crossing barriers, traffic congestion and high-speed freeway on- and off-ramps. An at-grade crossing of the SMART corridor is provided at the intersection of Windsor Road/Windsor River Road adjacent to the station, which currently lacks pedestrian amenities. The Plan includes improvements to both of these crossings.*
>
> *The Plan incorporates existing planned improvements with new pedestrian and bicycle facilities to establish a complete and connected network and address east-west movement.*
>
> *Planned Pedestrian and Bicycle Improvements*
> *Plans for several pedestrian and bicycle improvements are underway, including:*
>
> - *The SMART Trail, which will provide continuous north-south access for bicyclists and pedestrians in Windsor, with connections to neighboring jurisdictions along the corridor.*
> - *A network of planned Class I, II, and III bikeways, outlined in the 2008 Windsor Bicycle and Pedestrian Plan.*
> - *Pedestrian improvements along Old Redwood Highway between Windsor Road and Windsor River Road.*
> - *Improvements to the intersection of Windsor Road/Windsor River Road to accommodate trains, meet current Public Utilities Commission standards, and improve pedestrian access.*

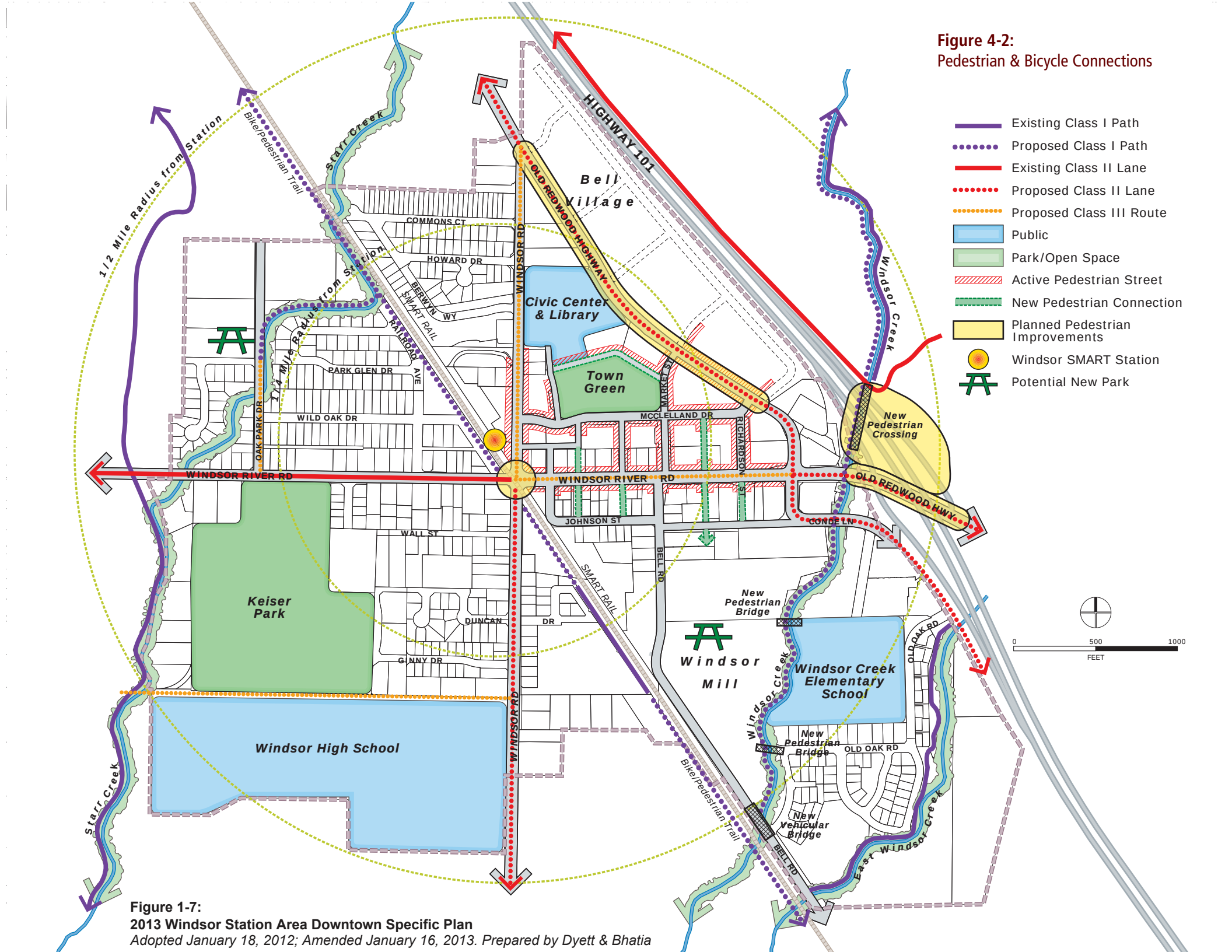


Figure 1-7:
2013 Windsor Station Area Downtown Specific Plan
Adopted January 18, 2012; Amended January 16, 2013. Prepared by Dyett & Bhatia

1.3.7 WINDSOR, CA SUSTAINABLE DESIGN ASSESSMENT TEAM REPORT (2008)

The ***Windsor, CA SDAT: Old Red Going Green A Sustainable Design Assessment Team Report*** was prepared in 2008 by a team led by the American Institute of Architects (AIA), identifies issues and opportunities related to land use, housing, energy, economic development and transportation and mobility in Windsor. Recommendations include:

- Address barriers to pedestrian and bicycle connectivity in the community
- Connect sidewalks, paths and trails to create a continuous pedestrian and bicycle path of travel
- Create linear parks and trails along the creeks
- Re-allocate overbuilt streets by narrowing lanes and create bicycle and pedestrian space
- Use pavement markings such as bicycle boxes and wide crosswalks
- Create a greenway along Old Redwood Highway to link neighborhoods and community parks, retaining its rural character



Figure 11



Figure 12

2008 Windsor Sustainable Design Assessment Team Report

1.3.8 SHILOH ROAD VISION PLAN 2001

As part of the recently completed update to the Town's General Plan, it was recognized that there is a need to update the Shiloh Road Vision Plan. The update is identified as a priority implementation program in the 2040 General Plan and is anticipated to be initiated in the coming years.

1.3.9 TOWN OF WINDSOR SAFE ROUTES TO SCHOOL REPORT 2012-2016 (DRAFT)

In 2012, the Town of Windsor was awarded a federal Safe Routes to School (SRTS) grant to develop and implement a program to promote walking and biking to school in Windsor. The Windsor SRTS program is organized into five target areas, focusing on students in Grades 2 through 8 to provide *education* and *encouragement* at school campuses for walking and biking to school. The program also involves police work to improve students' safety by providing a higher level of *enforcement* of traffic laws near the school campuses. There is an *engineering* component to the Windsor SRTS program, which has been used to conduct audits of Windsor streets, that are located along routes students typically use for

walking and biking to school, in order to identify possible improvements to sidewalks, crosswalks or bike lanes. An *evaluation* of the activities, which are observed to provide the best results, is the final 'E' program area.

Engineering recommendations were prepared for each school, with recommendations such as curb ramps, striping, sidewalks, signs and other features to facilitate safe pedestrian and bicycle travel. Completion of new trail segments that will be routes to local schools would include these facilities as part of project implementation, and some of the trails may qualify for State SR2S funding.

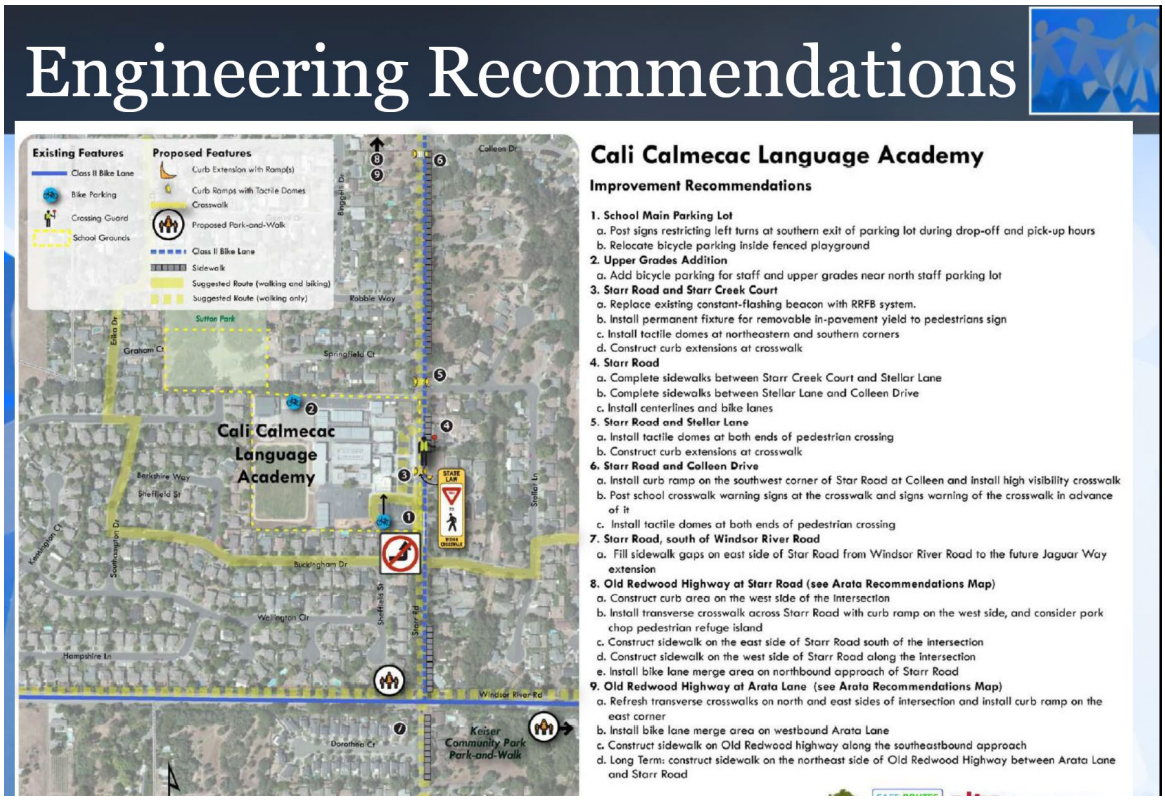


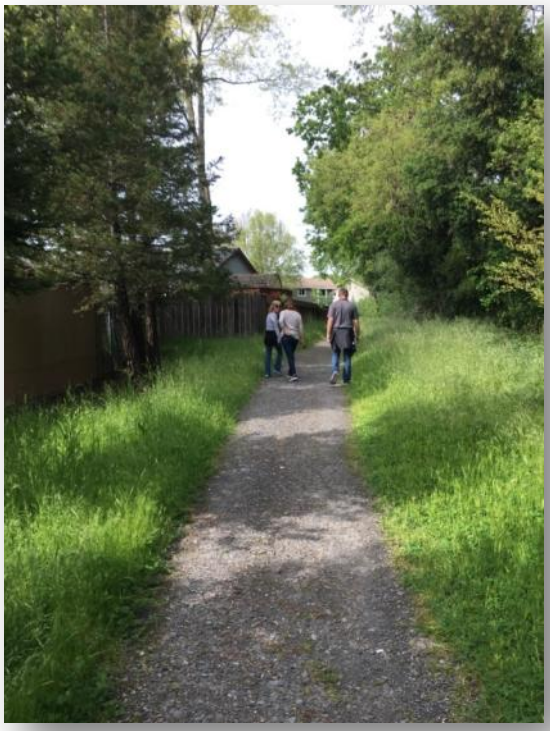
Figure 1-8: 2012-2016 Town of Windsor Safe Routes to School Report
Draft prepared by Alta Planning + Design and Parisi Transportation Consulting

1.3.10 Town of Windsor Final Storm Drainage Master Plan Phase I

The Storm Drainage Master Plan is an analysis of the Town's major storm drainage facilities, which includes the existing storm drainage pipeline network (equal to or greater than 24-inches in diameter); open channels; and the primary creeks and their tributaries located within the Town's watershed. The Plan also includes a list projects to improve storm drainage, reduce flood hazard, and repair or replace drainage- related facilities. Several of the recommended storm drainage improvement projects (SDIPs) are along or near creeks or adjacent to areas that have potential Class I trails. **Section 3.5** discusses the proposed SDIP projects that potentially overlap potential trail implementation.

2. ENVIRONMENTAL SETTING

This Study is a Feasibility and Planning Study to determine the issues associated with implementing the Class I trails within Windsor. In the future, when a particular trail alignment is approved, and specific project elements are defined, the trail components will be identified as a "project", and will be subject to environmental review under the provisions of the California Environmental Quality Act (CEQA), and possibly the National Environmental Policy Act (NEPA), if federal funding is obtained for project implementation. Some trail implementation projects may be categorized as exempt from further environmental review, such as conversion of existing roads to trails, minor improvements to an existing facility, or completion of trail improvements within existing road right of way. This determination will be made at the time the trail is implemented.



Feasibility Studies (this Study) are statutorily exempt from CEQA under Article 18 of the Resources code (below). As such, it is not yet a "project" that requires adoption, approval or commitment of funding.

15262. FEASIBILITY AND PLANNING STUDIES

A project involving only feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an EIR or Negative Declaration but does require consideration of environmental factors. This section does not apply to the adoption of a plan that will have a legally binding effect on later activities.

This section provides a description of key environmental issues, including constraints and challenges that were evaluated and used in preliminary trail alignment planning. Some of these issues will likely need to be evaluated in detail during project design (and additional detailed study may be needed), as well as other environmental issues that are not anticipated to significantly affect the existing environment.

2.1 PHYSICAL SETTING[2]

Windsor is a generally flat community surrounded by foothills of the Coast Range. It is located in the northern end of the Santa Rosa Plain, between two ridges of the Coast Range mountains. It is a

[2] Information for general environmental conditions is excerpted from the *Final Environmental Impact Report Town of Windsor 2040 General Plan February 2018*

residential community where single family residential uses make up 31 percent within the 1,400 acre Town Limits. Commercial and office area make up roughly four percent of the Town Limits. Since its incorporation in 1992, Windsor has expanded rapidly, and has an average household size of 3.02 persons per household in 2017, with almost 75% classified as families.

The Town is bisected by US 101 and the SMART rail corridor approximately one-quarter mile to the west. Passenger rail on the line is anticipated to be completed by the Sonoma-Marin Area Rail Transit (SMART). SMART currently operates from San Rafael to Airport Road, and funding has been secured to extend the system north from Airport Road to Windsor Station at Windsor River Road.

The Town lies within the Russian River Watershed, and is primarily within the Mark West Creek sub-watershed. Windsor and East Windsor Creek, Pool Creek and Faught Creek and tributaries drain the Windsor plain in a southwest and westerly direction.

2.2 AESTHETICS

The scenic characteristics of Windsor are the picturesque views of the surrounding wooded hills and grassland areas as one enters the community from the north or south. As a relatively new community, most of the developed subdivisions consist of single family homes where development has been set back from existing creeks and waterways, so most creeks have retained a visible riparian corridor with mature vegetation.

The Downtown area was planned as a distinct urban center, with mixed use development and a large Town Green. Sidewalks, paths, and street improvements have been designed to accommodate multiple modes of travel, including bicycles and pedestrians.

Constraints and Challenges

Trail elements such as walls, fences, gates and signs can affect visual character. Since Windsor is generally flat, it is anticipated that walls or other structures will not be significant elements of any trail project. Signs can be designed to be consistent with other visual elements, and landscaping can be provided at trail entryways to enhance the trail appearance.

Design Considerations

- Retaining walls, fences and barriers along the trail should be limited to areas where they are needed to resolve engineering constraints, provide resource or operational protection, and/or provide safety.
- Trail slope cuts larger than 4 ft. should be avoided and/or screened when necessary.
- Natural topography, vegetation, and scenic features of the area should be retained to the maximum extent possible.
- Trail-related signage should be minimized and focused at existing developed areas or at staging areas.
- Concrete retaining walls, where needed along trails, should be colored and/or textured to minimize their contrast with the surrounding landscape.

Additional Studies that May Be Needed

A Caltrans Visual/Aesthetics Analysis may be needed for any structures that may affect visual resources, for which funding and coordination with Caltrans is part of the project (US 101 Crossing).

2.3 BIOLOGICAL RESOURCES

Windsor is within the Santa Rosa Plain, historically dominated by oak savanna grassland, with vernal pools and swales that fill with water during the spring months. Creeks generally originate in the hills east of Town and cross to the west. Oak woodlands and riparian vegetation line the creeks and streams, open annual grassland are located along the western edges of the town, and seasonal swales and vernal pools are scattered throughout the landscape. These areas provide communities for endemic plants and animals, nesting habitat, and wildlife corridors for several special status species.

The majority of land within Windsor is developed, with the largest vegetation types including annual grassland, pasture, and cropland, with oak woodland clustered in northeast Windsor near Foothill Regional Park.

Special Status Wildlife. Windsor contains diverse habitat that can support a number of identified special status species, generally associated with the Town's creeks and waterways, vernal pools and undeveloped grassland areas. These include:

- Steelhead (Windsor and Pool Creeks)
- California Tiger Salamander (southwest edge of Town)
- California Linderiella. (Windsor Creek)
- Western pond Turtle. (Windsor and Pool Creeks)
- Baker's Navarretia. (Shiloh Road)
- Burke's Goldfields. (northwest and southeast Windsor)
- Dwarf Downingia. (northwest Windsor)
- Narrow-anthered Brodiaea. (central Windsor)

Windsor contains several creeks that are part of the Santa Rosa Creek watershed. The drainages within these watersheds are of biological importance considering they are utilized by species such as steelhead, Western pond turtle. Several branches of Windsor Creek, Pool Creek and Faught Creek bisect the community.

Nesting Birds. The Migratory Bird treaty Act (MBTA) with Canada, Mexico, and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of any and all nests that are occupied by migratory birds during the nesting season. California Fish and Game Code Section (CFGC) 3500 also prohibits the destruction of any nest, egg, or nestling. The riparian, savanna, and oak woodland habitats provide suitable habitat for nesting birds protected by the CFGC and MBTA.

Wetlands, Riparian Areas, and Jurisdictional Areas. In addition to creeks within the community, there are ponds, vernal pools, seasonal drainages and other features that can potentially be considered wetlands. These areas fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). All

streams appearing as blue lines on standard USGS topographic maps have associated Riparian Corridors designated for protection by Sonoma County and the Town.

Oaks. Heritage oaks are found throughout Windsor. The Town of Windsor is committed to protecting existing trees and planting new trees. In accordance, the Town has adopted a Tree Preservation and Protection Ordinance, which regulates protection, preservation, maintenance, and removal of protected trees. Protective measures such as avoidance and fencing around trees are required prior to construction, grading or demolition. Trail design will need to consider proximity to existing trees, opportunities for tree protection, and when necessary, replacement planting, and design strategies to minimize disturbance to trees.

Constraints and Challenges

Construction of trails in sensitive areas, such as creek corridors, has the potential to adversely affect plant and wildlife species, or to damage critical habitat for steelhead, wetlands, nesting birds, protected riparian areas, and/or jurisdictional areas. However, many of Windsor's creeks are already served by maintenance access roads that can be minimally improved to facilitate access without affecting the creek. Trail design and construction would include placement of the trail to avoid sensitive features, as well as incorporate Best Management Practices, habitat protection, and enhancement features to minimize potential impacts to biological resources.

At creek crossings, clearspan bridges or boardwalks would be utilized to separate trail users from the riparian corridor. Construction of trail bridges in areas where there are existing at-grade creek crossings also has the potential to reduce harm to, or even benefit, biological resources through habitat enhancement along its route, particularly where it crosses perennial or seasonal streams and wetlands. Furthermore, trails could provide interpretative signage to improve public awareness of biological resources and creek and waterway enhancement.

Design Considerations

To minimize potential impacts to biological resources when trails are implemented, the following is a preliminary list of measures that may be incorporated into each project. Additional elements to minimize disturbance may be incorporated during project design, construction and management.

- Restore and enhance natural habitat at drainage crossings;
- Landscape with native species in the trail corridor, including replacement of native oak trees;
- Avoid removal (where possible) of heritage oak trees along the trail corridor, by re-routing the trail around heritage trees and selective use of boardwalks to avoid root compaction;
- Conduct seasonally appropriate surveys of special-status plants and animals near creeks;
- Avoid, minimize, or mitigate for special-status plants;
- Incorporate Low Impact Development (LID) techniques, such as trail drainage and filtration of stormwater before it enters nearby creeks;
- Train construction employees in environmental awareness, including erosion prevention;
- Observe Best Management Practices (BMPs) during construction, including provisions of Sonoma County's FishNet4C program and protocols for preventing introduction of weed seeds;
- Provide signs indicating the presence and importance of the wildlife corridor and how users can help maintain its function for wildlife;

- Preclude or do not encourage nighttime use when negative human-wildlife interactions as well as disturbance to wildlife behavior would likely be greatest;
- Where necessary, build pathways above creek channels and associated riparian vegetation, ensuring sufficient upland above the scour zone of streams to accommodate passage during winter flows;
- Design path structures so that litter deposition and runoff into streams is precluded or minimized;
- Ensure that suitable cover and habitat are maintained or improved on both sides of any undercrossings;
- Install wildlife drift fences along the trail on either side of underpasses to funnel animals into underpasses;
- Include regular weed control along the trail in maintenance and management plans;
- Enforce pets on leash along the trail and provide waste disposal for pets.

Additional Studies that May Be Needed

- Jurisdictional Wetlands Delineation (depending on location)
- Special status species survey (depending on location)

For projects with federal funding/Caltrans involvement:

- Caltrans PEAR (Preliminary Environmental Analysis Report) Farmlands/Timberlands Technical Summary
- Caltrans Natural Environment Study (NES)

2.3 CULTURAL RESOURCES

As discussed in the 2040 General Plan, projects that involve "substantial ground disturbance" have the potential to impact cultural, historic, and/or paleontological resources. For trails projects, this could include areas of excavation for underpasses, bridge footings, retaining walls or other similar facilities. Minor surface treatments to existing roads, or placement of fill to create a trail surface would generally not affect underlying cultural resources. When environmental review is completed for a project that has the potential to impact these resources, tribal consultation is required in accordance with California Assembly Bill 52 (AB 52) provides protections for tribal cultural resources.[3] All lead agencies as of July 1, 2015 approving projects under CEQA are required, if formally requested by a culturally affiliated California Native American Tribe,[4] to consult with such tribe regarding the impacts of a project on tribal cultural resources prior to the release of any negative declaration, mitigated negative declaration or draft environmental impact report. Tribal cultural resources include site features, places, cultural landscapes, sacred places or objects that are of cultural value to a tribe that are eligible or listed on the CRHR or a local historic register or that the lead agency has determined to be a significant tribal cultural resource. Tribal consultation is to continue until mitigation measures are agreed to, or either the tribe or the lead agency concludes in good faith that an agreement cannot be reached. In the case of agreement,

[3] AB 52 amended Section 5097.94 of, and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3 to, the California Public Resources Code.

[4] The Native American Heritage Commission maintains a list of more than 100 federally recognized California tribes and an additional list of tribes not recognized by the federal government but listed as non-recognized California tribes. Both groups have the right to request notification and consultation under the AB 52.

the lead agency is required to include the mitigation measures in the environmental document, but If no agreement is reached, the lead agency must still impose all feasible measures necessary for a project to avoid or minimize significant adverse impacts on tribal cultural resources.

Constraints and Challenges

In general, a trail project has the potential to adversely affect cultural resources where work will be conducted below the existing ground surface. Grading, construction staging, and alignment of trail segments could disturb cultural resources. Any project that involves potential cultural resource impacts would need to follow the protocols and practices outlined in the General Plan, as well as current regulations (AB52) during project implementation. Trails also represent an opportunity to honor cultural resources through creative interpretive signage, monuments or pavement design elements that educates trail users about local history and archaeology.

Design Considerations

- Consider interpretive signage to educate trail users of the cultural history of Windsor.
- A Cultural Resources Phase I report should be prepared for each trail project that will involve substantial ground disturbance.
- Where possible, known cultural resources should be avoided.
- If avoidance is not possible, extended Phase I testing is recommended for resources that are unknown to be within the trail corridor.
- Cultural resources known to be located within the trail alignment should undergo Phase II archaeological testing.
- Construction of the trail will be subject to established requirements and procedures for the protection of unanticipated cultural resources or human resources.

Additional Studies that May Be Needed

- Cultural resources assessment for each trail segment to be implemented may be required as part of the future CEQA (and NEPA, if applicable) process.
- Tribal coordination and consultation (AB52) will likely be needed for any projects that require CEQA review.

2.4 TOPOGRAPHY AND GEOTECHNICAL ISSUES

Windsor is generally flat, located within the Coast Range Geomorphic Province. This province is characterized by parallel northwest trending mountain ranges. The elevation in the Town of Windsor ranges from approximately 120 feet in the plain to approximately 430 feet in the foothills on the eastern edge of the Town. Windsor is located on the northern boundary of the Santa Rosa Plain, which is generally flat with a gentle slope to the southwest (USGS 2017). This plain is composed of Mesozoic basement rocks of the Franciscan Complex, Coast Range ophiolite, and Great Valley Sequence. Surficial sediments consist of Pleistocene to recent alluvium and alluvial fan deposits.

Soils in Windsor include Huichica loam on hills and terraces, Cole clay loam and Yolo silt loam in the north, central and east areas. Felta very gravelly loam is found on eastern hills and terraces. Clear Lake clay is present at the southern edge of Town.

Active regional faults include the Maacama, San Andreas, and Rodgers Creek Faults. The south section of the Maacama Fault runs southeast to northwest, parallel to the Alexander Valley, and is located approximately 3.5 miles northeast of the Town. The North Coast section of the San Andreas Fault runs southeast to northwest along the coastline of the Pacific Ocean and is located approximately 18 miles southwest of the Town. The Rodgers Creek Fault runs beneath the northeastern corner of Windsor, within the Foothill Regional Park and is mapped as an Alquist-Priolo Earthquake Fault Zone.

Constraints and Challenges

Potential geotechnical impacts or constraints primarily include slope instability, minor risk of landslides and potential soil erosion problems associated with trail construction and use, especially on steeper slopes. In areas that may contain contaminated or hazardous soils, soils may need to be treated, removed or assessed to prevent exposure to trail users, Trails that would be located on moderate to steep slopes, as well as near or crossing creeks or waterways have the highest potential impacts or constraints.

Strong ground shaking could also result from a rupture of any of the major Bay Area regional earthquake faults. Such strong ground shaking motion could damage elevated structures such as bridges and retaining walls that are part of the trail system.

There is a significant risk of another major earthquake on several regional and more local active faults during the next thirty years. The hazards related to ground shaking vary depending on the location of the proposed bicycle and pedestrian improvements and underlying soils and geologic conditions. In areas underlain by consolidated bedrock, seismic hazards include small rock falls and possibly landslides that could harm bicycle and pedestrian facility users and damage the improvements. In areas underlain by unconsolidated sediments, ground failure and differential settlement could result from a severe earthquake, damaging paved surfaces and elevated structures. Liquefaction potential is highest in areas underlain by poorly engineered Bay fills, Bay mud, and unconsolidated alluvium with shallow groundwater conditions.

The Study area is relatively flat to gently rolling, so the risk of landsliding, soil erosion and loss of topsoil is mostly low, with localized steeper slopes that will need to be traversed. The Study area contains soils developed on younger and older alluvial fans and terraces and stream alluvial deposits, soft, weathered sedimentary rocks and volcanic rocks. Areas underlain by unconsolidated alluvial deposits with shallow groundwater are susceptible to strong ground motion, lateral spreading along incised stream areas, subsidence and settlement under structural loading, and liquefaction.

Design Considerations

With the exception of Foothill Regional Park, most of the Town is not within either an Alquist-Priolo Earthquake fault zone area, nor in an area included in the Seismic Hazards Zoning Act. A detailed Geotechnical Investigation would be completed associated with trail design, especially structures, and the final design and implementation would be consistent with the Geotechnical Investigation recommendations, California Building Code, Caltrans Highway Design Manual, Windsor Grading Drainage and Building Codes and ordinances, and other applicable regulations. Trail design would also be consistent with the policies of the Town and Sonoma County related to geologic and seismic hazards.

All construction, notably grading and foundation engineering will be performed in accordance with the recommendations of the Geotechnical Investigation. The design plans will identify specific mitigation measures to reduce the landslide risk and erosion potential of surface soils. Where potentially hazardous materials could be present, a soils investigation and remediation may be appropriate.

Additional Studies that May Be Needed

A design-level Geotechnical Investigation should be prepared for each trail segment that is implemented, under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical and foundation engineering. The Geotechnical Investigation will establish the seismic and geotechnical design parameters, in accordance with requirements of the California Building Code and applicable Sonoma County Codes. The Geotechnical Investigation will be reviewed and approved by the by the Town Engineer and by the Project Engineer as part of civil and structural design review of trail grading and drainage and any structures, such as retaining walls, grade separation structures, bridges and/or boardwalks. A Soils Report and hazardous materials assessment may also be prepared, depending on project location.

2.5 HYDROLOGY AND FLOODING

Major drainages in the Town include Windsor Creek, Pool and Faught Creeks, which flow to the southwest and eventually drain to the Russian River, which flows into the Pacific Ocean near Jenner. Other notable locally-named streams that flow through the Town include East Windsor Creek, Pruitt Creek, and Starr Creek. The 2017 Storm Drainage Master Plan Phase I provided a detailed analysis of the Town's storm drainage system, which includes creeks and waterways. The Master Plan contains project recommendations for projects to manage storm flows, and some of these projects could potentially include trails as part of project improvements. This is discussed in **Section 3.5**.

Windsor includes both undeveloped open space with natural drainage features and urban development with altered drainage systems, such as underground storm water systems.

Flooding. During heavy rainfall induced runoff events, areas adjacent to creeks in the Town are subject to flooding from over bank topping. Flood hazards can occur when the amount of rainfall exceeds the infiltration capacity of the surrounding landscape or the conveyance capacity of the storm water drainage system.

The Federal Emergency Management Agency (FEMA) has prepared a series of maps that show flood hazards in the area and many of the small tributary creeks in the Study area. Flooding is possible, generally in relatively narrow 100-year flood zones along the creeks. Portions of Windsor north and east of Los Amigos Road, south of Shiloh Road, and along Pool Creek east of Old Redwood Highway are also within the 500-year floodplain.

In 2017, the Town completed a Storm Drainage Master Plan Phase I (SDMP) that provides detailed analysis of the adequacy of the Town's major storm drainage facilities and provides recommended storm drainage improvement projects (SDIPs). Major storm drainage facilities are defined as the existing storm drainage pipeline network (equal to or greater than 24-inches in diameter); open channels; and the primary creeks and their tributaries located within the Town's watershed. Building on the FEMA flood maps, topographic mapping, and hydraulic and hydrologic modeling, the Study recommends

project to correct deficiencies in the Town's drainage system. Some of the projects overlap potential trail projects and could be incorporated into project design.

Constraints and Challenges

Trails that cross the Town's creeks or drainages will need to have bridges or boardwalks installed to cross the creek. Most of these will be bicycle or pedestrian bridges crossing relatively narrow regulatory floodplain areas, with bridges less than 50-100 feet in length most common.

Drainage crossings can introduce a concentrated sediment load to the waterway which can cause a decrease in water quality. Increase in sediment loads to creeks and their tributaries is a potentially significant concern and therefore a significant constraint in the watershed, unless carefully designed and constructed.

Trails can be located within floodplain areas with much greater flooding frequency (i.e., 10-year floodplain), provided that appropriate considerations are included in the trail and structure designs to prevent frequent and costly trail and bridge damage and washouts, clogged drainage structures, or prolonged trail closure. In general, the trail design surface elevation should be a minimum of 1 foot above the 10-yr flood elevation. Particular attention should be paid towards the design of bridge and boardwalk structures. The bottom chord or structural support member of all bridges and boardwalks within any regulatory floodplain should ideally be at a minimum elevation of Base Flood Elevation plus 2-3 feet of freeboard to be fully compliant with FEMA regulations. Each bridge or boardwalk crossing should be designed to have no impact on flood water surface elevations, or block or redirect flood flows to adjacent lands, and clear span the creeks.

Particular attention should be paid towards the hydraulic design of bridges and any needed boardwalk structures. The bottom chord or structural support member of all bridges and boardwalks within any regulatory floodplain should ideally be at a minimum elevation of the 100-year or Base Flood Elevation plus 2 feet of freeboard to be fully compliant with Flood Plain Management regulations and FEMA regulations. Each bridge or boardwalk crossing should be designed to have minimal impact on flood water surface elevations, or block or redirect flood flows to adjacent lands, and clear span the creeks.

Design Considerations

Structures that cross regulatory floodplains must be designed appropriately, as noted above. In general, the following measures can be implemented to minimize hydrological impacts:

- Comply with Windsor Design and Construction Standards, as well as the Town of Windsor Zoning Ordinance for Creekside Development Standards (Article 3, 27.20.040) when designing trails adjacent to creeks.
- Consider opportunities to include trails as a component of Storm Drainage Improvement Projects
- Comply with Windsor LID requirements for any trail project that creates or replaces more than 10,000 square feet of impervious surface.
- To prevent sediments from entering, BMPs will include at a minimum the following measures:
    - Use temporary measures, such as flow diversion, temporary ditches, and silt fencing or straw wattles.

- Surface disturbance of soil and vegetation must be minimized; existing access and maintenance roads should be used wherever feasible.
- Any stockpiled soil should be placed, sloped, and covered so that it would not be subject to accelerated erosion.
- Accidental discharge of all project-related materials and fluids into local waterways should be avoided by using straw rolls or silt fences, constructing berms or barriers around construction materials, or installing geofabric in disturbed areas with long, steep slopes.
- After ground-disturbing activities are complete for each area, all graded or disturbed areas should be covered with protective material such as mulch, and/or erosion control blankets and re-seeded with native plant species.

- Consider the need to establish a flood warning and trail closures to protect trail users, if severe weather or flooding events are forecast where the trail is located near streams with frequent and dangerous flooding.

- Bridge construction should address potential hydraulic impacts on channel flow with respect to sensitive wildlife species. In some cases, removal of impediments to fish passage may be incorporated into trail project implementation.

- Consider LID enhancement of roadside drainage areas to treat and filter water before it enters the creek. Incorporate bicycle and pedestrian facilities into bridge repair and rehabilitation projects to minimize creek disturbance, or plan separate parallel structures to avoid creek disturbance.

Additional Studies that May Be Needed

A detailed hydraulic analysis should be prepared for trails that cross creeks and waterways, with recommendations regarding the design elevations of all pedestrian bridges in compliance with Windsor floodplain management regulations. This includes 100-year flood elevation freeboard requirements, the locations of the bridge abutment structures with respect to flood flows, bridge abutment, scour, and channel bank protection requirements.

A Stormwater Pollution Prevention Plan (SWPPP) and a Spill Control and Countermeasures Plan (SCCP) should be prepared for each individual trail segment. Specific measures, as cited below, should be adapted from the most current edition of the Stormwater Best Management Practice Handbook for Construction, published by the California Stormwater Quality Association (CASQA). The SWPPP should include Best Management Practices (BMPs) to prevent or minimize stormwater pollution during construction activities, and post construction. An Erosion Control and Revegetation Plan, and a Spill Control and Countermeasures Plan, should be included in the SWPPP, and in the Construction Documents. BMPs should be prepared and implemented to control short-term construction-related water quality impacts.

2.6 LAND USE

As stated in the General Plan, approximately 30% of the community is single family residential use. 10% is developed as industrial or office/commercial use, and approximately 17% is public land.

Public Lands. In addition to lands owned and managed by the Town, which include public facilities, parks, roads and other lands, there are several public agencies with lands in Windsor. These represent potential partners for trail implementation.

Caltrans owns and manages US 101 which bisects Windsor. In addition to crossing the Highway in the future as part of the Connecting Central Windsor Study (pedestrian overpass), portions of the approach right of way are proposed for trail connections in the Downtown area. In addition, Caltrans serves as the funding facilitator for some state and federal grant funding programs to implement trails projects.

The ***County of Sonoma*** owns road right of way and some remnant parcels within the Town that were acquired before the Town was incorporated.

The ***Sonoma County Water Agency*** (SCWA) owns and controls some of the creek lands within the Town, either in fee, or through easements. SCWA has allowed trails on their lands in other areas of the County, and has indicated that such use is generally allowable subject to use agreement, easement or some other mechanism to establish use, maintenance and assignment of liability. Many of the creeks in Windsor already have maintenance access roads that are ideal for use as trails, and right of way can potentially be made available for trails.

Sonoma Marin Area Rail Transit (SMART) is the voter-approved agency responsible for implementation of passenger rail service within Sonoma and Marin counties, as well as implementation of the SMART Trail. The SMART Trail is a proposed regional trail that extends approximately 4.31 miles along the SMART Railroad ROW through Windsor between the Town's northern to southern limits. The rail corridor is located west of and roughly parallels US 101. SMART will extend a multi-use path adjacent to the SMART corridor, connecting bicyclists and pedestrians north and south from the multi-modal transit station into neighboring jurisdictions. The Town has engaged in preliminary discussions regarding the SMART Trail alignment within Windsor, and it is anticipated that the trail will be completed concurrent with construction of Windsor rail service.

Destinations. Destinations and connections in and around Windsor include Downtown Windsor, parks, schools, shopping areas and other trails and transit facilities. Windsor is uniquely situated near three regional parks, and each quadrant of the Town has several local and/or Town-wide destinations in addition to neighborhood parks and shopping areas.

Constraints and Challenges

Where possible, placing trails on public lands is a preferred strategy to minimize land use conflicts. Windsor is fortunate that many of the creeks are publicly owned, and form a logical network to connect Windsor's neighborhoods with key destinations and Downtown.

The Town's public utilities facilities complex on Windsor Road could also potentially provide trail connections in central Windsor, but would need to be carefully considered to address potential operational and safety conflicts. Implementation of trails in this area therefore should be considered a long term process.

Design Considerations

Implementation of trails should be a priority where Class I trails have been identified , and public right of way is available, or in areas of future development where right of way can be dedicated for trails as part of project review and approval, Implementation of the SMART trail and trails along SCWA creeks should be considered a high priority as they connect key destinations, are consistent with Town planning objectives, and in some cases, require minimal infrastructure to implement.

Additional Studies that May Be Needed

- Consider requiring trail implementation as part of new development proposals, especially where they will connect community destinations.
- Work with private landowners where opportunities exist for joint use and management of parallel access roads and design trail segments that incorporate management needs of adjacent lands, including posting of rules, fencing, signage, and need for periods of trail closure for management activities.
- Finalize Town acquisition of former County parcels, especially paper streets (public right of way set aside for street construction, but where a street does not exist) that can be considered for trail use.

2.7 PERMITTING REQUIREMENTS

In addition to Caltrans permitting process for any work within Caltrans ROW or utilizing federal funds administered by them, other regulatory permits may be needed for trails implementation. Where biological resources may be impacted by a trail project, the proposed work is subject to regulatory requirements as outlined in the following local, state and federal statutes and policy documents. In addition, cultural resources are subject to protections under state law, as well as Town permits that may trigger a building permit. A summary of regulatory permitting requirements is presented in **Table 2-1.**

Table 2-1: Regulations and Permit Summary		
Administering Agencies	**Design Review/Agreement/Permit**	**Regulation**
United States Army Corps of Engineers	Issues Nationwide or Individual Permit to perform dredge or fill activities in the Waters of the U.S., including wetlands.	Section 404 of Federal Clean Water Act, Porter-Cologne Water Quality Act
United States Fish and Wildlife Service (USFWS)	Issues "no effect" or "not likely to affect" letter related to endangered species.	Consultation with the United States Army Corps of Engineers (USACE) under Section 7
	Protects against destruction of migratory bird nests and possession of migratory bird "parts."	Migratory Bird Treaty Act (MBTA)
California Department of Fish and Wildlife (CDFW)	Environmental Review	California Environmental Quality Act (CEQA)
	Issues permit in creeks, wetlands and waterways	Lake and Streambed Alteration Agreement (LSA) Section 1600
Caltrans	Caltrans has established procedures for projects that are completed within state right of way (ROW), or completed with funds administered under their authority as part of the Local Assistance process. It is anticipated that some trails may be completed under this program. Facilities that are located within Caltrans ROW must also obtain an encroachment permit.	Local Assistance Program SB 1 Funding Implementation
North Coast Regional Water Quality Control Board	Issues water quality certification.	Section 401 of the Federal Clean Water Act
Sonoma County Water Agency	Construction of facilities on County-owned land (Responsible Agency)	Grading, encroachment, use agreement, cultural resources
SMART/California Public Utilities Commission (CPUC)	Coordination regarding trail and station design and implementation; permitting related to any trail/rail/street crossings	CPUC General Order 88B
Town of Windsor	Construction of facilities on land within the Town limits that is not within County or State owned lands (Responsible Agency)	Grading, encroachment, use agreement, possible design

U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project

involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife. The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which

could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and the local San Francisco Bay Regional Water Quality Control Board (RWQCB) have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The San Francisco Bay RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

SMART and California Public Utilities Commission (CPUC). Trail and rail facilities within Windsor will be built by SMART. The Federal Railroad Administration oversees the national railway network, and in addition, the CPUC regulates rail crossings. Regulations are intended to ensure that highway-rail and pathway-rail crossings are safely designed, constructed, and maintained. Review, coordination and permitting will be needed for any new rail crossings, as well as modifying or altering existing crossings. In general, new at-grade rail crossings are not allowed.

3. TRAIL SEGMENTS

This section discusses existing and planned trails identified in the 2014 Bicycle and Pedestrian Master Plan, as well as potential new trails identified as part of this Study needed to close gaps, increase neighborhood connectivity and increase opportunities for bicycle and pedestrian activity within the community.

Trail Log. **Appendix B** contains an assessment of existing conditions at trail segments. The Trail Log contains a description of each of the trail segments, including:

- Existing use
- Adjacent streets and intersections
- Nearby destinations
- Segment length
- Right of way and encroachment issues
- Flooding, hydrology or geotechnical issues
- Slopes
- Creeks and riparian canopy
- Fencing, guardrails, structures nearby





Typical Trail Inventory Elements	
Segment 4B	**Segment 24B**
Slope	Riparian canopy
Proximity to creek	Pavement surface
Right of way	Proximity to structures

3.1 EXISTING CLASS I TRAILS

Existing Class I trails are primarily located along Windsor Creek in the northeast quadrant of Windsor. Although some of these trails meet Class I standards for width and surface, some will need to be modified or upgraded to meet accessibility and width requirements for two-way travel (see **Section 6**). Existing trails include:

- Portions of Windsor Creek north of Los Amigos Road and west of Brooks Road
- Windsor Creek between Bell Road and Conde Lane
- Trail east of Trione Circle
- Trail east of Eagle Drive
- Trail east of Windsor Park Circle
- Trail on Pool Creek within Victoria Oaks subdivision (AKA Potrello subdivision)

3.2 PLANNED TRAILS

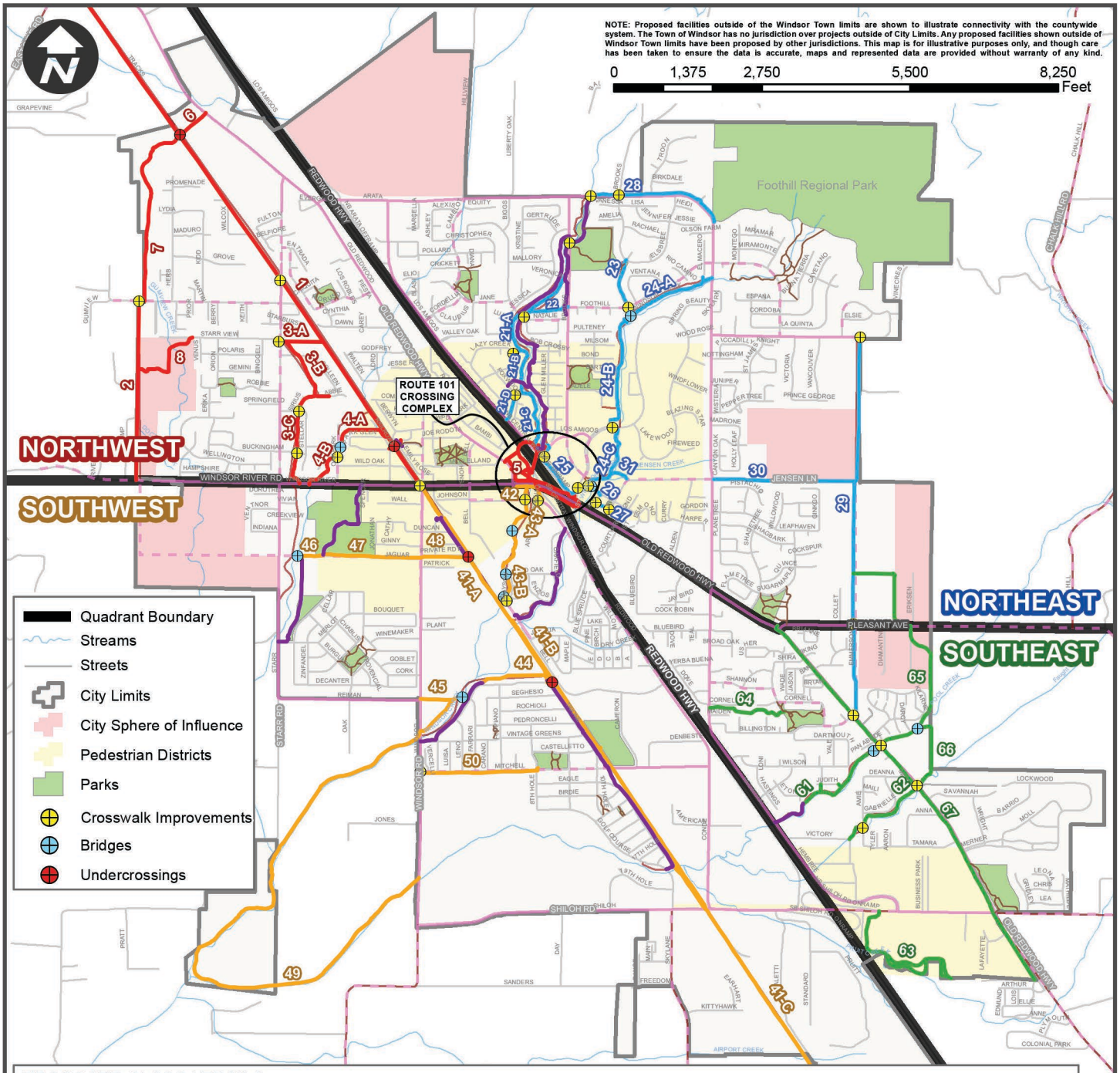
This Study identifies 47 Class I trail segments that can be implemented as part of a network of trails throughout Windsor. In addition, four potential SMART undercrossing locations have been identified. Due to cost and implementation challenges, it is assumed that only one or two of these locations would be utilized for a trail crossing. For planning and informational purposes, the Town was divided into four quadrants, as shown on the Trails Map (**Figure 3-1)**:

Northwest Quadrant (North of Windsor River Road; West of US 101)

- Downtown
- SMART
- Starr Creek
- Cali Calmecac School
- 101 Crossing/East Windsor

Northeast Quadrant (North of Old Redwood Highway/Pleasant Avenue, East of US 101)

- North Windsor Creek
- Foothill Regional Park
- Lakewood Hills
- Brooks Elementary School
- Mattie Washburn School
- Windsor Middle School
- Brooks over 55 Community
- Lakewood shopping area



PROPOSED CLASS I TRAILS

NORTHWEST QUADRANT

1. SMART
2. Gumview Trail
3. North Starr Creek Trail
4. East Starr Creek Trail
5. 101 Crossing Complex
6. Park & Ride Connector
7. SMART-Gumview Connector
8. Gumview Creek Trail

NORTHEAST QUADRANT

21. West Windsor Creek Trail
22. Windsor Creek Connector
23. Windsor Middle School
24. E. Windsor Creek Connector
25. Lakewood-Amigos Trail
26. Franklin Street Bridge
27. 3rd - 4th St Connector
28. Arata Lane Connector
29. Jensen Lane East Connector
30. Jensen Lane Trail
31. Lakewood Connector

SOUTHWEST QUADRANT

41. SMART
42. Conde Lane Connector
43. South Windsor Creek Trail
44. Trione Connector
45. WWTP Connector
46. South Starr Creek Trail
47. Jaguar Way
48. SMART-Windsor Rd Connector
49. Windsor-Pool Creek Loop
50. Mitchell Lane Connector

SOUTHEAST QUADRANT

61. Pool Creek Trail
62. Faught Creek Trail
63. Shiloh Vision
64. Robbins Park Connector
65. Pool Creek-Jensen Lane Connector
66. Faught-Pool Creek Connector
67. Old Redwood Greenway

- Class I Existing Trails
- Class II and III Existing Trails
- Park Trails
- Class II and III Proposed Trails

TOWN OF WINDSOR CLASS I BICYCLE AND PEDESTRIAN TRAILS STUDY

TOWN OF WINDSOR

QUESTA

PROPOSED TRAILS

FIGURE 3-1

Southwest Quadrant (South of Windsor River Road, West of US 101)

- SMART
- South Windsor Creek
- South Starr Creek
- Windsor High School
- Keiser Park
- Esposti Park
- Wilson Ranch Park
- Windsor Creek Elementary School
- Town Utility Facilities

Southeast Quadrant (South of Old Redwood Highway/Pleasant Avenue, East of US 101)

- Pool Creek
- Faught Creek
- Shiloh area shopping
- Shiloh Vision Plan Area

3.2.1 Summary of Trail Segments

Table 3-1: Class I Trail Segments

Trail Number	Project Name	Begin Point	End Point	Length miles	Local (L) Regional (R)	Regional Network	Use*
NORTHWEST							
1	SMART Northwest	Windsor Town Limits	Windsor River Road	2.5	R	Yes	Trans/ Rec
2	Gumview Trail	Gumview Road	Windsor River Road	.65	L	No	Trans/Rec
3A	North Starr Creek Trail (paper street)	Starr Road	SMART Trail	.15	L	No	Trans/ Rec/SR2S
3B	North Starr Creek Trail	Starr Road	Stellar Lane	.28	L	No	Trans/ Rec/SR2S
3C	North Starr Creek Trail	Stellar Lane	Windsor River Road	.26	L	No	Trans/ Rec/SR2S
4A	East Starr Creek Trail	Oak Park Street	SMART Trail	.25	L	No	Trans/ Rec
4B	East Starr Creek Trail	Oak Park Street	Windsor River Road	.21	L	No	Trans/ Rec
5	101 Crossing Complex	Los Amigos Road	Old Redwood HWY	N/A	L	No	Trans/ Rec
6	Park & Ride Connector	Old RWD HWY	SMART Trail	.13	L	No	Trans/ Rec
7	SMART-Gumview Connector	SMART Trail	Gumview Road	.70	L	No	Trans/ Rec
8	Gumview Creek Trail	Gumview Trail	Starr View Drive	.30	L	No	Trans/ Rec

Trail Number	Project Name	Begin Point	End Point	Length miles	Local (L) Regional (R)	Regional Network	Use*
NORTHEAST							
21A	West Windsor Creek Trail	Brooks Road South	Lazy Creek Drive	.38	L	No	Trans/ Rec/SR2S
21B	West Windsor Creek Trail	Lazy Creek Drive	Senior Center	.15	L	No	Trans/ Rec
21C	West Windsor Creek Trail	Senior Center	Los Amigos Road	.47	L	No	Trans/ Rec
21D	Foxwood Connector	W Windsor Creek Trail	Los Amigos Road	.09	L	No	Trans/ Rec
22	Windsor Creek Connector	W Windsor Creek Trail	Brooks Road	.38	L	No	Trans/ Rec/SR2S
23	Windsor Middle School	Elsbree Ln	Foothill Drive	.19	L	No	Trans/ Rec
24A	East Windsor Creek Trail	Foothill Drive	Hembree Lane	.38	L	No	Trans/ Rec
24B	East Windsor Creek Trail	Lakewood Drive	Foothill Drive	.47	L	No	Trans/ Rec
24C	East Windsor Creek Trail	Franklin Street Bridge	Lakewood Drive	.29	L	No	Trans/ Rec
25	Lakewood-Amigos Trail	Lakewood Drive	Los Amigos Road	.26	L	No	Trans/ Rec
26	Franklin Street Bridge	Brooks Road South	4th Street	.06	L	No	Trans/Rec
27	Pueblo Viejo Park Connector	3rd Street	4th Street	.06	L	No	Trans/ Rec
28	Arata Lane Connector	Brooks Road	Foothill Regional Park	.50	L	No	Trans/ Rec
29	Jensen Lane East Connector	Vinecrest Road	Old Redwood Highway	1.3	L	No	Trans/ Rec
30	Jensen Lane Trail	Hembree Lane	Jensen lane East Connector	0.5	L	No	Trans/Rec
31	Lakewood Connector	Jensen Lane	East Windsor Creek Trail	0.1	L	No	Trans./Rec
SOUTHWEST							
41A	SMART Southwest	Windsor River Road	Jaguar Way/Park Circle	.83	R	Yes	Trans/ Rec
41B	SMART Southeast	Windsor River Road	Mitchell Lane	1.4	R	Yes	Trans/ Rec
41C	SMART South	Mitchell Lane	Town Limits	.95	R	Yes	Trans/ Rec
42	Conde Lane Connector	Old Redwood Highway	Conde Lane	.11	L	No	Trans/ Rec
43A	South Windsor Creek Trail	Conde Lane	Old Oak Road	.17	L	No	Trans/ Rec/SR2S
43B	South Windsor Creek	Old Oak	SMART Trail (Bell	.28	L	No	Trans/ Rec/SR2S

Trail Number	Project Name	Begin Point	End Point	Length miles	Local (L) Regional (R)	Regional Network	Use*
	Trail	Road	Road)				
44	Trione Connector	Trione Circle	SMART Trail	.25	L	No	Trans/Rec
45	WWTP Connector	Windsor Road	Trione Circle	.28	L	No	Trans/ Rec
46	South Starr Creek	Keiser Park	Jaguar Way	.19	L	No	Trans/ Rec
47	Jaguar Way Connector	Starr Road	Windsor Road	.47	L	No	Trans/Rec/SR2S
48	SMART-Windsor Rd Connector	Windsor Road	SMART Trail	.19	L	No	Trans/Rec/SR2S
49	Windsor-Pool Creek Loop	Windsor Road	Windsor Road	2.3	L	No	Rec
50	Mitchell Lane Connector	Windsor Road	8th Hole Drive	.44	L	No	Trans/Rec
SOUTHEAST							
61	Pool Creek Trail	Hembree Lane	Old Redwood Highway	.44	L	No	Trans/Rec
62	Faught Creek Trail	Victory Lane	Old Redwood Highway	.36	L	No	Trans/ Rec
63	Shiloh Vision	Shiloh Road	Old Redwood HWY	.85	R	Yes	Trans/ Rec
64	Robbins Park Connector	Hembree Lane	Robbins Park	.28	L	No	Trans/ Rec
65	Pool Creek-Jensen Lane Connector	Emmerson Street	Old Redwood Highway	.95	L	No	Trans/ Rec
66	Faught-Pool Creek Connector	Faught Creek	Pool Creek	.28	L	No	Trans/ Rec
67	Old Redwood Highway Greenway	Pleasant Avenue	Town Limits/Shiloh	1.7	R	Yes	Trans/ Rec
SUBTOTAL[5]				23.13			
Potential Undercrossings: SMART							
S1	North Windsor	Old Redwood HWY	Herb Road	40 ft. tunnel 2-200 ft. ramps to grade			
S2	Thiessen Park Trail Connector	Railroad Avenue	Emily Road Circle	40 ft. tunnel 2-200 ft. ramps to grade			
S3	Jaguar Way/Windsor Road Connection	Bell Road	Windsor Road	40 ft. tunnel 2-200 ft. ramps to grade			
S4	Trione-Bell Connector	Trione Circle	Bell Road	40 ft. tunnel 2-200 ft. ramps to grade			

* Trans Transportation
Rec Recreation
SR2S Safe Routes to Schools

[5] Does not include Connecting Windsor Trails except identified separately (25, 42)

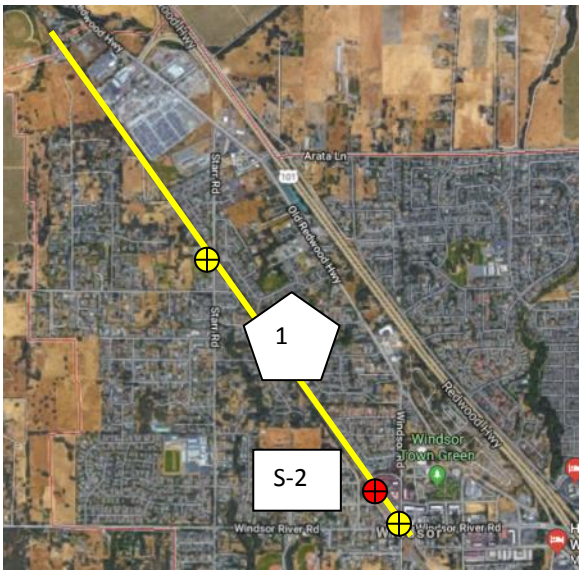
3.2.2 CLASS I TRAIL DESCRIPTIONS

This section describes potential Class I trail segments, Actual trail design will be completed on a case-by-case basis, and in limited areas, some portions of a trail might be developed as a Class II or Class II facility due to development constraints, right of way limitations, or environmental conditions,.

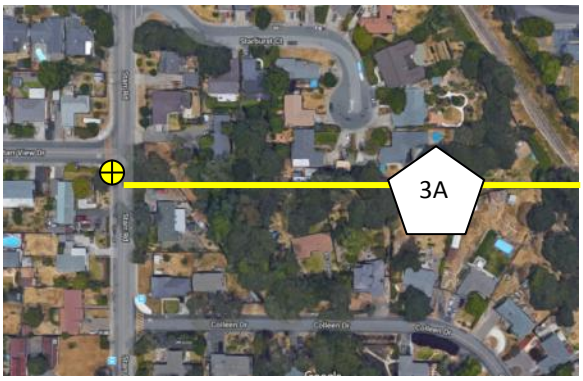
Key:

	Proposed Trail
	Crosswalk Improvements
	Bridge
	Undercrossing

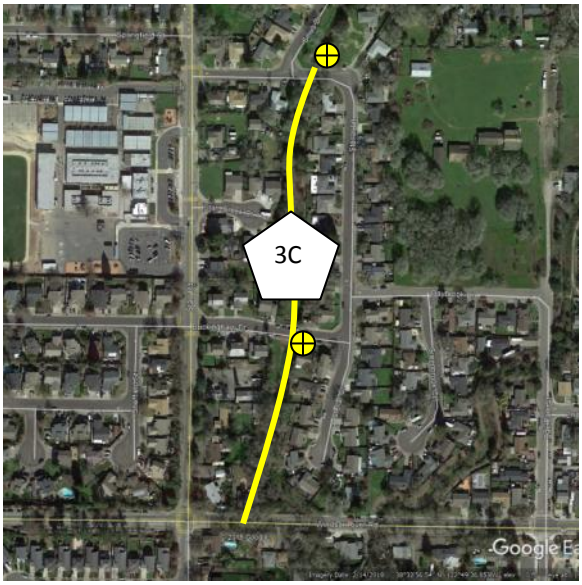
NORTHWEST WINDSOR

1. SMART Trail North	Length: 13,200 ft.
Windsor Town limits to Windsor River Road	
Description: Class I trail within and adjacent to SMART ROW on west side, from the Town's northern limit near Herb Road south to Windsor River Road. Improvements include a solid barrier to be installed to separate the RR tracks and train operations from the trail. Pedestrian rail crossing safety improvements would be provided at Starr Road. A 40 ft. underpass in the vicinity of the existing station to connect with Railroad Avenue with Thiessen Park and downtown should be considered. Bicycle and pedestrian facilities should be incorporated into planned street improvements at Windsor River/Windsor Road.	

2. Gumview Trail	Length:3.400 ft.
Location: Gumview Road - Windsor River Road	
Description: The Class I Gumview Trail would be located along the edge of Windsor's western town limits as part of future development. The trail would connect Gumview Road to Windsor River Road. The proposed trail marks the western edge of Town's incorporated area, and is roughly marked by the current alignments of Rockstretch Road and Old Camp Lane. The site is currently private property adjacent to rural residences. The trail should be included in future build out and development plans for the area.	

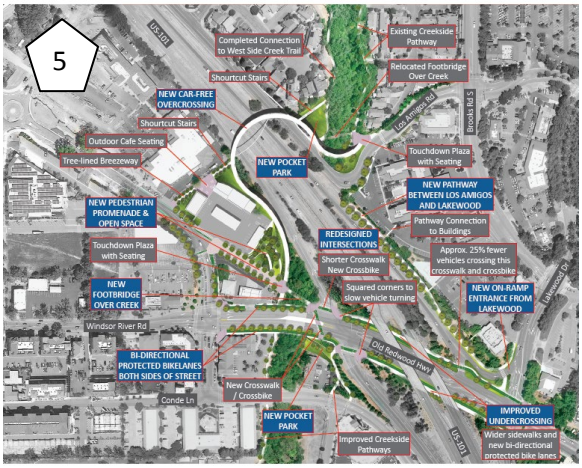
3A. North Starr Creek Trail	Length: 800 ft.
Location: Starr Road-SMART Trail (paper street)	
Description: The Starr Creek Trail is a proposed local trail that follows Starr Creek in Windsor's Northwest Quadrant and provides a connection to the SMART Trail. The proposed trail is broken into three segments: 3A provides a direct connection along public right of way to the SMART Trail; 3B and 3C would be located along Starr Creek south to Windsor River Road. This is an east-west paper street that provides a direct connection to the SMART corridor. There is significant encroachment from adjacent property into the public ROW. Modification of the Starr Creek drainage structure may be needed to complete the trail.	

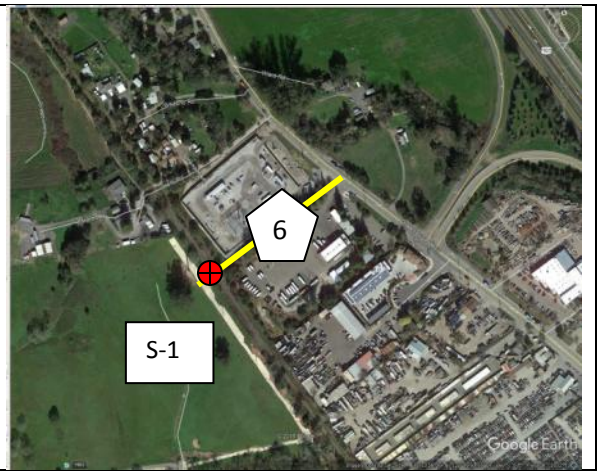
3B. North Starr Creek Trail	Length: 1,500 ft.
Location: Starr Road to Stellar Lane	
Description: 3B runs north-south roughly parallel to and east of Starr Road. The trail alignment would follow the west side of creek between Starr Road and Colleen Drive. At Colleen Drive the trail would shift to the east side of the creek and extend south to Abbie Court where a strip of public ROW between residences provides vehicle access between the street and the creek. Continuous public ROW access between Colleen Drive and Abbie Court is interrupted by a private property (066-060-029). The corridor includes a mix of SCWA access roads and creek bank with passable foot path. Creek access is behind backyard fences which are a mix of solid wood and wire fences. SCWA Access Gates and/or bollards are installed at entry points.	

3C. North Starr Creek Trail	Length: 1,400 ft.
Location: Stellar Lane - Windsor River Road	
Description: 3C is on the east side of creek, extending south from Stellar Lane and Buckingham Drive, and ending at Windsor River Road approximately 800 feet west of Keiser Park. The creek includes concrete lining/flood control measures at the south end adjacent to Windsor River Road. Culverts are installed at road under-crossings. Segments of stable bank and cut bench that are vehicle accessible are interspersed with segments with moderate cross slopes to creek. Creek banks have been stabilized on the north and south sides of Buckingham Drive (approximately 300 foot section south of Buckingham Drive, and approximately 750 foot section between Stellar Lane and Buckingham Drive).	

4A. East Starr Creek Trail	Length: 1,300 ft.
Location: Oak Park St. - SMART Trail (Railroad Ave)	
Description: The East Starr Creek Trail is a proposed local trail that follows the east tributary of Starr Creek. Segment 4A begins at the intersection of the SMART Trail and Railroad Avenue and would utilize the SCWA access road on the south and east sides of the creek as it wraps along the backyard fences of the homes along Park Glen Drive and extends west and south to its intersection with Oak Park Street. A trail bridge would be needed across Starr Creek from the entry on Oak Park Street in order to use the maintenance road on the east/south sides of the creek between Daybrook Drive and the Park Glen Drive cul-de-sac. The bridge would connect the trail segments and provide an east west connection between neighborhoods.	

4B. East Starr Creek Trail	Length: 1,100 ft.
Location: Oak Park Street - Windsor River Road	
Description: The East Starr Creek Trail is a proposed local trail that follows the east tributary of Starr Creek. Segment 4B begins at Oak Park Street, utilizes the SCWA access road on the west side of the creek, and extends south to Windsor River Road. Trail entry and crossing improvements are needed at Oak Park Street and at Windsor River Road. Starr Creek is constrained south of Windsor River Road by private property. Redirect trail users along Windsor River Road to established crossings at Starr Road or Oak Park Street.	

5. US 101 Crossing Complex	Length: N/A
Location: Los Amigos Road-Old Redwood Highway	
Description: This complex of trails includes several options for improving bicycle and pedestrian connections across US 101 in the vicinity of Old Redwood Highway. Evaluated as part of the *Connecting Central Windsor Study,* improvements would include modifications to the existing Old Redwood Highway/Windsor River Road streets; a pedestrian/bicycle overpass connecting Los Amigos Road and Windsor River Road west of Windsor Creek, and trail connections and urban plaza improvements west of the highway. Some of these trails and plazas could be independently implemented to improve Downtown connectivity.	

6. Park and Ride Connector	Length: 700 ft.
Location: Old Redwood Highway to SMART Trail	
Description: This segment would be located on Windsor Unified School District lands to connect to future development on Herb Road. A 40 ft. underpass would provide grade-separated crossing of the SMART tracks.	

7.SMART-Gumview Connector	Length: 3,700 ft.
Location: SMART Trail to Gumview Road	
Description: This Class I trail would be completed as part of future development to provide an off street connection between North Windsor, Gumview Trail and Starr View Drive.	



8. Gumview Creek Trail	Length: 1,600 ft.
Location: Gumview Trail to Starr View Drive	
Description: This Class I trail would be completed as part of future development to provide an off street connection between the Gumview Trail and Starr View Drive (In Urban Growth Boundary, but outside Town limits)	



NORTHEAST WINDSOR

21A. West Windsor Creek	Length: 2000 ft.
Location: Brooks Road South to Lazy Creek Drive	

Description: The West Windsor Creek Trail is a proposed trail on the west side of West Windsor Creek. An existing segment of trail exists between Arata Lane and Brooks Road. The proposed trail consists of four segments: 21A, 21B, 21C, and 21D.

Segment 21A would include a planned mid-block crossing of Brooks Road at Hiram Lewis Park near Jessica Drive. The existing gravel access road/trail extends from Brooks Roads south to Lazy Creek Drive. Segment 21A is already well utilized by pedestrians and bicyclists.

Minor improvements to trail surface for accessibility, crosswalk improvements at Natalie, signs and local erosion/stormwater improvements would be completed.

A parallel path exists on the east side of West Windsor Creek. Existing bench and gravel maintenance road are currently well utilized as a trail. Solid wood backyard fences line the corridor.



21B. West Windsor Creek	Length: 800 ft.
Location: Lazy Creek Drive to Windsor Senior Center	

21B would improve the dirt footpath along the top of the bank in the public ROW from Lazy Creek to Hembree House Cultural Center and Museum, Senior Center, and Windsor Pool. A pedestrian bridge crosses the creek between the Museum on the west side and Tommy Dorsey Court on the east side. ROW at top of bank should be verified to determine available width for a Class I trail. Retaining walls or boardwalk may be needed if ROW is insufficient at top of bank. Existing curb ramp to street and bike lanes on Los Amigos Road may need modification to meet ADA standards.



21C. West Windsor Creek	Length: 2,500 ft.
Location: Windsor Senior Center to Los Amigos Road	
Description: This segment would be constructed at top of bank south the Senior Center. The trail would complete a segment on the west side of the creek between pedestrian bridges adjacent to Tommy Dorsey Court and at Los Amigos Road. The southern terminus of the trail is adjacent to US 101 and forms an important north-south connection to the Central Windsor US 101 Crossing Complex.	

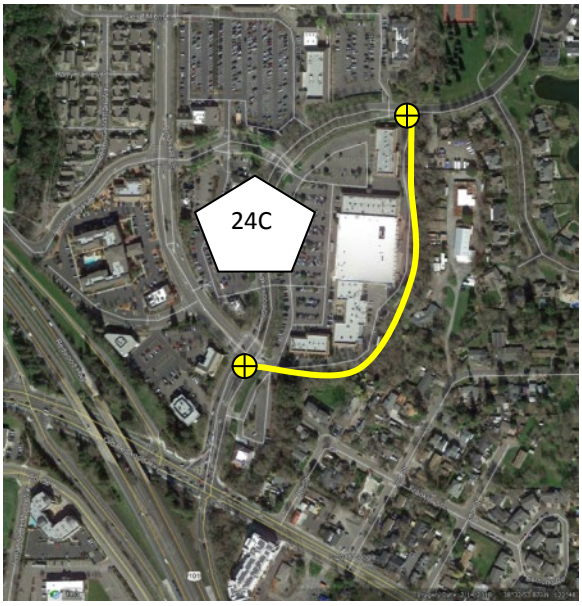
21D. West Windsor Creek	Length: 500 ft.
Location: West Windsor Creek Trail to Los Amigos Road	
Description: The Foxwood Connector utilizes a wide public ROW landscape strip on the west side of Foxwood Drive. It connects the West Windsor Creek Trail and adjacent community facilities (Hembree House Cultural Center and Museum, Windsor Senior Center, and Windsor Pool) to Los Amigos Road. Mature trees landscaping in the ROW may affect trail alignment. Options include routing the trail behind landscaping and along back yard fences utilizing an existing dirt maintenance road, or widening the sidewalk to Class I standards (8 feet).	

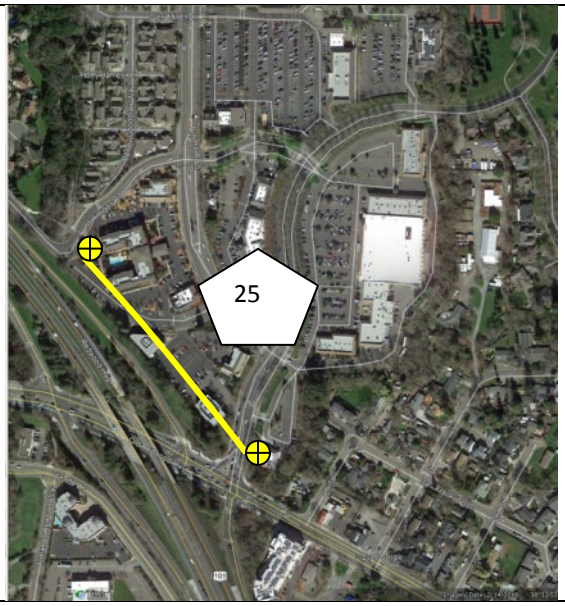
22. Windsor Creek Connector	Length: 2,000 ft.
Location: West Windsor Creek trail to Brooks Road	
Description: The Windsor Creek Connector is on the east side of West Windsor Creek and extends from Natalie Drive to Foothill Drive. This alignment would formalize an informal route that connects from the intersection of Foothill Drive/Brooks Road through the United Methodist Church's southern parking lot to a compacted gravel trail that runs along the backyard fences of the homes along Natalie Drive. The trail turns south at the creek and connects to Natalie Drive. The existing trail is compacted gravel, the width ranges from approximately 4 - 8 feet wide. The existing gravel foot trail routes users to parking lot. School zone crosswalks are provided on the north and east legs of the Brooks Road/Foothill Drive intersection. This segment also includes connecting the unpaved existing trail along the creek to the north where a mid block crossing is proposed. This alignment is partially on private right of way (La Petite Academy and the Methodist Church), so an easement or user agreement would be needed.	

23. Windsor Middle School	Length: 1,000 ft.
Location: Elsbree Lane - Foothill Drive	
Description: This segment would improve an existing foot trail east of Windsor Middle School. Access to the existing foot trail is provided from Foothill Drive at the south end of the segment via a pedestrian pass through in the chain link fence. Access from Elsbree Lane is unrestricted. The soft surface foot trail is on top of the level bank, is set back from the creek, and is vehicle accessible until about 300' south of Elsbree Lane where the ROW narrows. Improvement of the existing boardwalk to Hiram Lewis Park may be needed for ADA access.	

24A. East Windsor Creek	Length: 2000 ft.
Location: Foothill Drive to Hembree Lane	
24A would formalize the existing gravel trail between Hembree Lane and Lakewood Drive. Segment 24A follows the west side of the creek. A short spur extends between the main trail along the creek corridor and Foothill Drive adjacent to the southeast corner of Windsor Middle School. An extension of the trail continues north from this point along the east side of the tributary that borders the back side of Windsor Middle School. Minor improvements would be needed for accessibility and two way travel throughout the segment.	

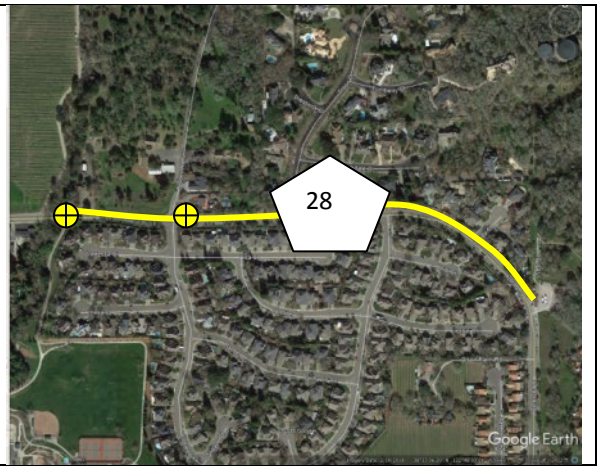
24B. East Windsor Creek	Length: 2,500 ft.
Location: Lakewood Drive to Foothill Drive	
24B would formalize the existing gravel trail and fire access road between Hembree Lane and Lakewood Drive. Segment 24B follows the west side of the creek. Minor improvements would be needed for accessibility and two way travel throughout the segment. A trail bridge would be required to cross a tributary approximately 400 feet south of Foothill Drive. Grass pavers behind the office complexes at the trail's southern entrance may need to be modified for ADA accessibility. A new trail section with crosswalk improvements is needed north of Lakewood Drive to connect the trail directly to the street.	

24C. East Windsor Creek	Length: 1,500 ft.
Location: Franklin Street Bridge to Lakewood Drive	
Description: Segment 24C would extend south from Lakewood Drive behind the Raley's shopping center to Jensen Creek adjacent to Old Redwood Highway. The proposed trail would be routed along the creek bank where available space exists, but would also route through parking area and drive aisle behind Raley's, the Post Office, and Exchange Bank. Reconfiguration of the driveway, parking and landscape areas may be needed to delineate a trail route. There is an opportunity for redevelopment of commercial space to create outdoor use areas that overlook the creek. Right of way is generally private and easements or agreements would be needed to complete this segment.	

25. Lakewood-Amigos Trail	Length: 1,400 ft.
Location: Lakewood Drive to Los Amigos Road	
Description: Part of the 101 Crossing Complex (Segment 5), this trail would be located on the eastern edge of Caltrans onramp to provide a direct off street connection to the Windsor Creek Trails and the proposed 101 overpass.	

26. Franklin Street Bridge	Length: 300 ft.
Location: Brooks Road South to 4th Street	
Description: New trail and bridge to cross East Windsor Creek north of Exchange Bank. Existing social trail heavily used to cross the creek. There is public right of way and existing trail segment leading to creek on east side. Easement or agreement would be needed to extend trail west to street north of bank.	

27. 3rd Street-4th Street Connector	Length: 300 ft.
Location: south of Franklin between 3rd and 4th Streets	
Description: Trail segment to use existing alley to provide a continuous connection between Lakewood shopping area and Pueblo Viejo Park.	

28. Arata Lane Connector	Length: 2,600 ft.
Location: Brooks Road to Foothill Regional Park	
Description: Formalize existing footpath on north side of Arata Lane. Local slopes may necessitate localized use of retaining walls for ADA accessibility. Consider extending Class I trail west to US 101 when this area is developed in future, as part of a Windsor ring trail.	

29. Jensen Lane East Connector	Length: 7,100 ft.
Location: Vinecrest Road – Old Redwood Highway	
Description: This trail is located along Windsor's eastern limit line. The proposed trail is currently a 'paper trail' along the eastern town limits for inclusion in future build out, and would provide a direct connection between southeast Windsor and Foothill Regional Park. The Jensen Trail should be considered part of a ring trail system around the perimeter of the community . Bicycle and pedestrian connections to local streets should be provided when the site is developed.	

30. Jensen Lane Trail	Length: 2,700 ft.
Location: Hembree Lane east to Jensen lane East Connector	
Description: This trail would provide a connection along Jensen Lane to connect to the Jensen Lane east connector trail. In areas where the adjacent area has been developed, it may be necessary to construct bicycle and pedestrian facilities as Class II, or acquire additional right of way for trail implementation. A Class I trail should be provided as part of future development. As shown on the adjacent figure, a dashed line indicates where the trail could be extended 1,700 feet to East Windsor Creek along the Jensen Creek Drainage facilities. However, this drainage area is privately owned by the Lakewood HOA and would need to be negotiated to make this trail connection. Bicycle and pedestrian connections to local streets should be provided when the site is developed.	

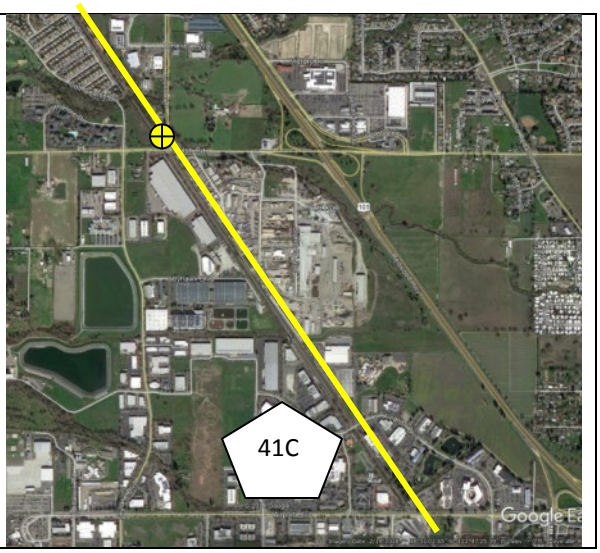
31. Lakewood Connector	Length: 400 ft.
Location: Jensen Lane -East Windsor Creek	
Description: This trail connection would link the Jensen lane Bicycle Boulevard with East Windsor Creek. This segment goes through private property and would need to be negotiated or included as part of site redevelopment. This segment could be completed as an alternate to the Franklin Street Bridge.	

SOUTHWEST WINDSOR

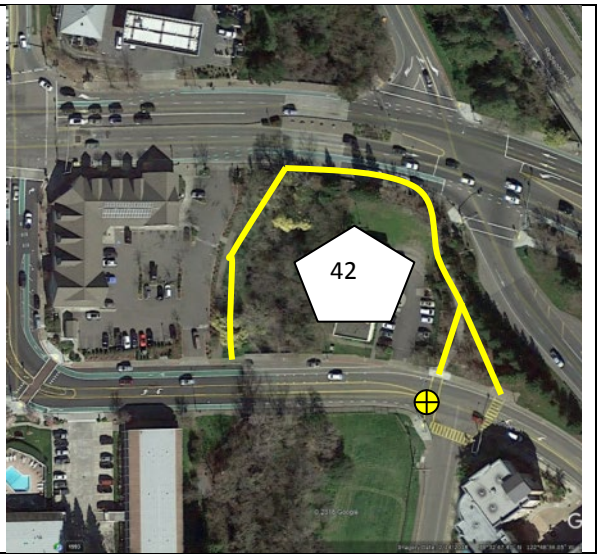
41A. SMART Trail South	Length: varies
Location: Windsor River Road – Jaguar Way/Park Circle or Windsor Creek	
Description: 41A SMART Trail East Side of Tracks SEE SECTION 3.4	



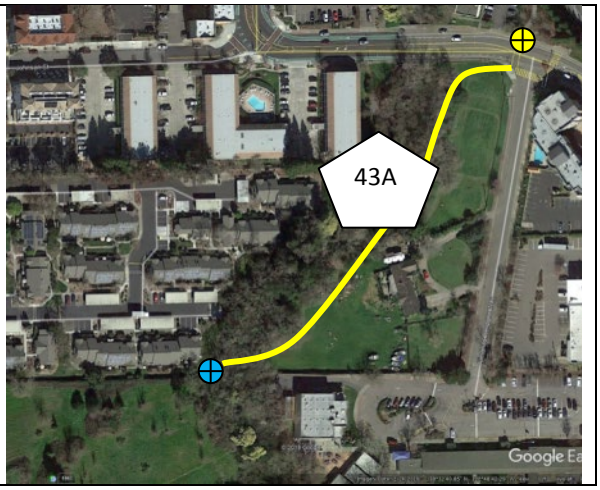
41B. SMART Trail South	Length: 7,600 ft.
Location: Windsor River Road - Mitchell Lane	
Description: 41B SMART Trail East Side of Tracks SEE SECTION 3.4	

41C. SMART Trail South	Length: varies
Location: Mitchell Lane to south Town limits	
Description: SMART trail south of Mitchell Lane SEE SECTION 3.4	

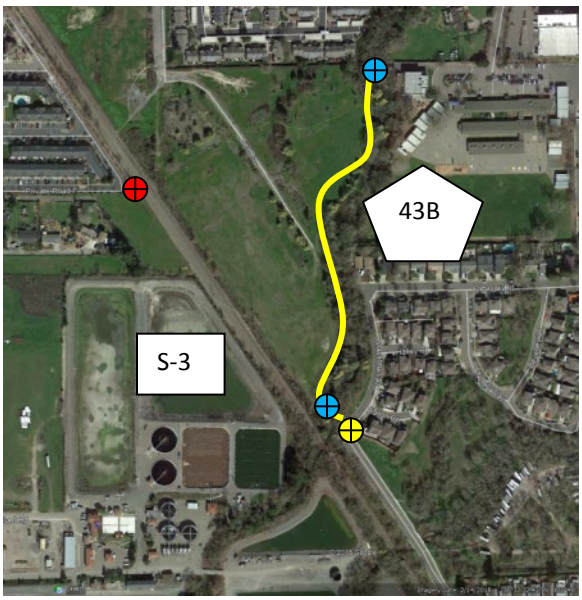
42. Conde Lane Connector	Length: 600 ft.
Location: Old Redwood Highway to Conde Lane	
Description: The Conde Lane Connector is part of the 101 crossing complex (Segment 5) that would improve and formalize connections between Old Redwood Highway and Conde Lane, with a link to a proposed trail along Windsor Creek. Crosswalks would be improved to facilitate a connection to the school. The South Windsor Creek Trail (Segment 43A) continues south along the creek from Conde Lane to Windsor Creek Elementary School.	



43A. South Windsor Creek	Length: 900 ft.
Location: Conde Lane – Old Oak Road	
Description: Segment 43A begins on the south side of Conde Lane continues south from Segment 42 to the Windsor Creek Elementary School campus. A new pedestrian bridge would be provided as part of future development west of the creek. This trail is on private property and an easement, acquisition or future development may be needed to complete this segment.	



43B. South Windsor Creek	Length: 1500 ft.
Location: Old Oak Road – SMART Trail (Bell Road)	
Description: Segment 43B is located along the west side of the West Windsor Creek Tributary and begins at Windsor Creek Elementary School campus and continues south to Bell Road at Grayson Way adjacent to the RR ROW. Trail improvements including a pedestrian bridge to the school, and a vehicular crossing with pedestrian and bicycle facilities across Windsor Creek would be implemented as part of future development. Other potential improvements in this area include a portion of the SMART trail, and a potential undercrossing of the SMART tracks to facilitate access between Windsor High School and downtown Windsor. A potential seasonal crossing could be located near the creek if the railroad and vehicular bridges are constructed to accommodate crossing under them.	



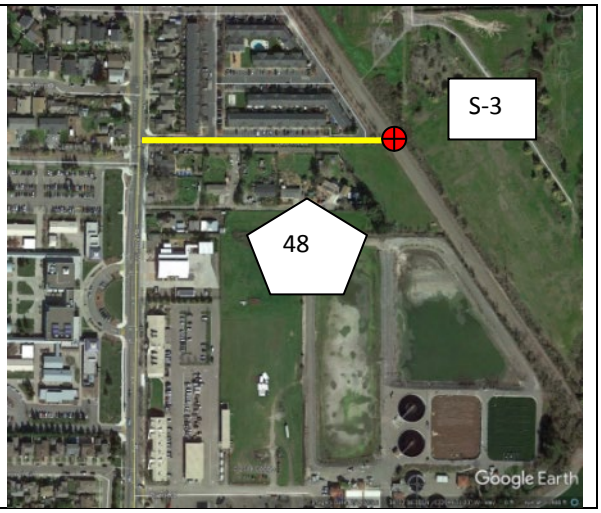
44. Trione Connector	Length: 1,300 ft.
Location: Trione Circle to SMART Trail	
Description: The Trione Connector Trail would formalize use of an existing dirt maintenance road on the north side of Trione Circle for approximately 1200', where it would connect to an existing Class I pathway that follows the north side of the Trione Circle to Leno Drive. At Leno Drive the pathway transitions to a wide sidewalk that extends along Trione Circle to Vintage Greens Drive and then along Vintage Greens Drive to Windsor Road.	



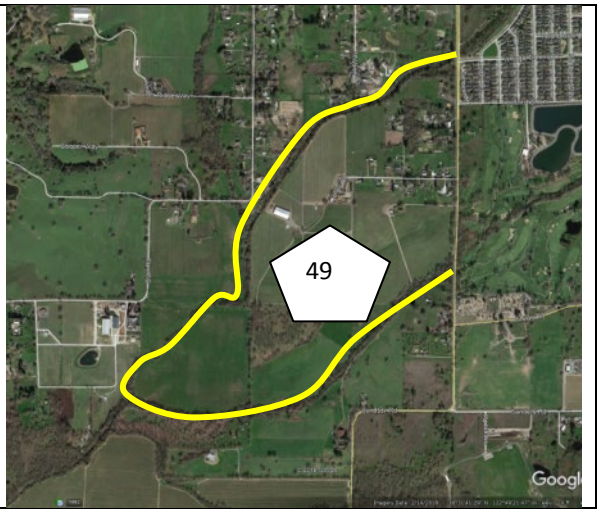
45. WWTP Connector	Length: 1,500 ft.
Location: Windsor Road - Trione Circle	
Description: The Wastewater Treatment Plant Connector Trail is a proposed local trail in central Windsor located south of Windsor River Road and west of the SMART corridor. The trail routes along the southern edge of the Town's Water Treatment Plant (Pond 7) and a new pedestrian bridge, forming an east west connection between the Trione Connector Trail and Windsor Creek to Windsor Road at Reiman Lane. The trail would connect to and extend west The connector would provide an east west cutoff for commuters heading east-west through Windsor heading to locations on Windsor Road such as Windsor High School and to residential neighborhoods located off Reiman Lane.	

46. South Starr Creek	Length: 1,000 ft.
Location: Keiser Park to Jaguar Way	
Description: The South Starr Creek Trail provides a connection from Keiser Park to the Starr Creek Trail. It extends north-south from Windsor River Road through Keiser Community Park to Starr Creek Park connecting to Starr Road at Burgundy Way. This segment would formalize an existing path within the park, and include a bridge over the creek to connect an existing parking area with the planned Jaguar Way extension and Starr Creek Park Trail. Improvements in this area may be implemented as part of the planned Windsor Aquatic complex.	

47. Jaguar Way	Length: 2,500 ft.
Location: Starr Road to Windsor Road	
Description: This segment would provide Class I improvements associated with the extension of Jaguar Way. Improvements would include bicycle and pedestrian facilities and a new vehicle bridge over Starr Creek. This segment would be implemented as part of the street extension. Class I facilities should be considered through the park and where there is sufficient ROW.	

48. SMART-Windsor Road Connector	Length: 1,000 ft.
Location: Windsor Road to SMART Trail	
Description: This segment would generally connect Windsor Road with the SMART Trail in the vicinity of Town lands or private development to facilitate a connection to the Windsor Creek Trails. Precise alignment to be determined by Town or associated with private development in this area. An undercrossing of the SMART tracks should be considered to facilitate community access.	

49. Windsor-Pool Creek Loop	Length: 12,000 ft.
Location: Windsor Road to Windsor Road (Windsor Creek and Pool Creek)	
Description: This segment would utilize existing Town and SCWA access roads to provide a recreational trail loop. This trail could be opened seasonally, or for special events to gauge public interest. Future improvements and consideration of connections to regional park facilities further west should be considered and coordinated with Sonoma County.	



50. Mitchell Lane Connector	Length: 2,300 ft.
Location: Windsor Road to 8th Hole Drive	
Description: Off street facilities utilizing Town lands south of Mitchell Lane. Private lands at the southeast corner of Mitchell and Windsor Road are proposed as the Overlook project.	



SOUTHEAST WINDSOR

61. Pool Creek Trail	Length: 2,300 ft.
Location: Hembree Lane to Old Redwood Hwy	

The proposed creekside trail extends east-west along Pool Creek, with a segment recently completed at Hembree Lane in the Victoria Oaks subdivision. A bridge crossing to the north would be needed and may potentially be completed as part of a development project on Wilson Lane. Completion of the trail segment east to Old Redwood Highway would be included as part of future development.

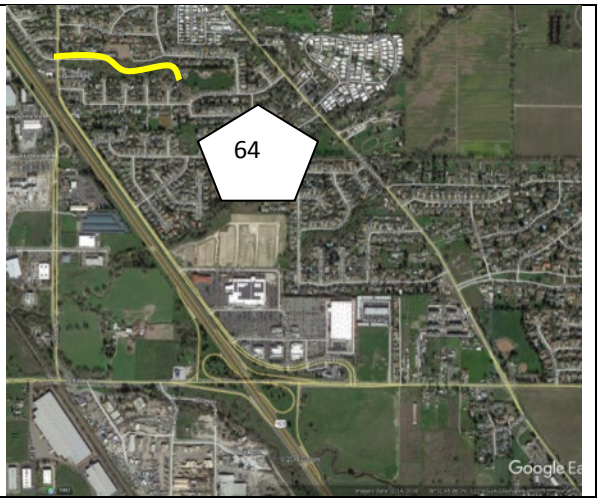


62. Faught Creek Trail	Length: 1,900 ft.
Location: Victory Lane to Old Redwood Hwy	

Description: The Faught Creek trail extends east-west along the north side of Faught Creek between Old Redwood Highway and Victory Lane. The trail would formalize an existing compacted 8 foot trail extending from Old Redwood Highway to Gabrielle Drive on north side of creek. Trail would be located at top of bank following Gabrielle Drive to Amie Drive existing foot path and sidewalk. Creek goes underground from Amie Drive west under Walmart. Crossing improvements should be considered if the trail is extended east of Old Redwood Highway in the future.



63. Shiloh Vision	Length: 4,500 ft.
Location: Shiloh Road to Old Redwood Highway	
Description: Currently private property, Shiloh Road Vision Plan calls for a multi-use trail and linear park along Pruitt Creek, which would be implemented as part of future development. The Shiloh Road Village Vision Plan calls for a linear park and multi-use pathway system that works with the site's open space, floodplain and wetlands, and meanders along Pruitt Creek. The Plan identifies the linear park and trail as an important community amenity, a buffer to US 101, an opportunity for passive recreation and interpretive elements, as well as a trailhead facility for the regional park system.	

64. Robbins Park Connector	Length: 1,500 ft.
Location: Hembree Lane to Robbins Park	
Description: This trail would provide a neighborhood off street trail to connect Hembree Lane with Robbins Park. Currently private property, improvements would be completed associated with a planned development project. Bicycle and pedestrian connections to local streets should be included as part of the project.	

65. Pool Creek Connector	Length: 5,000 ft.
Location: Emmerson Street Old Redwood Highway	
Description: This trail would provide a Class I segment to connect the Pool Creek Trail with future facilities along Jensen Lane, and facilitate access to Foothill Regional Park as part of a ring trail system. A pedestrian bridge over Pool Creek would be needed if a trail along Faught Creek is also completed. It is anticipated that some of these facilities could be completed as part of future development projects. There may be creek restoration opportunities where segments of the creek have been altered; this portion of the creek may provide sensitive species habitat.	

66. Faught Creek Connector	Length: 1,500 ft.
Location: Faught Creek (east of Old Redwood Highway) to Pool Creek	
Description: This trail would provide a Class I segment to connect with the Pool Creek Trail and facilitate access to Foothill Regional Park as part of a ring trail system. A pedestrian bridge over Pool Creek would be needed. It is anticipated that some of these facilities could be completed as part of future development projects. There may be creek restoration opportunities where segments of the creek have been removed.	

67. Old Redwood Highway Greenway	Length: 9,000 ft.
Location: Pleasant Avenue to Town limits (south of Shiloh Road)	
Description: This greenway was originally identified in the 2008 SDAT Design Plan to provide separated bicycle/pedestrian facilities and provide a transition from the urban Downtown core to the rural character of southeast Windsor. The greenway could be implemented as larger parcels become developed, or implemented by reclaiming excess shoulder and pavement along the roadway. The greenway system should also connect to proposed Class I facilities within the Shiloh Vision Plan, Pool Creek and Faught Creek trails. Pedestrian bridges would be needed across the two creeks.	

3. 3 OTHER TRAIL CONNECTIONS

Community Connectors. These are the arterial streets and local connections that should be improved as part of a complete trail network. The level of improvements vary from minor improvements such as signage, wayfinding and striping, to street and roadway improvements such as sidewalks, bicycle lanes and separated path implementation.

Current Development Projects with Potential Trails:

- Windsor School District/10501 Herb Road Subdivision (Draper Estates)
  - Planned Improvements: Unknown
  - Trail Opportunity: Provide connection to SMART Trail, and provide easement for future Class I trail to connect to Gumview Trail as part of Windsor Ring Trail

- Mill Creek (8777 Bell Road)
  - Planned Improvements: Trail proposed along Windsor Creek
  - Trail Opportunity: Provide pedestrian bridge to school, provide trail along Windsor Creek, construct portion of SMART trail and connections, contribute to grade separated crossing of SMART ROW within project

- Creekwalk (6405 Old Redwood Hwy / APN 163-011-036)
  - Planned Improvements: Unknown
  - Trail Opportunity: Provide complete streets improvements along ORH

- 330 Arata Lane Subdivision (330 Arata Lane / APN 161-050-030)
  - Planned Improvements: Unknown
  - Trail Opportunity: Provide Class I improvements along Arata Lane
- The Oaks (6122 Old Redwood Hwy / APN 163-172-019)
  - Planned Improvements: Unknown

- Trail Opportunity: Provide complete streets improvements along ORH

- Victoria Oaks 6808, 6816, and 6842 Hembree Lane / APNs 163-130-030, 163-130-031, and 163-130-032
  - Planned Improvements: Class I trail along Pool Creek
  - Trail Opportunity: Provide Pool Creek-Faught Creek trail connection.

- The Overlook Mitchell Lane
  - Planned Improvements: Unknown
  - Trail Opportunity: Potential connector Windsor Road to SMART trail, part of potential off-street trail incorporating golf course, reclaimed water ponds

- Los Amigos 280 Arata Lane / APN 161-050-068, northeast corner Arata Ln/Los Amigos
  - Planned Improvements: Unknown
  - Trail Opportunity: Provide complete streets improvements, extend Class 1 Trail along Arata Lane frontage

- 6500 and 6516 Old Redwood Hwy / APNs 163-012-016 and 017
  - Planned Improvements: Unknown
  - Trail Opportunity: Trail Opportunity: Provide complete streets improvements along ORH and easement along Emerson Road extension for Jensen Trail connection

- 484 Wall Street
  - Planned Improvements: Unknown
  - Trail Opportunity: potentially part of connection to Keiser Park

- Jensen Lane Annexation 657 and 1296 Jensen Lane, APNs 162-020-013 and 014
  - Planned Improvements: Streets
  - Trail Opportunity: Provide Class I trail along Jensen Lane and n/s connector. Site lots so that trail is on east side of lane and opposite driveways to minimize vehicular conflicts and increase trail visibility.

- 60 Shiloh Road (corner of Shiloh Rd/ Old Redwood Hwy), APN 059-310-061
  - Planned Improvements: Street improvements
  - Trail Opportunity: possible connection to Shiloh Vision Trail (provide easement)

3.4 SMART RAIL TRAIL

Implementation of SMART rail service and associated Class I trail facilities, will improve opportunities for north/south pedestrian and bicycle travel within Windsor, as well as provide connections to regional destinations. This section identifies issues associated with the trail alignment currently being planned from Airport Blvd. to Windsor River Road. The precise alignment of the trail north of Windsor River Road to Healdsburg will be determined in the future when that rail segment is implemented.

Funding was secured in June 2018 to complete the rail segment from Airport Blvd. north to Windsor Station at Windsor River Road. Town representatives have had preliminary discussions with SMART about the precise trail location for this segment.

Alignment Issues. The precise alignment for the Segment south of Windsor River Road is currently being planned. The Town has participated in preliminary discussions with SMART to determine the best alignment for this area. Opportunities and constraints associated with this alignment are contained in **Appendix C**. Alignment options include:

- **Shiloh Road South.** South of Shiloh Road, the SMART trail will be located on the east side of the tracks, to align with the existing trail/train terminus at Airport Blvd. SMART anticipates an enhanced crosswalk (lights and beacons) across Shiloh east of the tracks.

- **Shiloh Road to Mitchell Lane.** Traveling north from Shiloh Road, the trail could utilize the existing sidewalk and maintenance access road along Conde Lane and Pool Creek, then continue north on the east side of the tracks. Alternatively, the trail could utilize a Town-owned strip west of the tracks and connect with the existing trail along Eagle Drive. Pedestrian crosswalk improvements would be provided across Mitchell Lane.

- **Mitchell Lane to Windsor River Road.** North of Mitchell Lane, the trail could be located on the east side of the tracks, and could improve existing informal paths on the west side of the Wilson Ranch Soccer Park to provide additional separation from trains as well as serve the local park. At Bell Road, one option would be to eliminate the existing parking lane on the west side of the road and convert it to a separate Class I trail segment, which would avoid existing trees and drainage issues adjacent to the tracks. The trail would continue north and be sited within the proposed Mill Creek development, with connections to the proposed Windsor Creek Trail.

  In addition to the trail on the east side of the tracks, it is recommended that a crossing under the tracks to the west side be considered to provide a direct, grade separated crossing connecting the high school with communities on the east side of the tracks. This can be accomplished either by installing a culvert and ramp under the tracks as part of the SMART reconstruction, or by lengthening the railroad bridge over Windsor Creek, which would allow a seasonal crossing adjacent to the creek. A parallel trail would be constructed on Town wastewater treatment plant lands or within SMART ROW north to connect to the existing trail east of Duncan Drive. This would provide a direct connection to the planned SMART Windsor Station.

- **North of Windsor River Road**. North of Downtown Windsor, the SMART trail would be located on the west side of the tracks, to facilitate connections to the residential neighborhoods and schools in West Windsor. When planning for connection to Healdsburg, the trail could shift to the east side of the tracks at the Starr Road road/rail crossing if it is ultimately determined that the trail segment north to Healdsburg is located on the east side.

Trail/Rail Crossing Issues. Railroad crossings are regulated by the California Public Utilities Commission (CPUC), including setbacks, grade separation, and use issues. General Order 26-D dictates setbacks, and General Order 75-D contains regulations for at-grade private rail crossings. In general, the CPUC strongly prefers that new rail crossing projects be grade separated, and most often requires a nearby at-grade crossing to be removed if a new one is approved.

In Windsor, the rail corridor will be fenced, with crossings of the SMART alignment limited to at-grade crossings of existing streets at four locations:

- Starr Road
- Windsor River Road
- Mitchell Lane
- Shiloh Road

As with US 101, the rail corridor represents a barrier to cross-town bicycle and pedestrian travel, and limits direct and convenient access to key destinations such as schools and Downtown. During the public input process, there was strong support for providing a grade separated crossing to facilitate bicycle and pedestrian travel.

Railroad Grade Separation. In urbanized areas, and because of their relatively high costs, the decision to create grade-separated crossings where an at-grade crossing already exists is often a factor of volume of use. The Manual on Uniform Traffic Control Devices (MUTCD) Guidelines recommend evaluation of all at-grade crossings as part of projects, due to the potential for accidents and congestion. A review of literature regarding pedestrian grade separation projects generally utilizes pedestrian traffic volumes of at least 100 users per hour, or higher peak averages when considering grade separation. **Table 3-2** provides some general guidelines to determine the appropriate use of underpasses vs. overpasses for grade separation.

Table 3-2: Railroad Grade Separation/Crossing Guidelines

Design Issue	Underpass	Overpass
Vertical Clearance	8.5 to 10 ft. + 3 ft. cover	26 ft. +
Access Ramp	100 ft.+	208 ft. +
Utility Conflicts	Possible	No
Drainage	Pump may be needed	No
Lighting/Security/Visibility	May be needed depending on location	May be needed depending on location
Cost	$500K+	$2M+
Vandalism	Yes	Yes (need enclosed crossing)

Guidelines for Overpasses. In general, overpasses are utilized to separate high-volume/high-speed pedestrian and motorized traffic. A typical overcrossing of a railroad is elevated at least 26 feet above the tracks, with approach ramps for ADA access at a maximum grade of 5% slope (limited segments may be slightly steeper if a level landing area is provided). Due to required track clearance, the overall length and height of overcrossing ramps and structure would likely be visually imposing, and relatively expensive.



Stevens Creek Trail, Santa Clara



AMTRAK, Emeryville, CA



AMTRAK, San Luis Obispo, CA

Federal research also indicates that an overpass structure may not be used if a more direct route is available. Vandalism, security and user safety issues increase where the volume of pedestrian use is low. Ramps and stairs may also discourage use of the structure, although placing a ramp perpendicular to the structure directly from the trailhead area may be utilized to increase accessibility.

Caltrans Highway Manual (1985) recommended overpasses where grade separation is to be provided, due to potential for vandalism and crime. Costs associated with overpass construction include length and height of the structure, need for vertical clearance, ADA ramp, enclosure to protect the rail line from falling objects, and fencing adjacent to the tracks to prevent trespass.

Guidelines for Underpasses. Underpasses are less popular, due to concerns regarding crime, vandalism, drainage, high water tables, and relocation of utilities, depending on location. Where possible, the rail track or roadway may be raised slightly to reduce the depth of the tunnel, and to allow better visibility.



Davis, CA



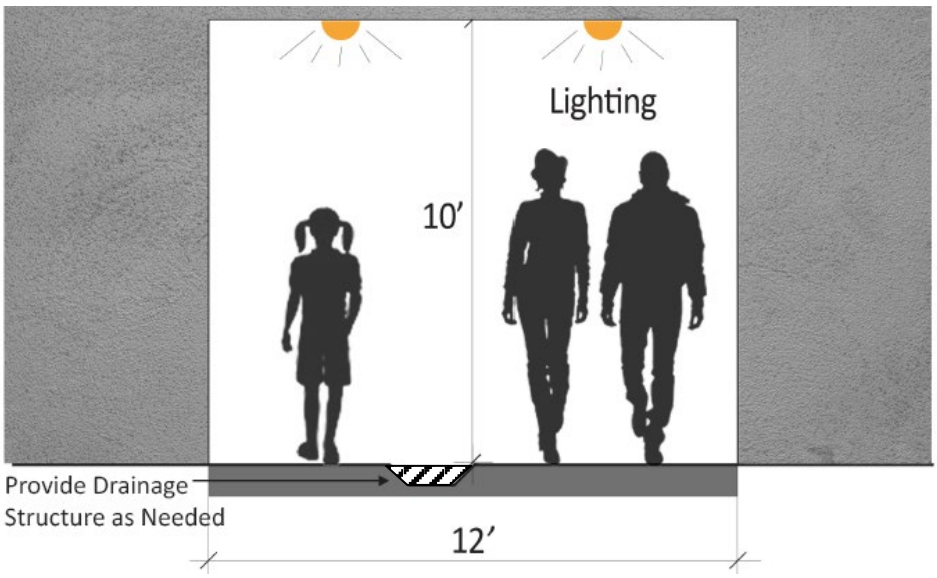
Santa Clara, CalTrain



Fremont, CA

In Windsor, an underpass to serve bicycles and pedestrians would need to be approximately 30 to 40 feet long (to accommodate possible double tracks on the rail line), and would need approximately 200 foot long ramps to access the underpass on each side.

Clearance. According to Chapter 1000 of the Caltrans Highway Design Manual, the minimum acceptable vertical clearance for an underpass is 8.5 feet, with a desired width of 12 to 14 feet (needed if designed for use by equestrians). An underpass would likely include concrete headwalls, retaining walls and long ramps, and fitted with lighting and a pump system if located near any creek systems, or in an area subject to seepage.



Underpass Dimensions

Warrants. Specific warrants (justification) were developed by the US Department of Transportation in 1984 for grade-separated pedestrian crossings, and warrants were also included in the Caltrans Highway Design Manual (1995, for street grade separation). These include:

- Pedestrian volumes over 100 persons per hour;
- Average Daily Traffic (ADT) vehicular volume greater than 25,000;
- The site is at least 600 feet from the nearest alternative safe crossing;
- There should be a physical barrier to prevent at-grade crossing;
- Artificial lighting of underpasses is recommended;
- Topography should be considered to minimize construction costs;
- Adjacent land uses should be considered;
- Funding must be available for the crossing;
- Study of present and future conditions regarding pedestrian usage and traffic volumes;
- School crossings.

Recommendation. At least one grade separated pedestrian crossing of the SMART tracks should be considered as part of SMART rail implementation in Windsor, and included in rail reconstruction planning. If funding and trail connections are not available at the time rail service commences, then design and implementation of rail service should be done in such a way so as to not preclude future grade separation projects, as providing grade separation after the train is operational is considerably more challenging. This can be accomplished in several ways:

- Extend the length of rail bridges by at least 15 feet to accommodate a separate pedestrian crossing; and/or
- Install an arch culvert at least 8.5 feet high during track reconstruction for future connection to trails;
- Include ramps and connections to the grade separation as part of adjacent development projects.

3.5 STORM DRAINAGE MASTER PLAN PROJECT TRAILS

The 2017 Storm Drainage Master Plan includes recommendations for projects to reduce flooding, improve water quality, and correct deficiencies in the Town's watershed drainage system. There are some projects that overlap potential trail segments, and where incorporation of trail facilities may be efficient for permitting, implementation and cost efficiency. These potential projects are listed in **Tables 3-3** and **3-4.**

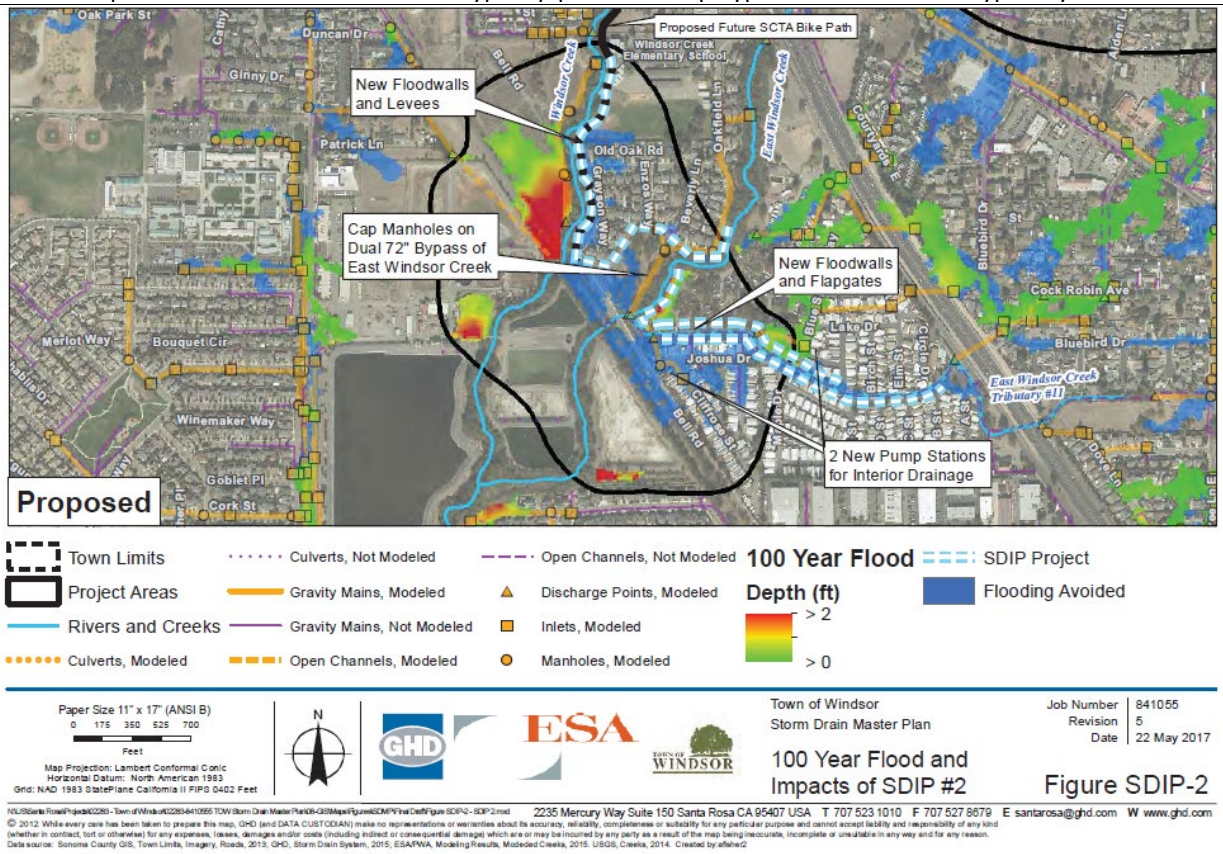
Table 3-3: Summary of Storm Drain Improvement Projects with Potential Trails

SDIP Project Number	Trail Segment	Location	Notes
SDIP-2	43A, 43B	Windsor Creek at Windsor Creek Elementary School	Planned
SDIP-5	2, 7	Gumview Drive	Needs property owner agreement
SDIP-6	23	Hiram Lewis Park	
SDIP-7	23	Windsor Middle School	
SDIP-9	67	Old Redwood Highway/Pleasant Avenue	Improvements likely in road
FSDIP-1	6	Old Redwood Highway/north Town limits	
FSDIP-2	63	Shiloh Vision Plan Area	Trail to be included in project
FSDIP-3	41C	SMART Trail south of Mitchell	May need property owner agreement depending on location
FSDIP-4	3A, 3B, 3C	Starr Creek north of Windsor River Road	Improvements likely in road
FSDIP-5	49	Windsor Road at Pool Creek	

Table 3-4: Storm Drainage Improvement Projects with Potential Trails	
SDIP Project Number **SDIP-2**	**Trail Segment 43A, 43B**

Description: Floodwalls and levee on east side of Windsor Creek

- Install 6,600 LF of floodwall/levees along Windsor Creek, East Windsor Creek, and East Windsor Tributary #11 to reduce overtopping. There is a significant drainage ditch that runs east/west along the south side of the south ballfield of Windsor Creek Elementary School. This ditch runs into Windsor Creek (near the callout for "New Floodwalls" on Figure SDIP-2) and would be cut off by the floodwall proposed for this area. Install pipeline(s) with flap gate(s) between the drainage ditch and Windsor Creek through the floodwall improvements. Improvements to Grayson Way may also be needed to increase roadway elevations to prevent flooding;
- Install two storm water sump pumps, one on each side of East Windsor Tributary #11 to collect local runoff at the Windsor Mobile Country Club. Install flap gates on the storm drains leaving the mobile home park to keep rising creek flows out of the mobile home park. Pump sizing to be determined during project design; and
- Cap manholes on the dual 72-inch bypass pipeline to keep bypass flow within the bypass system.

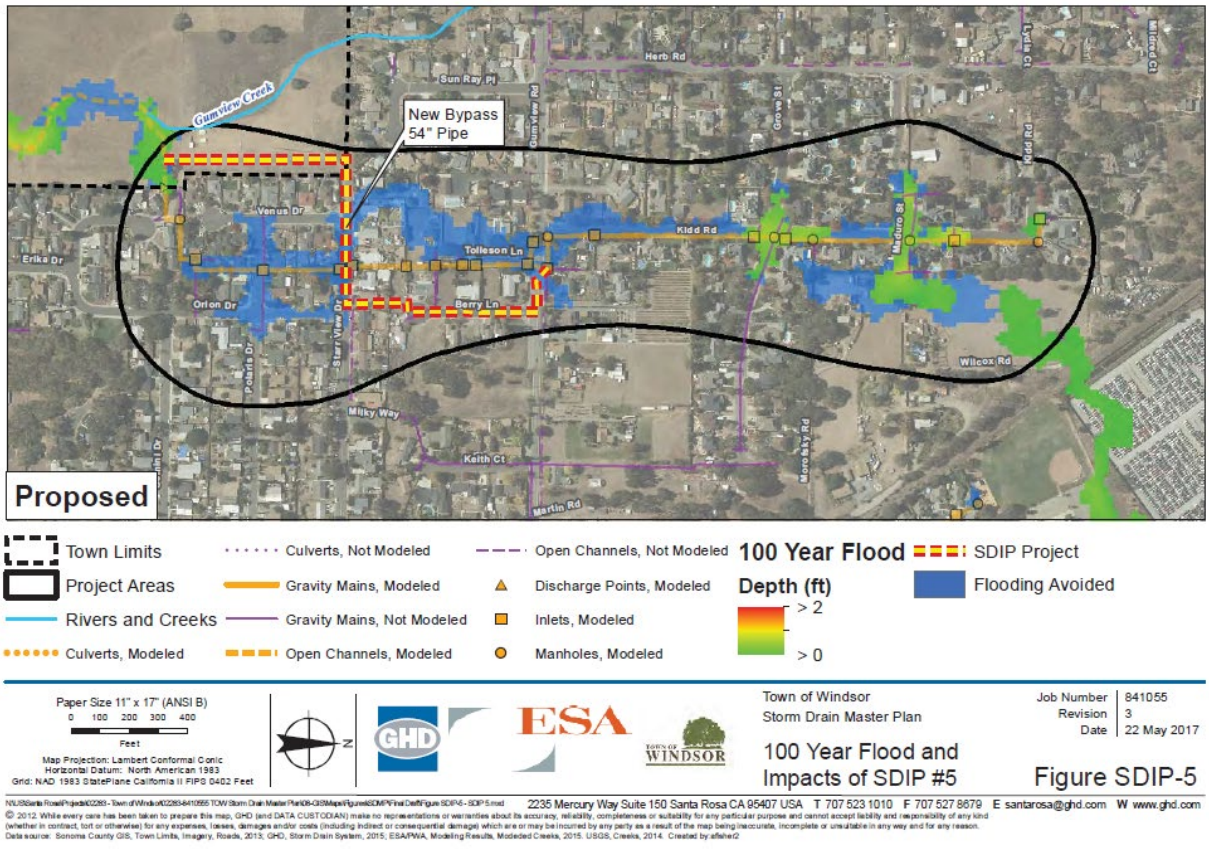


How Trail can be Incorporated into SDIP Project: Construct trail on levees constructed for flood control (trail may shift to east side of creek, depending on flood design; connections to SMART Trail and undercrossing design may be incorporated. Obtain permits for construction of trail as part of project.

SDIP Project Number SDIP-5	Trail Segment 2,7

Description

- Install 140 LF of 54-inch storm drain pipeline in pavement on Gumview Drive and connect it to the existing storm drain pipeline segment in Gumview Drive;
- Continue a 54-inch storm drain bypass pipeline south for 460 LF on Berry Lane;
- Continue a 54-inch storm drain bypass pipeline approximately 200 LF south through private residences to Starr View Drive;
- Install a 54-inch storm drain pipeline from the connection in Starr View Drive west in pavement on Starr View Drive for 490 LF to the open field (this will include a cross connect to the existing storm drain that is crossing Starr View Drive); and
- Install a 54-inch storm drain pipeline 600 feet south in the open field to the current discharge location at the open channel adjacent to Orion Drive.



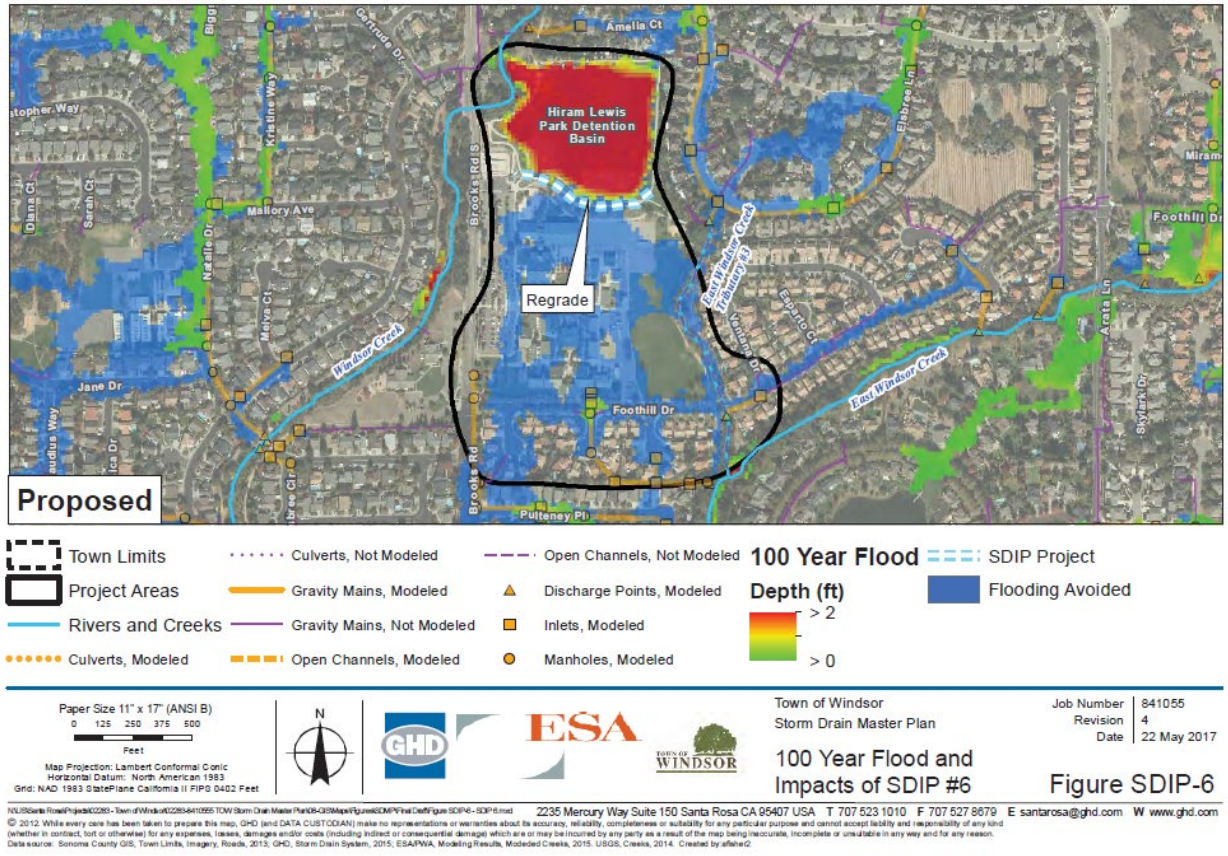
How Trail can be Incorporated into SDIP Project:

Obtain public access easement when utilities are installed and incorporate trail into ROW. Obtain permits for construction of trail as part of project.

SDIP Project Number SDIP-6	Trail Segment 23

Description

Re-grade the southern perimeter of the detention basin installing a 2 foot high berm to allow for additional storage, which will contain flows up to the 100-year flood.

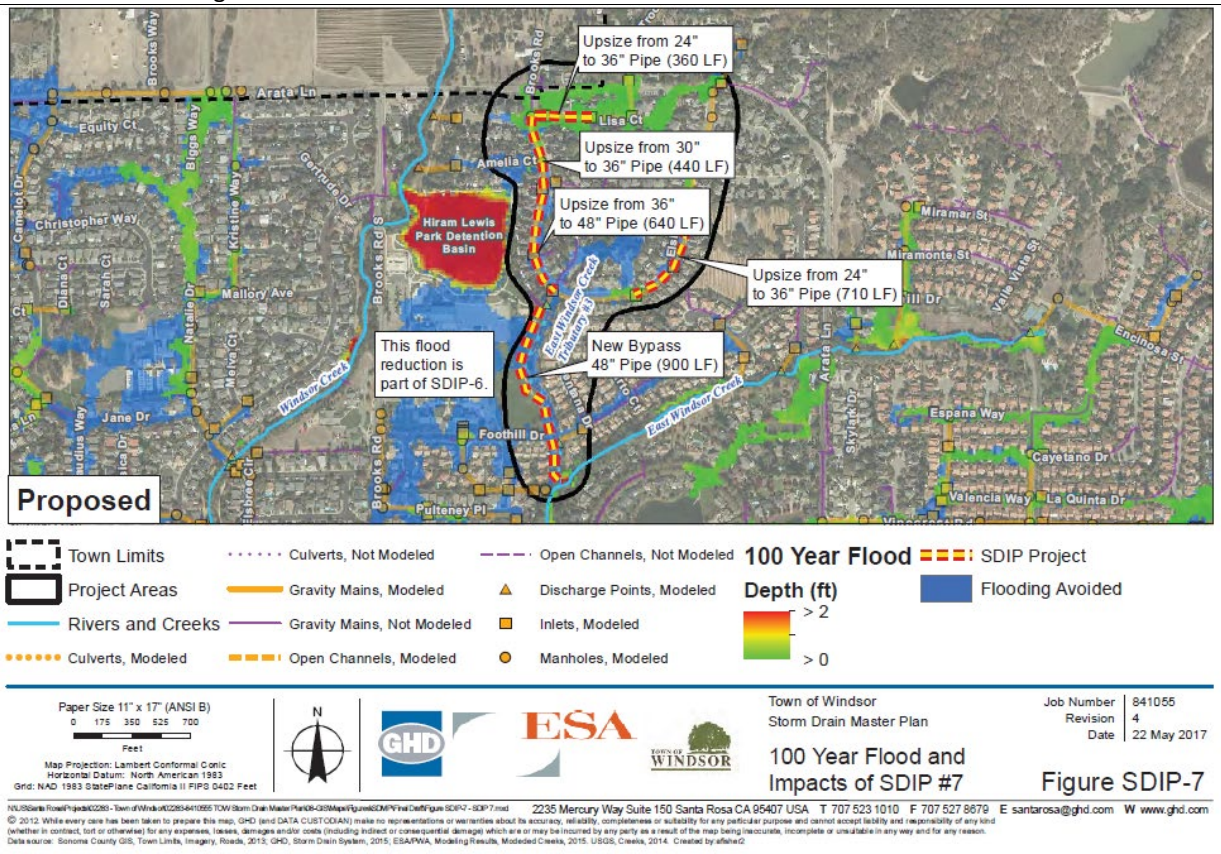


How Trail can be Incorporated into SDIP Project: Incorporate trail into berm and earthwork/grading and access roads. Obtain permits for construction of trail as part of project.

SDIP Project Number SDIP-7	Trail Segment 23

Description

- Replace 640 LF of existing 36-inch storm drain pipeline with a 48-inch storm drain pipeline in Elsbree Lane (west loop), in pavement, from the outlet in the open channel extending north to Rachel Lane;
- Replace 800 LF of existing 24-inch and 30-inch storm drain pipeline in Elsbree Lane (west loop) and Lisa Court in pavement with a 36-inch storm drain pipeline;
- Replace 710 LF of existing 24-inch storm drain in Elsbree Lane (east loop) with a new 36-inch storm drain pipe. Limits of work are within the pavement and extend from south of the intersection with Rachel Lane to north of the intersection with Rachel Lane. See Figure SDIP-7 for the approximate work limits; and
- Install 900 LF of 48-inch storm drain bypass along the west side of the open channel, downstream to a new discharge location in to East Windsor Creek.

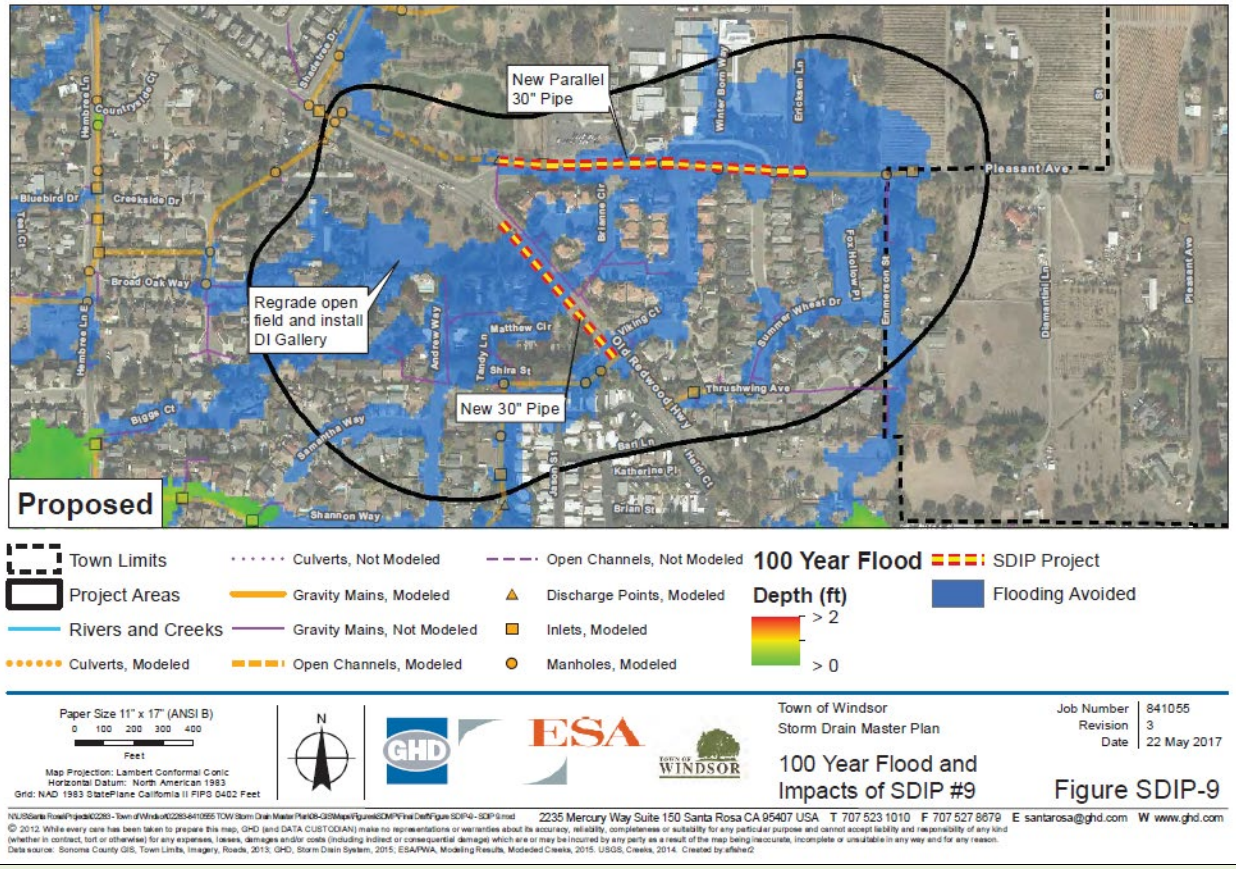


How Trail can be Incorporated into SDIP Project: Incorporate trail into berm and earthwork/grading and access roads. Obtain permits for construction of trail as part of project. Public access easement may be needed from Windsor Unified School District for portions of trail on school – owned lands.

SDIP Project Number SDIP-9	Trail Segment 67

Description

- Replace 640 LF of existing 36-inch storm drain pipeline with a 48-inch storm drain pipeline in Elsbree Lane (west loop), in pavement, from the outlet in the open channel extending north to Rachel Lane;
- Replace 800 LF of existing 24-inch and 30-inch storm drain pipeline in Elsbree Lane (west loop) and Lisa Court in pavement with a 36-inch storm drain pipeline;
- Replace 710 LF of existing 24-inch storm drain in Elsbree Lane (east loop) with a new 36-inch storm drain pipe. Limits of work are within the pavement and extend from south of the intersection with Rachel Lane to north of the intersection with Rachel Lane. See Figure SDIP-7 for the approximate work limits; and
- Install 900 LF of 48-inch storm drain bypass along the west side of the open channel, downstream to a new discharge location in to East Windsor Creek.

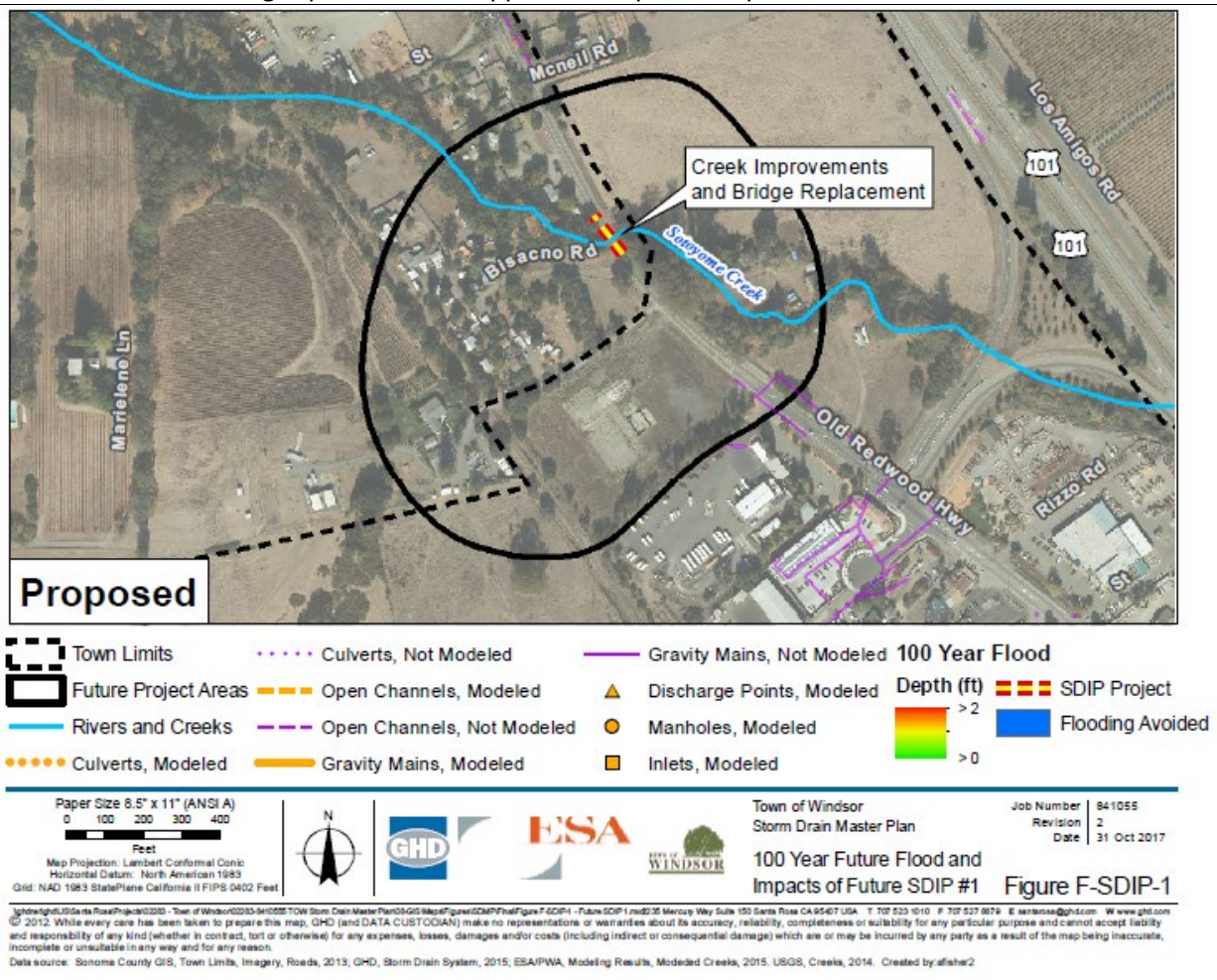


How Trail can be Incorporated into SDIP Project: Permit and construct trail as part of pipeline work.

SDIP Project Number FSDIP-1	Trail Segment 6

Description

F-SDIP 1 proposes to remove sediment from the creek, and replace the bridge on Old Redwood Highway to improve creek hydraulics and accommodate road enhancements. The new bridge is assumed to have a width of 46 feet, which is comprised of two 12-foot travel lanes, two 6-foot wide bicycle lanes, and one 5-foot wide sidewalk, 1.5-feet on each side of the bridge for guardrails, and 2-feet of additional width as a safety precaution. Based on the hydraulic evaluation for the creek, the bridge span may not require expansion; however, for the purpose of this cost analysis, the existing 21-foot clear span is assumed to be expanded to 25-feet, adding 5-feet to the overall bridge span for total span of 30-feet. Therefore, the new bridge span would be approximately 1,380 square feet.

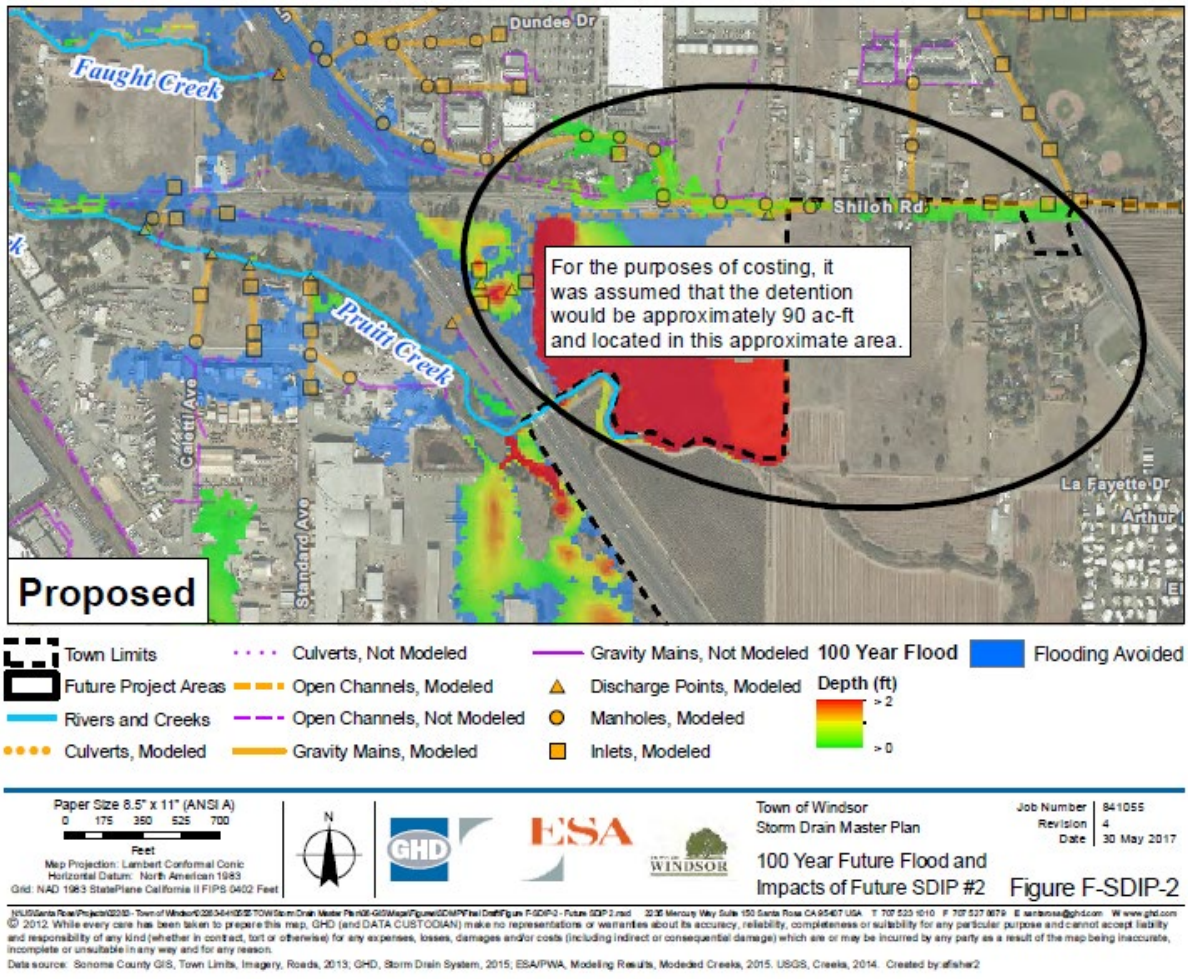


How Trail can be Incorporated into SDIP Project: Consider including Class I bicycle and pedestrian facilities as part of bridge replacement. Obtain permits for construction of trail as part of project.

SDIP Project Number FSDIP-2	Trail Segment 63

Description

F-SDIP 2 proposes to create a new detention basin in the open field east of the US 101 northbound off-ramp at Shiloh Road. The detention basin would retain peak flows and could prevent or reduce flooding of the off-ramp and highway and reduce peak flows into Pruitt Creek. The conceptual site for the detention basin is illustrated in Figure F-SDIP-2. An existing Vision Plan for a portion of the conceptual area impacts a significant portion site and a potential detention basin. A significant portion of the property is within an existing FEMA flood plain. However, the viability of the Vision Plan is unknown, mainly due to the designation of part of the planning area as within the existing FEMA flood plain. For the analysis of this future SDIP, a 10.6 acre footprint was assumed with excavation to a maximum of approximately six feet, and an up to 6.5-foot high levee crest around the perimeter set at Elevation 126.3. This preliminary design provides approximately 90 acre-feet of storage.



How Trail can be Incorporated into SDIP Project: Consider placement of Class I facilities when determining location of detention basins. Consider including Class I bicycle and pedestrian facilities as part of project. Obtain permits for construction of trail as part of project.

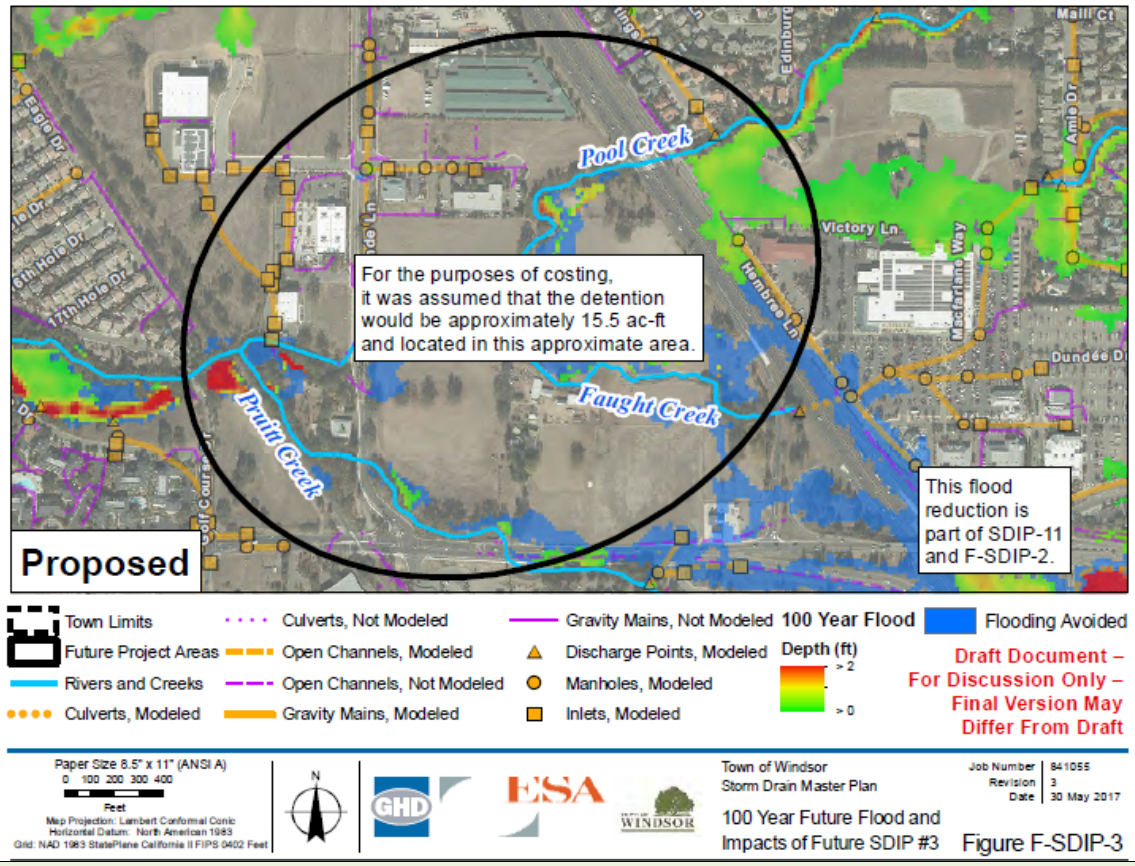
SDIP Project Number FSDIP-3	Trail Segment 41C

Description

Improve Water Quality: F-SDIP 3 proposes to improve Pool Creek and Faught Creek in private property located between US 101 and Conde Lane, including: bank stabilization; removal of excess sediment and livestock waste; and installing restrictions for creek crossing by livestock.

Reduce Flooding: F-SDIP 3 also proposes to construct a storm water detention basin upstream of the confluence of Pool Creek and Pruitt Creek, west of US 101. For the purposes of costing, it was assumed that the detention basin would be approximately 15.5 acre-feet within a 4 acre footprint, with levees constructed along Pool and Faught Creeks to retain peak storm flows from those creeks (effectively raising the hydraulic grade line without causing additional flooding). The method for transferring creek flow to and from the detention basin should be determined during preliminary design (i.e., pipelines, overflow weirs).

The Town should consider integrating the proposed improvements into future development that is located within this SDIP area. For example, development of a storm water detention basin within a park setting should be considered also for the additional benefits associated as a park during non-stormwater detaining periods, similar to Hiram Lewis Park. If the property is not developed as a park (i.e., other commercial land use), the addition of detention features to mitigate for increases in stormwater runoff should be considered.



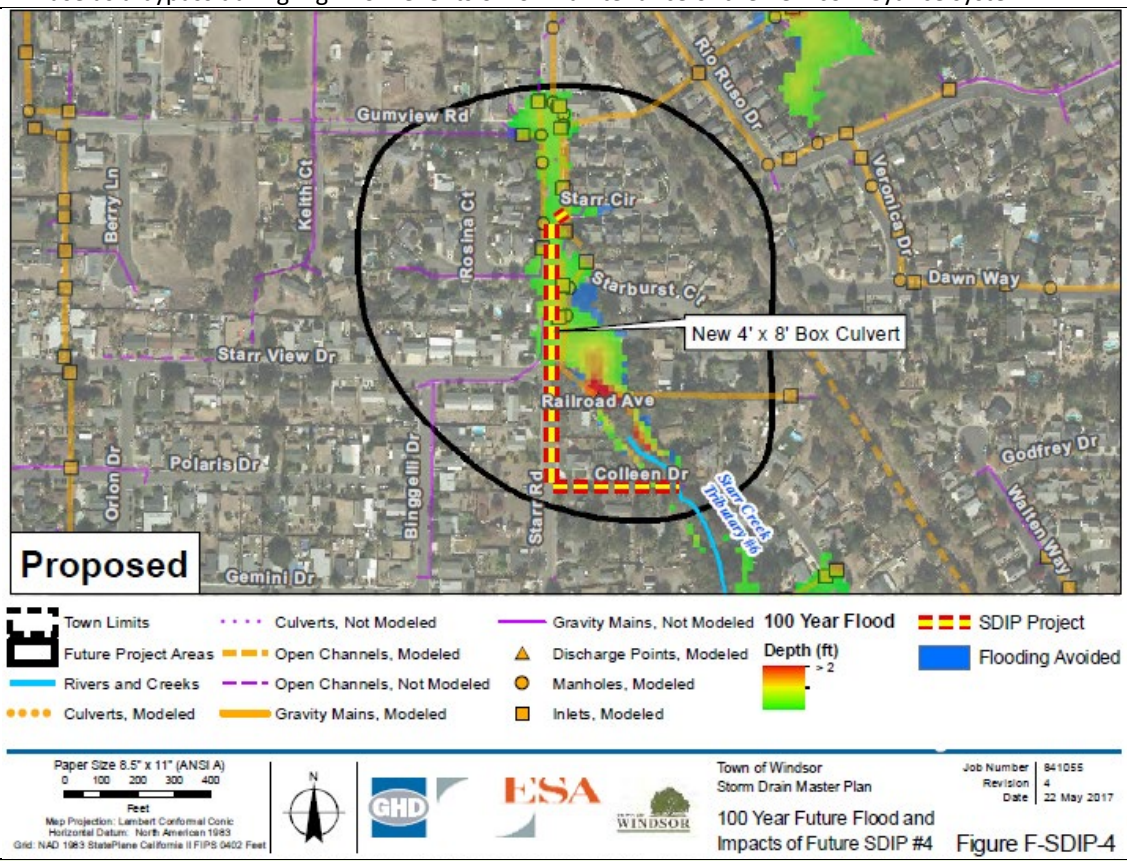
How Trail can be Incorporated into SDIP Project: Consider options for Class I facilities in this area if located near SMART Trail, for potential connections to businesses in this area. Obtain permits for construction of trail as part of project.

SDIP Project Number FSDIP-4	Trail Segment 3A, 3B, 3C

Description

SDIP 4 proposes to install pipeline / box culvert improvements in Starr Road and Colleen Drive. A new pipeline or box culvert would convey flow from Starr Road in the vicinity of Starr Circle and Gumview Road to Starr Creek Tributary #6 at Colleen Drive. There are two apparent options for improvements: 1) the new pipeline / box culvert connects to the creek via an easement across from Starr View Drive and the two existing pipelines crossing Colleen Drive are upsized; or 2) a new pipeline and box culvert is installed in Starr Road and Colleen Drive up to the two existing pipelines, bypassing flows around the problem area. Option 2 is assumed for the summary below, as the proposed improvements would be located within Town right-of-way:

- Install 1,010 LF of 4-foot x 5-foot reinforced concrete box (RCB) culvert in Starr Road from Starr Circle south to Colleen Drive;
- Abandon the existing box culvert located underneath the residential property; and
- Install 350 LF of 4-foot x 5-foot RCB in Colleen Drive from Starr Road to culvert crossing on Colleen Drive. Discharge the new box culvert to the creek on the downstream side of Colleen Drive.
- Note: the Town may also consider maintaining the existing box culvert located in the private property for use as a bypass during high flow events or for maintenance of the new conveyance system.

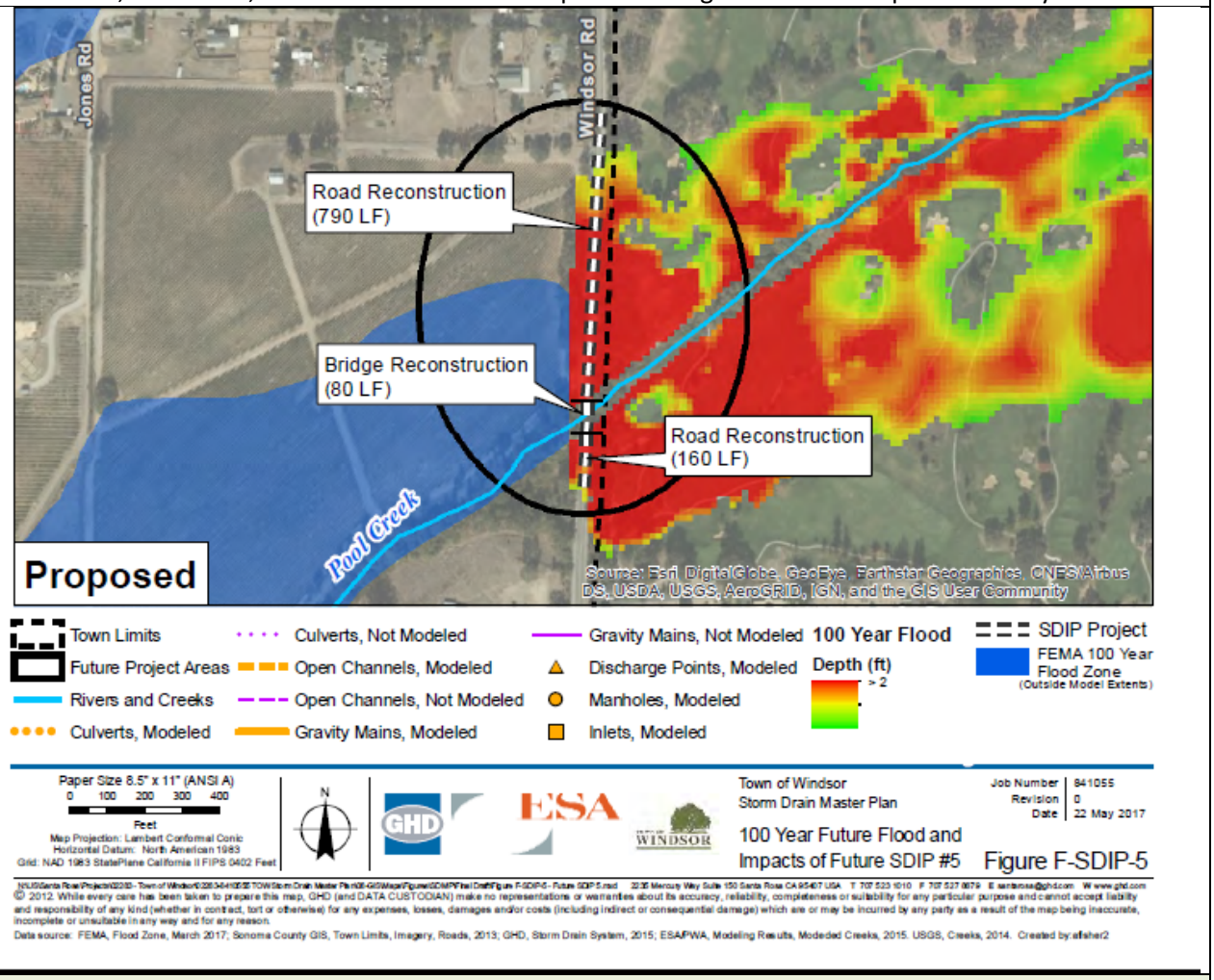


How Trail can be Incorporated into SDIP Project: Consider including Class I bicycle and pedestrian facilities as part of creek work. Obtain permits for construction of trail as part of project. Resolve encroachment issues in project vicinity.

SDIP Project Number FSDIP-5	Trail Segment 49

Description

The proposed improvement is to construct a bridge over Windsor Creek that is clear of the 100-year future conditions model HGL. Improvements would not be intended to reduce the HGL or flooding in Pool Creek, but rather, to allow traffic to be unimpeded during storm events up to the 100-year event.



How Trail can be Incorporated into SDIP Project: Include Class I facilities as part of bridge replacement. Obtain permits for construction of trail as part of project.

4. TRAIL RANKING AND SCREENING

One of the Study's objectives is to screen and rank potential trails in order to establish priorities for implementation. With community input, the Study team developed a screening and ranking methodology to inform decision making for implementation of the Town's Class I Trail Projects. The screening and ranking process provides a basis for decision making, and allows the Town to set priorities, manage resources, and implement improvements efficiently and systematically. In addition to this ranking, other factors such as development opportunity, financial conditions, political leverage, and environmental conditions my influence project implementation, as some projects may be quicker and easier to implement than others as opportunities arise.

4.1 TOWN PRIORITIES AND METHODOLOGY

The Town established an initial basis for screening priorities for trail implementation:

- Projects that have high anticipated use;
- Projects that close gaps between the ends of existing paths;
- Projects that link neighborhoods, parks and key activity centers (such as the Town Green and commercial areas); and
- Projects that can be easily implemented.

To supplement these criteria and provide insight into local and national screening and ranking methodologies for bicycle and pedestrian projects, research was performed to determine the methodologies employed in other jurisdictions. To begin, the National Cooperative Highway Research Program, Report 803 - Pedestrian and Bicycle Transportation Along Existing Roads—ActiveTrans Priority Tool Guidebook (2015) was reviewed. This national guide provides a step-by-step methodology for prioritizing pedestrian and bicycle facility improvements. Although the focus is on 'on-street' routing, the methodology is flexible, allowing the user to assign goals and values that reflect those of the agency and the community. It is also transparent, breaking down the process into a series of discrete steps that can be easily documented and communicated to the public. Review of local efforts including the 2010 Santa Rosa Bicycle and Pedestrian Master Plan, 2014 SCTA Countywide Bicycle Plan, and the Marin County Non-Motorized Transportation Pilot Program supplemented the national research.

Review of Local Examples

The following efforts were reviewed for comparative analysis and to better understand the methodology employed for project screening and ranking: Marin County Non-Motorized Transportation Pilot Program (2007), Santa Rosa Bicycle and Pedestrian Master Plan (2010), and the SCTA Countywide Bicycle Plan + Town of Windsor Chapter (2014).

Marin County Non-Motorized Transportation Pilot Program – The program utilized separate screening and ranking criteria and scores, to develop a list of improvements and priorities that could help jurisdictions throughout Marin County to achieve specific objectives of the Non-Motorized Transportation Pilot Program. The criteria were developed to select projects that would result in mode shift, i.e., projects that would help get more people to choose to walk or bike for transportation purposes. Screening criteria included 4 categories with a maximum point allocation of 100. Criteria included: 1. Impact on Achieving Modal Shift; 2. Complements Proposed Transportation Network by

Providing Needed Support Facilities; 3. Ability and Timeliness of Implementation; and 4. Benefit-to-Cost Determination.

Ranking Criteria included 5 categories with a maximum point allocation of 100. Criteria included: 1. Impact in Achieving Modal Shift; 2. Completes a Portion of the Transportation Network by Providing Connectivity and Access; 3. Improves Safety; 4. Ability and Timeliness of Implementation; and 5. Unique Opportunities.

Santa Rosa Bicycle and Pedestrian Master Plan – The Santa Rosa B&PMP Screening and Ranking Criteria were established by the Town's consultant in cooperation with staff and its Bicycle and Pedestrian Advisory Committee. The methodology used a screening, scoring, and ranking process that closely resembles that which is proposed for the Town of Windsor. The screening criteria addressed issues geared towards streets, bicyclists, and pedestrians, some of which are not applicable to Windsor. The criteria included: Traffic Volume, Collision History, Current Demand, Community Interest, and Closure of a Gaps/Increases Connectivity, Technical Ease of Implementation, and Land Use.

SCTA Countywide Bicycle and Pedestrian Plan + Town of Windsor Chapter – The Countywide Bicycle and Pedestrian Plan utilized an internal screening ranking process with project review and prioritization performed internally by staff, the Bicycle and Pedestrian Advisory Committee, and project consultants. Priority assignments considered public input, demand, land-use, cost, opportunity, and connectivity and were categorized as High, Medium, or Low, giving staff flexibility to move forward with project implementation based on opportunity.

Scoring Criteria

The ActiveTrans Priority Tool (ATP) methodology was selected as the starting point for project screening and scoring because of its flexibility, transparency, "common sense" approach, and national acceptance. The ATP methodology identifies nine factors that are commonly considered in the prioritization processes and can be used to reflect a range of community/agency values.
The ATP factors include:

1. Stakeholder Input	**6. Demand**
2. Constraints	**7. Connectivity**
3. Opportunities	**8. Equity**
4. Safety Needs	**9. Compliance**
5. Existing Conditions	

The ATP factors are defined below, and where appropriate have been modified from the Guidebook to align with the needs of the Town of Windsor and the intent and purpose of the Windsor Class I Bicycle and Pedestrian Trails Study. Three factors from the list above have been eliminated; "Existing Conditions" and "Compliance," which both focus on built street environments, and "Equity" which is incorporated into the factors "Connectivity" and "Use".

Each of the Town's ranking criteria, as identified above, is reflected and expanded upon within the ATP factors listed below. The screening criteria and factor weights were updated based upon input received from staff and the Bicycle and Pedestrian Advisory Committee. The screening factors have been formatted under two categories: **Opportunities** and **Constraints**. Factors in the opportunities category

include: **Stakeholder Input**, **Ease of Implementation**, **Connectivity**, **Accessibility**, and **Use**. Factors in the constraints category include **Engineering Complexity** and **Environmental Complexity**.

Each screening factor includes criteria that further define the factor and receive a weighted score. Criteria weights have been assigned a value range of +(0 to 3) on the opportunities side, and – (0 to 3) on the constraints side, representing a "high", "medium", and "low" value. The Trail Scoring Criteria are shown in **Table 4-1**, and described further in **Section 4.2**.

Table 4-1: Trail Screening Criteria

	Category	Screening Factor	Point Scale[6]
Opportunities			
1	Stakeholder Input	Stakeholder Support	0-3
2		Public Support	0-3
3	Ease of Implementation	Development Opportunity	0-3
4		Funding Opportunity	0-3
5	Connectivity	Closes Gap in Paths	0-3
6		Connects to Activity Node	0-3
7	Accessibility	Improves Access	0-3
8		Enhancements to Existing Facilities	0-3
9	Use	Existing Use (Estimated)	0-3
10		Anticipated Use	0-3
11		Provides Alternative to Arterial Street	0-3
	Category	Screening Factor	Point Scale[7]
Constraints			
12	Engineering Complexity	Design Complexity/Implementation Costs	-3 - 0
13		Right of Way[8]	-3 - 0
14		Complexity of Design/Structures	-3 - 0
15	Environmental Complexity	Biological Resources	-3 - 0
16		Geology/Hazards	-3 - 0
17		Hydrology/Flooding	-3 - 0
18		Land Use Consistency	-3 - 0
19		Traffic[9]	-3 - 0
Total Points Possible			33

Local and national review of project screening and ranking criteria yielded a variety of techniques and methodologies that are employed to develop implementation priorities. The existing list of projects in the 2014 Windsor Bicycle and Pedestrian Master Plan includes a general rank of High, Medium, and Low, but does not provide staff or the public with a transparent process to understand the criteria evaluated and methods employed to achieve the designated rankings. The applied methodologies and weight scale are intended to help Town staff, stakeholders, and the public to better understand the criteria and

[6] A point scale of + 0 to 3 points is possible for each criterion under the Opportunity factors. The weighting scale represents low, medium, and high.
[7] Zero to -3 points can be deducted for criteria under the Constraints factors. The weighting scale represents low, medium, and high.
[8] Right-of-Way includes consideration of acquisition challenges and costs.
[9] Considers traffic impacts and street crossing improvement needs.

considerations that were used to achieve the project ranking priorities the Class I Trail Study. The process is transparent, can be easily understood by the staff and the public, is adjustable for future efforts and as priorities change over time, and generates specific numerical scores.

A presentation on the Trail Screening and Ranking Methodology was delivered to staff and the Bicycle and Pedestrian Advisory Committee on April 18, 2017. The methodology, screening factors, evaluation criteria, and scoring were reviewed and discussed at length. Following the meeting, written comments on the material were submitted by staff and Advisory Committee members. Revisions were prepared to address the comments received, resulting in a 'quasi' biaxial separation of opportunities and constraints.

The screening factors and evaluation criteria were adjusted and expanded to better address initial environmental screening. The scoring methodology was revised so the criteria weights have a value range of + (0 – 3) on the opportunities side, and – (0 – 3) on the constraints side; representing a "high", "medium", and "low" value to provide greater clarity. To accommodate new trail segments, including those identified in the *Connecting Windsor Study,* the trail numbering system has been revised to provide a reserve of numbers within each map quadrant for expansion of the project list. Further, select trail names have been refined for identification and location clarity.

4.2 SCREENING FACTORS

Opportunities

Stakeholder Input – The Stakeholder Input factor considers the amount of public feedback in support of (or against) a pedestrian or bicycle improvement at a particular location. The Stakeholder Input factor can be represented by being consistent with recommendations in an adopted plan, by a citizen advisory committee, from staff or elected officials, and/or via quantitative documentation of requests/comments from the public including the on-line mapping tool, written comments, and input collected in public meetings. Information from the *Connecting Windsor* and *Parks and Recreation Master Plan* surveys are reflected in scoring this factor, where applicable.

Ease of Implementation – This factor quantifies the ability to take advantage of resources that support project implementation. These resources may be financial or political, or recognize existing conditions. They are important to consider because they save time and money when implementing projects. For example, financial opportunities include whether or not a proposed improvement is eligible for grant funding, can draw from a dedicated funding source, can be incorporated into a scheduled construction or maintenance project, or can be implemented as a component of a private project through development requirements/agreements.

Connectivity – This factor accounts for the degree to which a project allows pedestrians or bicyclists to travel comfortably and continuously throughout Town in an off-street setting to reach a destination. Linkage or connectivity is a relevant factor when prioritizing new facilities, particularly when the new facility fills or closes a gap between existing facilities or provides direct links between neighborhoods and parks, and key activity centers such as the Town Green, schools, commercial and employment areas, recreation destinations, and multi-modal transit resources.

Accessibility – This factor addresses the need to provide equitable access throughout the community and to meet ADA accessibility needs such as the formalization of existing foot paths through widening,

surface improvements, formal trail right-of-way dedication, accessible entry improvements, and way finding improvements.

Use – This factor represents existing or anticipated pedestrian and bicycle activity or use levels and considers how proposed improvements would serve as an alternative to the use of arterial streets. This factor is often closely related to stakeholder input and gap closure, as residents and stakeholders translate demand into their personal priorities. Use and Demand is a key factor to consider if an agency's aim is to add new pedestrian or bicycle facilities where they will be most used or needed. Existing pedestrian and bicycle demand can be measured by counting the number of people on foot and bike at a given time and location. For the purpose of this effort existing use is a qualitative analysis based upon observation and input received from the public including the extensive survey work performed for the Connecting Windsor and Parks and Recreation Master Plan studies. Anticipated or 'latent' pedestrian and bicycle demand can be estimated by considering the proximity of pedestrian or bicycle improvement locations to bicycle and pedestrian attractors or generators, such as schools, parks, transit facilities, and mixed-use and high-density land uses.

An increasing body of evidence supports the concept of latent demand. For example, the Non-Motorized Transportation Pilot Program (FHWA) demonstrated that walking and bicycling improvements often led to an increase in the total number and rate of people walking and bicycling in the community. Consequently, analyzing latent demand enables communities to focus resources and investments on areas with the greatest potential for multimodal trips, even if current levels of walking and bicycling trips are low.

Constraints

Two types of constraints are considered – engineering and environmental. As noted earlier, depending on severity, these have negative points awarded.

Engineering Complexity - This factor addresses the relative level of difficulty in implementing a project. Engineering Complexity is important to consider because it can drain agency resources. Many of these constraints are framed in terms of cost, and may include right-of-way acquisition, facility design, and construction difficulty (i.e., project requires a foot bridge, hillside cut or fill, retaining walls, etc.).

Environmental Complexity – This factor provides an initial screening of the potential environmental impacts of the potential trails. Evaluation criteria are tailored to match environmental factors to be evaluated as part of the California Environmental Quality Act (CEQA) statute and guidelines and include consideration of issues and permitting complexity related to biological resources, geology and hazards, hydrology, land use consistency, and traffic. In some cases, environmental complexity may include potential flood damage, special design considerations (trail setback, permeability, bridges, etc.), and/or maintenance needs.

Scoring Process

A total score of 33 points is possible for each discrete project using the proposed factors and weight scale described above. The scoring process utilized existing conditions data developed from field surveys, the Connecting Windsor Study and Park and Recreation Master Plan, input received from the public via the on-line mapping tool and in public meetings, stakeholder input, and conclusions

developed through analysis completed for the project. Project scoring was then completed by the Study team, reviewed by staff, and then confirmed by the Town's Bicycle and Pedestrian Advisory Committee.

4.3 RESULTS

Table 4-2 summarizes the trail segment priority results. **Table 4-3** reflects the detailed scoring of each trail segment identified in **Section 3.**

Table 4-2: Trail Priorities

Trail Number	Project Name	Begin Point	End Point
HIGH PRIORITY – SHORT TERM IMPLEMENTATION			
1	SMART Northwest	Windsor Town Limits	Windsor River Road
3A	North Starr Creek Trail	Starr Road	SMART Trail
4A	East Starr Creek Trail	Oak Park Street	SMART Trail
5	101 Crossing Complex	Los Amigos Road	Old Redwood HWY
21A	West Windsor Creek Trail	Brooks Road South	Lazy Creek Drive
22	Windsor Creek Connector	W Windsor Creek	Brooks Road
23	Windsor Middle School	Elsbree Lane	Foothill Drive
24A	East Windsor Creek Trail	Foothill Drive	Hembree lane
24B	East Windsor Creek Trail	Lakewood Drive	Foothill Drive
26	Franklin Street Bridge	Brooks Road South	4th Street
29	Jensen Lane East Connector	Vinecrest Road	Old Redwood Highway
30	Jensen Lane Trail	Hembree Lane	Jensen lane East Connector
41A	SMART Southwest	Windsor River Road	Jaguar Way/Park Circle
41B	SMART Southeast	Windsor River Road	Mitchell Lane
41C	SMART Shiloh South	Mitchell Lane	Town Limits
42	Conde Lane Connector	Old Redwood Highway	Conde Lane
43A	South Windsor Creek Trail	Conde Lane	Old Oak Road
43B	South Windsor Creek Trail	Old Oak Road	SMART Trail (Bell Road)
47	Jaguar Way Connector	Starr Road	Windsor Road
67	Old Redwood Highway Greenway	Pleasant Avenue	Town Limits south of Shiloh Road
MEDIUM PRIORITY – MID TERM IMPLEMENTATION			
3B	North Starr Creek Trail	Starr Road	Stellar Lane
3C	North Starr Creek Trail	Stellar Lane	Windsor River Road
4B	East Starr Creek Trail	Oak Park Street	Windsor River Road
21B	West Windsor Creek Trail	Lazy Creek Drive	Senior Center
21C	West Windsor Creek Trail	Senior Center	Los Amigos Road
21D	Foxwood Connector	W Windsor Creek Trail	Los Amigos Road
24C	East Windsor Creek Trail	Franklin Street Bridge	Lakewood Drive
25	Lakewood-Amigos Trail	Lakewood Drive	Los Amigos Road
27	Pueblo Viejo Park Connector	3rd Street	4th Street
28	Arata Lane Connector	Brooks Road	Foothill Regional Park
29	Jensen Lane Connector	Vinecrest Road	Old Redwood Highway
44	Trione Connector	Trione Circle	SMART Trail

Table 4-2: Trail Priorities			
Trail Number	**Project Name**	**Begin Point**	**End Point**
45	WWTP Connector	Windsor Road	Trione Circle
46	South Starr Creek	Keiser Park	Jaguar Way
48	SMART-Windsor Rd Connector	Windsor Road	SMART Trail
61	Pool Creek Trail	Hembree Lane	Old Redwood Highway
62	Faught Creek Trail	Victory Lane	Old Redwood Highway
64	Robbins Park Connector	Hembree Lane	Robbins Park
LOW PRIORITY – LONG TERM IMPLEMENTATON			
2	Gumview Trail	Gumview Road	Windsor River Road
6	Park & Ride Connector	Old Redwood Highway	SMART Trail
7	SMART-Gumview Connector	SMART Trail	Gumview Road
8	Gumview Creek Trail	Gumview Trail	Starr View Drive
31	Lakewood Connector	Jensen Lane	East Windsor Creek
49	Windsor-Pool Creek Loop	Windsor Road	Windsor Road
50	Mitchell Lane Connector	Windsor Road	8th Hole Drive
63	Shiloh Vision	Shiloh Road	Old Redwood Highway
65	Pool Creek-Jensen Lane Connector	Emmerson Street	Old Redwood Highway
66	Faught-Pool Creek Connector	Faught Creek	Pool Creek

Table 4-3: Trail Scoring Criteria

					Opportunities											Constraints								
				Screening Factors	Stakeholder Input		Ease of Implementation		Connectivity		Accessibility		Use			Engineering Complexity			Environmental Complexity					Total
				Point Scale [1]	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	-3-0	-3-0	-(0 - 3)	-3-0	-3-0	-3-0	-3-0	-3-0	33
Quadrant	Number	Trail Description	Beginning Point	End Point	Public Support	Stakeholder Support	Development Opportunity	Funding Opportunity	Closes Gap in Paths	Connects to Activity Node	Improves Access	Enhancements to Existing Facilities	Existing Use (estimated)	Anticipated Use	Provides Alternative to Arterial Street	Design Complexity / Implementation Costs	Right-of-Way 2	Complexity of Design/Structures	Biological Resources	Geology/Hazards	Hydrology	Land Use Consistency	Traffic	
Northwest	1	SMART (Windsor River Road North)	Windsor Town Limits (North)	Windsor River Road	3	3	3	3	3	3	3	2	1	3	3	-1	0	0	-1	-1	0	0	-2	28
	2	Gumview -Windsor River Connector	Gumview Road	Windsor River Road	3	1	3	0	1	2	3	0	0	3	3	0	-1	0	-1	0	0	0	0	14
	3A	N Starr Creek (Starr View Connector)	Starr View Drive at Starr Road	SMART Trail	1	3	1	3	3	3	3	3	0	3	3	-1	0	0	0	0	-1	0	0	25
	3B	N Starr Creek (Abbie Court North)	Starr View Drive at Starr Road	Abbie Court	3	3	1	2	2	3	3	2	2	2	3	-1	0	0	-1	0	-1	0	0	23
	3C	N Starr Creek (Abbie Court South)	Abbie Court/Stellar Lane	Windsor River Road	3	3	1	2	2	3	3	2	2	2	3	-1	0	0	-1	0	-1	0	0	23
	4A	E Starr Creek (Oak Park - Railroad)	Oak Park Street	Railroad Avenue / SMART Trail	3	3	3	3	3	3	3	2	0	3	3	-1	0	-1	-1	0	-1	0	0	25
	4B	E Starr Creek (Oak Park -Windsor River Road)	Oak Park Street	Windsor River Road	1	3	1	2	3	3	3	2	0	3	3	-1	0	-1	-1	0	-1	0	0	20
	5	US 101 Crossing Complex	Windsor River Road	Los Amigos Road	3	3	3	3	3	3	3	2	3	3	3	-3	-2	-3	-1	-1	0	0	-1	24
	6	Windsor School District SMART Trail Connector	Old Redwood Highway	Herb Road	1	2	1	3	3	2	3	0	0	3	3	-1	-1	-2	0	-1	-1	-1	0	14

					Opportunities											Constraints								
				Screening Factors	Stakeholder Input		Ease of Implementation		Connectivity		Accessibility		Use			Engineering Complexity			Environmental Complexity					Total
				Point Scale [1]	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	-3-0	-3-0	-(0 - 3)	-3-0	-3-0	-3-0	-3-0	-3-0	33
	7	Gumview Trail North	Herb Road	Gumview Road	1	1	3	0	3	3	3	0	0	3	3	-1	-3	0	-1	0	0	-1	0	14
	8	Starr View-Gumview Connector Trail	Gumview Trail	Starr View Road	2	1	3	0	3	3	3	0	0	3	2	-1	-3	0	-1	0	0	-1	0	14
	9 to 20	RESERVED FOR FUTURE USE																						
Northeast	21A	W Windsor Creek (Brooks-Natalie)	Brooks Road (across from Hiram Lewis Park adjacent to Jessica Drive)	Natalie Drive	3	3	0	3	3	3	3	3	3	3	3	-1	0	-1	-1	-1	-1	0	0	25
	21B	W Windsor Creek (Natalie-Lazy Creek)	Natalie Drive	Lazy Creek Drive	3	3	0	3	3	3	3	3	0	3	3	-1	0	-1	-1	-1	-1	0	0	22
	21C	W Windsor Creek (Lazy Creek-Los Amigos)	Lazy Creek Drive	Los Amigos Road	3	3	0	3	3	3	3	1	0	3	3	-2	0	-1	-2	-1	-1	0	0	18
	21D	Foxwood Connector	Foxwood Drive	Los Amigos Road	1	1	0	1	2	3	3	3	1	2	2	0	0	0	0	0	0	0	0	19
	22	E Windsor Creek Extension (Foothill-Natalie)	Brooks Road	Natalie Drive	3	3	2	3	3	3	3	3	3	3	3	0	-2	0	-1	0	0	0	0	29
	23	Windsor Middle School Connector	Elsbree Lane	Foothill Drive	3	3	0	3	3	3	3	3	3	3	3	-1	-2	-1	0	-1	0	0	0	25
	24A	Foothill RP Connector	Foothill Drive	Hembree Lane	3	3	0	3	3	3	3	3	3	3	3	-1	0	-1	0	0	-1	0	0	27
	24B	Foothill RP Connector	Foothill Drive	Lakewood Drive	3	3	1	3	3	3	3	3	3	3	3	-1	0	-2	-1	-1	-2	0	0	24
	24C	Foothill RP Connector	Lakewood Drive	Brooks Road South (adjacent to Lakewood Drive)	3	3	3	1	3	3	3	2	2	3	3	-1	-3	-1	-1	0	-1	-1	-1	20
	25	Lakewood-Amigos Pathway (Part of 101 crossing Complex)	Old Redwood Highway	Los Amigos Road	3	3	3	3	3	3	3	3	1	3	3	-2	-2	-2	0	0	0	-1	-1	21
	26	Franklin Street Bridge	4th Street	Brooks Road South (adjacent to Lakewood Drive)	3	3	1	3	3	3	3	3	2	3	3	-1	-1	-1	-1	-1	-1	0	0	24
	27	3rd St - 4th St Connector	3rd Street	4th Street	2	1	1	1	2	3	3	3	2	2	3	-1	0	-1	0	0	0	0	0	21
	28	Arata/Foothill Park Connector	Arata Lane	Foothill Park	1	2	1	1	3	3	3	3	1	2	3	-1	0	-1	0	0	0	0	0	21

					Opportunities											Constraints								
				Screening Factors	Stakeholder Input		Ease of Implementation		Connectivity		Accessibility		Use			Engineering Complexity			Environmental Complexity					Total
				Point Scale [1]	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	-3-0	-3-0	-(0 - 3)	-3-0	-3-0	-3-0	-3-0	-3-0	33
	29	Jensen Lane East Connector	Vinecrest Road	Old Redwood Highway	3	3	3	1	3	3	3	3	3	3	3	0	-1	-1	-1	0	-1	0	0	27
	30	Jensen Lane Trail	Hembree Lane	Jensen Lane East Connector	3	3	3	1	3	3	3	3	3	3	3	0	-1	-1	-1	0	-1	0	0	27
	31	Lakewood Connector	Jensen Lane	East Windsor Creek	2	0	2	2	3	3	3	3	3	2	1	-1	-1	-1	-2	-2	-2	0	0	14
	33 to 40	RESERVED FOR FUTURE USE																						
Southwest	41A	SMART -West side of Tracks	Windsor River Road	Trione Circle	3	3	3	3	3	3	3	2	1	3	3	-2	0	-2	-1	-1	-1	0	0	24
	41B	SMART - East Side of Tracks	Windsor River Road	Mitchell Lane	3	3	3	3	3	3	3	2	1	3	3	-1	0	-2	-1	-1	-1	0	0	24
	41C	SMART - East Side of Tracks	Mitchell Lane	Town Limits	3	3	3	3	3	3	3	2	1	3	3	-1	0	0	-1	-1	-1	0	0	27
	42	Conde Lane Connector	Old Redwood Highway	Conde Lane	3	3	3	2	3	3	3	3	1	3	3	-1	0	0	-1	0	0	0	-1	27
	43A	S Windsor Creek	Conde Lane	Windsor Creek Elementary School	3	3	3	3	3	3	3	2	3	3	3	-1	-2	-1	-1	0	0	0	-1	26
	43B	S Windsor Creek	Windsor Creek Elementary School	Bell Road	3	3	3	3	3	3	3	2	3	3	3	-1	-2	-1	-1	0	0	0	0	26
	44	Trione Connector	Trione Circle	Trione Circle	3	3	0	1	3	2	3	3	1	3	3	-1	0	-1	0	0	0	0	0	22
	45	WWTP Connector	Windsor Road	Trione Circle	3	3	2	2	3	3	3	2	1	3	3	-1	0	-2	-2	0	-1	0	0	20
	46	S Starr Creek	Keiser Park	Starr Creek Park	3	3	1	3	3	3	3	3	2	3	3	-1	0	-2	-2	-1	-1	0	0	23
	47	Jaguar Way	Starr Road	Windsor Road	3	3	2	2	3	3	3	3	3	3	3	-1	0	-1	-1	0	0	0	-1	27
	48	Town of Windsor Connector	Windsor Road	SMART Trail	1	1	1	2	3	3	3	2	0	3	3	-1	0	-1	-2	-2	-1	0	0	15
	49	Windsor/Pool Creek Loop	Windsor Road	Windsor Road	1	2	0	3	1	1	1	3	0	2	2	-1	0	0	-1	0	-1	0	0	13
	50	Mitchell Lane	Windsor Road	Mitchell Lane	1	1	2	0	1	1	2	3	2	3	3	-1	0	-1	-1	-2	-2	0	0	12
	51- to 60	RESERVED FOR FUTURE USE																						
Southeast	61	Pool Creek (Old Rwd HWY - Hembree)	Old Redwood Highway	Hembree Lane	3	3	3	2	3	2	3	2	1	3	3	-2	-1	-2	-3	-2	-3	0	0	15
	62	Faught Creek (Old Rwd HWY - Victory)	Old Redwood Highway	Victory Lane	3	3	2	1	3	3	3	2	1	3	3	-1	-1	-1	-1	-1	-2	0	-1	19

					Opportunities											Constraints								
				Screening Factors	Stakeholder Input		Ease of Implementation		Connectivity		Accessibility		Use			Engineering Complexity			Environmental Complexity					Total
				Point Scale [1]	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	-3-0	-3-0	-(0 - 3)	-3-0	-3-0	-3-0	-3-0	-3-0	33
	63	Shiloh Vision (Pruitt Creek)	Edmund Avenue (Mobile Home Estates)	Shiloh Road	3	3	3	0	0	3	2	0	0	1	2	0	-1	0	-1	0	-1	0	0	14
	64	Robbins Park Connector	Hembree Lane	Robbins Park	2	2	3	1	2	3	3	1	2	3	2	-1	-1	-1	-1	0	-1	0	0	19
	65	East Pool Creek	Old Redwood Highway	Pleasant Avenue/Jensen Lane Trail	2	2	2	1	3	2	3	0	1	2	2	-2	-1	-1	-1	-1	-1	0	0	13
	66	East Faught Creek	Old Redwood Highway	Pool Creek	2	2	2	1	3	2	3	0	1	2	2	-2	-1	-1	-1	-1	-1	0	0	13
	67	Old Redwood Greenway	Pleasant Avenue	South of Shiloh Road	2	3	1	2	3	3	3	3	3	3	3	-2	-1	-1	-2	0	-1	0	-1	25
	68-80	RESERVED FOR FUTURE USE																						

Notes:

1. **Overall Ranking:** High = 24-33 points; Medium = 15-24 points; low = <15 points

2. A point scale of 0 - 3 points is possible for each criteria under the Opportunity factors. Zero to -3 points can be deducted for criteria under the Constraints factors. The weighting scale represents low, medium, and high.

3. Right-of-Way includes consideration of acquisition challenges and costs.

4. Considers traffic impacts and street crossing improvement needs.

5. COSTS AND FUNDING STRATEGIES

Preliminary trail implementation costs and funding strategies are discussed in this Section. These costs are based on current (2018) design, construction and associated costs for similar facilities. The cost estimates are intended as a general guide for funding allocation and planning purposes, since exact project costs will depend upon an array of factors such as precise alignment, needed trail structures, project amenities, implementation timeline and current market conditions.

5.1 COST CRITERIA

Costs to implement a trail include construction costs as well as overall project costs such as permitting, design and construction management. Each of the trail segments (except those evaluated in the *Connecting Central Windsor Study)* was assigned a preliminary project cost for planning purposes, based on the preliminary cost for construction, a 20% construction contingency, and 25% allowance for project design and management, including:

- Planning
- Permitting
- Engineering design: Plan, Specification and Estimate (PS&E)
- Construction Management

Generalized costs for trail construction average approximately $1 million per mile. **Table 5-1** describes the average costs for trail construction in Windsor.

Table 5-1: Relative Costs of Class I Trail Construction

1.	Existing paved trail; widen, add DG shoulders, signage:	$60-$70/LF ($350,000/mile)
2.	New trail, generally flat terrain, few conflicts, 8 ft. paved:	$115-$130/LF($650,000/mile)
3.	New trail, minor grading, some conflicts, 8 ft. paved:	$145-$160/LF($820,000/mile)
4.	New trail, modest grading, utilities, encroachment, ROW:	$180-$220/LF($1,200,000/mile)
5.	New trail, complex grading, walls, utilities:	$350-$450/LF($2,100,000/mile)

Pedestrian Bridges:	$1,500-$2,500/LF
At-grade Street Crossings, signs, beacons:	$150,000-$250,000
Under-crossings:	$500,000-$1,000,000
Design & Construction Contingency:	20-25% of construction
Design, Environmental Permitting, Construction Admin., and Inspection:	20-35% of construction

CONSTRUCTION COSTS

1. Grading and Paving. This cost group assumes four potential pavement types, and the cost includes mobilization, demolition, earthwork, base preparation and pavement surface installation. Trail construction includes four types:

A. Modification of existing road or trail surface. This is an existing unpaved trail that would need minor grading in select locations and placement of pavement surfacing (patch) in limited areas

B. Widen existing 5 foot wide trail to 8 ft. surfaced (asphalt or pervious surface) trail with two foot shoulders (12 ft. total width)
C. New 8 ft. wide pervious surface (stabilized decomposed granite or quarry fines) with 2 ft. aggregate base shoulders (creek settings) (no existing trail or road)
D. New 8 ft. wide asphalt concrete trail with 2 ft. wide aggregate base shoulders (high use and non-creek areas)

2. Site Improvements. This category includes site preparation, procurement and installation of trail site improvements. Landscape lighting is not included in this category, and would be included on a case by case basis.

A. Signs, such as informational, wayfinding, traffic, etc.
B. Fencing (such as vinyl clad chain link, SMART security fence, or split rail)
C. Landscape restoration (habitat mitigation and restoration, stormwater/swale or aesthetic landscape treatment, assuming a width of twenty feet)
D. Site furnishings, such as benches, bollards, trash receptacles, etc.

3. Structures/Special Improvements. Trails in some locations may require additional construction elements such as a pedestrian bridge, underpass (SMART rail line), retaining walls, etc. as part of the trail system. This cost category can vary widely depending on precise alignment and level of improvement. This category includes:

A. Bridge, assuming pedestrian/bicycle use only, 10 foot wide structure.
B. Underpass, including culvert under rail line, ramps to grade, lighting and drainage system for tunnel.
C. Retaining walls, guardrails, physical barriers
D. Enhanced crosswalk with activation, flashers, beacons, etc.
E. Wayfinding, such as special pavement treatments (colored pavement, pavers, etc), signage, interpretive features, or other enhanced design elements.

5.2 COST SUMMARY

Table 5-2 is a summary of project costs color coded according to low, medium or high implementation priority. Detailed costs are shown in **Table 5-3**.

Table 5-2: Summary of Trail Costs*					
Trail Number	Trail Name	Begin Point	End Point	Length miles	
1	SMART Northwest	Windsor Town Limits	Windsor River Road	2.5	$3,319,050
2	Gumview Trail	Gumview Road	Windsor River Road	.65	$501,700
3A	North Starr Creek Trail (paper street)	Starr Road	SMART Trail	.15	$448,050
3B	North Starr Creek Trail	Starr Road	Stellar Lane	.28	$175,450
3C	North Starr Creek Trail	Stellar Lane	Windsor River Road	.26	$192,850
4A	East Starr Creek Trail	Oak Park Street	SMART Trail	.25	$306,675
4B	East Starr Creek Trail	Oak Park Street	Windsor River Road	.21	$168,925
5	101 Crossing Complex	Los Amigos Road	Old Redwood HWY	N/A	$16-20M
6	Park & Ride Connector	Old RWD HWY	SMART Trail	.13	$123,250
7	SMART-Gumview Connector	SMART Trail	Gumview Road	.70	$545,200
8	Gumview Creek Trail	Gumview Trail	Starr View Drive	.30	$233,450
21A	West Windsor Creek Trail	Brooks Road South	Lazy Creek Drive	.38	$420,500
21B	West Windsor Creek Trail	Lazy Creek Drive	Senior Center	.15	$152,250
21C	West Windsor Creek Trail	Senior Center	Los Amigos Road	.47	$298,700
21D	Foxwood Connector	W Windsor Creek Trail	Los Amigos Road	.09	$10,150
22	Windsor Creek Connector	W Windsor Creek Trail	Brooks Road	.38	$505,325
23	Windsor Middle School	Elsbree Ln	Foothill Drive	.19	$148,190
24A	East Windsor Creek Trail	Foothill Drive	Hembree Lane	.38	$133,980
24B	East Windsor Creek Trail	Lakewood Drive	Foothill Drive	.47	$269,555
24C	East Windsor Creek Trail	Franklin Street Bridge	Lakewood Drive	.29	$476,325
25	Lakewood-Amigos Trail	Lakewood Drive	Los Amigos Road	.26	$649,600
26	Franklin Street Bridge	Brooks Road South	4th Street	.06	$292,175
27	Pueblo Viejo Park Connector	3rd Street	4th Street	.06	$61,480

Table 5-2: Summary of Trail Costs*					
Trail Number	Trail Name	Begin Point	End Point	Length miles	
28	Arata Lane Connector	Brooks Road	Foothill Regional Park	.50	$460,230
29	Jensen Lane East Connector	Vinecrest Road	Old Redwood Highway	1.3	$1,055,020
30	Jensen Lane Trail	Hembree Lane	Jensen lane East Connector	0.50	$310,000
31	Lakewood Connector	Jensen Lane	East Windsor Creek Trail	0.10	$58,000
41A	SMART Southwest	Windsor River Road	Jaguar Way/Park Circle	.83	$726,450
41B	SMART Southeast	Windsor River Road	Mitchell Lane	1.4	$726,450
41C	SMART South	Mitchell Lane	Town Limits	.95	$291,450
42	Conde Lane Connector	Old Redwood Highway	Conde Lane	.11	$448,050
43A	South Windsor Creek Trail	Conde Lane	Old Oak Road	.17	$445,875
43B	South Windsor Creek Trail	Old Oak Road	SMART Trail (Bell Road)	.28	$792,425
44	Trione Connector	Trione Circle	SMART Trail	.25	$10,875
45	WWTP Connector	Windsor Road	Trione Circle	.28	$301,818
46	South Starr Creek	Keiser Park	Jaguar Way	.19	$402,375
47	Jaguar Way Connector	Starr Road	Windsor Road	.47	$383,525
48	SMART-Windsor Rd Connector	Windsor Road	SMART Trail	.19	$900,450
49	Windsor-Pool Creek Loop	Windsor Road	Windsor Road	2.3	$89,900
50	Mitchell Lane Connector	Windsor Road	8th Hole Drive	.44	$421,950
61	Pool Creek Trail	Hembree Lane	Old Redwood Highway	.44	$326,975
62	Faught Creek Trail	Victory Lane	Old Redwood Highway	.36	$161,675
63	Shiloh Vision	Shiloh Road	Old Redwood HWY	.85	$760,525
64	Robbins Park Connector	Hembree Lane	Robbins Park	.28	$258,825
65	Pool Creek-Jensen Lane Connector	Emmerson Street	Old Redwood Highway	.95	$1,712,450
66	Faught-Pool Creek Connector	Faught Creek	Pool Creek	.28	$1,491,325
67	Old Redwood Highway Greenway	Pleasant Avenue	Town Limits/Shiloh	1.7	$1,869,050
SUBTOTAL[10]				23.73	

[10] Does not include Connecting Windsor Trails except identified separately (25, 42)

* High Priority – Short Term Implementation
Medium Priority – Mid Term Implementation
Low Priority – Long Term Implementaton

5.3 FUNDING STRATEGIES

Appendix D contains a summary of current funding opportunities related to trails. The trail projects (segments) will be matched to potential funding programs, and the specific program criteria. In some cases, projects may be selected or organized to meet grant program funding criteria, or projects may be jointly implemented by project partners such as the Sonoma County Transportation Authority or others.

Understanding Transportation Funding

Approximately every six years, the U.S. Congress adopts a surface transportation act — Congress's authorization to spend tax dollars on highways, streets, roads, transit and other transportation related projects throughout the U.S. The most recent surface transportation act is titled "Moving Ahead for Progress in the 21st Century" (MAP-21). The legislation was signed into law on July 6, 2012. MAP-21 funding is allocated to states based on federal formulas. The Federal formulas allocate a portion of each state's funds to specific surface transportation programs such as transit, congestion mitigation, and highways; while other portions of these funds are allocated to the states for use in discretionary programs.

In California, these funds are generally administered by Caltrans or the Resources Agency, although most programs are then distributed through metropolitan planning organizations (MPOs) such as the Sonoma County Transportation Authority (SCTA). The regional government agencies, which vary by location within the State, administer the funding of local projects. The majority of the funding programs established in the legislation are for transportation purposes, as opposed to recreation-only, with an emphasis on reducing auto trips and traffic congestion, improving traffic safety, developing intermodal transportation systems, and reducing pollutants and emissions produced by transportation.

Bicycle, pedestrian, trail (recreational trails), and school safety improvement projects may be funded by a variety of federal, state, regional, and/or local funding programs. Federal and state programs have continued to acknowledge the importance of these improvements with increased flexibility in the major funding programs, along with the development of dedicated programs for "active" or "non-motorized" transportation projects. Project funding may also be obtained through bond measures, special tax districts, private entities, and/or directly by a local agency's general fund.

Funding Local Transportation Projects

To be eligible for funding, projects must meet a variety of criteria. Typically, projects must be listed in a Regional Transportation Improvement Plan (RTP). Listing in an RTP is generally achieved through local

actions such as listing in a local agency's Capital Improvement Plan (CIP), the completion and adoption of a bicycle master plan, pedestrian master plan, specific plan, project study report, feasibility study, and/or other special studies. These planning efforts serve to evaluate potential projects and demonstrate their value through the public process. The result is typically a quantification of the costs and benefits of a project (such as saved vehicle trips, safety index ratings, and/or reduced emissions), proof of public involvement and support, environmental review at the state or federal level, evaluation of project alternatives, and the identification and elimination of potential fatal flaws, or development of overriding considerations. Next, the allocation of funds typically requires a commitment of local resources. In most cases, MAP-21 programs will provide 80 to 90 percent funding of a local project, but there is a preference to leverage other moneys and demonstrate a cooperative funding approach.

5.4 Right of Way, Easements and Entitlements

Right of Way Needs. Where possible, the trail will be located within available public right of way, or located on private lands in agreement with affected property owners. It is likely that additional right of way may be needed to complete the trail in limited areas where there is insufficient width for a trail within the existing road right of way. Additional width may be needed in areas that have environmental constraints, utilities, or other conflicts such as:

- To provide a sufficient safety buffer between motorized travel and the trail alignment
- Heritage tree avoidance
- Creeks, drainages and creek crossings
- Utilities
- Street intersections
- To avoid existing or planned infrastructure

Where trails are located on lands not owned by the Town of Windsor, acquisition of trail easements or purchase of fee title for land may be needed. Construction of trails can be one of the primary costs of project implementation. Where possible, trails should be located on public land with cooperating project partners, such as SCWA or SMART. Mechanisms for trail agreements include:

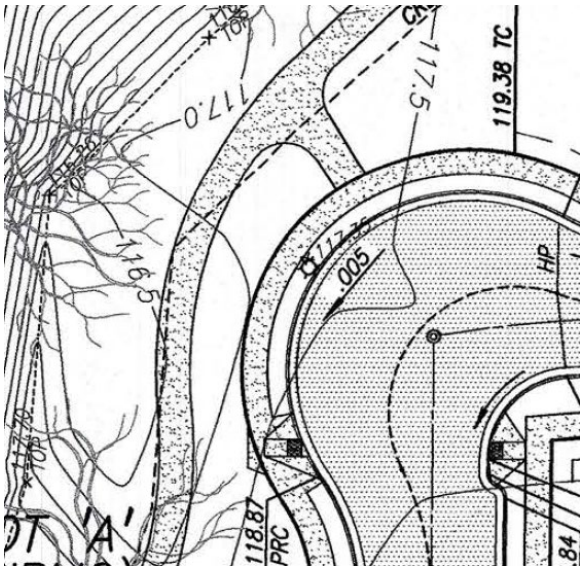
- Purchase in fee title, trail dedication
- Easement
- License Agreement
- Memorandum of Understanding

Trail dedication for future implementation can be obtained as a floating easement, as a requirement or part of a larger project. It is critical that such dedications occur within feasible, buildable easements, and within a meaningful time frame, or trail construction be implemented during project construction.

The easement needs to be wide enough to both contain the trail section and also include provisions for access as well as a larger area to be used (temporarily) during construction and maintenance access.

Appendix E contains mapping of the proposed trails and right of way ownership.

6. TRAIL IMPLEMENTATION



Implementation of trails projects will be a multi-step process, completed as a number of individual phases or construction of separate segments that will link together over time. It is likely that the segments using available or newly acquired public ROW would be completed by the Town, new trails will be completed as part of development projects or park and recreation facilities, and Caltrans could potentially complete some of the work associated with state transportation projects. This Study will provide a baseline for trail implementation, and the recommendations contained herein should be incorporated into future update of the Town's Bicycle and Pedestrian Master Plan.

Trail segments involving private lands or other public agencies (such as SCWA) are typically completed as a condition of development approval, easement acquisition, licensing or use agreement, or other cooperative agreement with the property owner.

6.1 IMPLEMENTATION STEPS

Construction of actual trail projects will require additional site-specific planning, environmental review, and design development, with a number of subsequent steps. The actual next steps for any specific project will vary in terms of level of analysis, and implementation timeline. The following typical steps are required for construction of a public trail project requiring detailed planning, design, environmental review and project permitting prior to construction.

1. Review and/or approval of this Feasibility Study by lead agencies and project stakeholders. Incorporate into appropriate Town planning documents.
2. Identify and confirm priority projects.
3. Secure funding and commit program funds for project implementation.
4. Complete discussions with stakeholders where easements or right-of-way are needed. Where appropriate, obtain Easement, Agreement in Principal or Memorandum of Understanding for right-of-way as individual projects or phases move forward towards construction.
5. Prepare Preliminary Engineering Design Documents, with greater focus on phases identified for initial design and construction. Update cost estimates and more clearly identify ROW needed.
6. Complete environmental assessment process (CEQA/NEPA, as appropriate). Some areas (within existing road rights of way) may be categorically exempt.
7. Obtain regulatory permit approvals (see **Section 2.4**).
8. Negotiate and complete ROW agreements, including easements, and trail use or licensing agreements.
9. Prepare detailed engineering design plans and construction documents. Publicly bid the project's construction plans.

10. Construction, including construction oversight of the approved plans by a qualified contractor to ensure that the project plans, along with all of the environmental mitigation measures and all permit conditions, are followed and implemented as approved.

7. DESIGN GUIDELINES

This Section provides guidelines for the design of Class I trails within the Town of Windsor. Class I trails form part of an active transportation network for bicyclists and pedestrians that also includes sidewalks, bicycle lanes, and crossing improvements or grade separation structures at roads or creeks to minimize trail user conflicts.





The Design Guidelines form the basis for decision-making regarding trail alignment, type and amenities, including trail use and type of user; compliance with accessibility standards; aesthetic considerations, and associated traffic improvements that may be needed to provide safe crossings or to buffer trail users from adjacent vehicular use. Trail implementation considerations discussed in this Section include:

- Caltrans Design Standards applicable to Class I trails
- Accessibility
- Trail Width, Separation and Surface
- Stormwater Management
- Trail Amenities
- Signage, Wayfinding and Interpretive Elements
- Lighting
- Street/Trail Crossings
- Safety and Security

7.1 CALTRANS DESIGN STANDARDS

The goal of Windsor trails will be to provide separated, shared use facilities where possible, with design to comply with Caltrans requirements for bikeway systems. This is defined by Caltrans as Class I bikeways (bike paths): facilities with exclusive right of way, with cross flows by vehicles minimized. It is likely that portions of the route, such as connecting on-street segments (with low traffic volumes) might be designed as bicycle lanes or designated routes (Class II or Class III facilities), with corresponding requirements for width, striping and signage.

Caltrans requires project review and coordination when there is funding from state or federal sources administered by them, and has also developed bicycle and pedestrian facility guidelines. In general, trails within Windsor will be designed using these standards. In addition, portions of the trail may cross or be within Caltrans ROW along US 101 and trail implementation within Caltrans ROW would likely need to comply with Caltrans Highway Design Manual, discussed below. Many of the trail segments discussed in the *Connecting Central Windsor Study* (such as Segment 25) would need coordination with Caltrans.

Caltrans Bikeway and Pedestrian Facilities Guidelines. The following documents provide general direction regarding design standards for non-motorized facilities within Caltrans ROW:

- Caltrans Highway Design Manual (HDM): Bicycle Transportation Design, Chapter 1000, last updated December 16, 2016
- Caltrans Design Information Bulletin (DIB) 82-05 Pedestrian Accessibility Guidelines For Highway Projects, October 2013
- Caltrans Project Development Procedures Manual, July 1999. Chapter 17, Encroachments in Caltrans Right of Way
- Caltrans Project Development Procedures Manual, July 1999. Chapter 31, Nonmotorized Transportation Facilities

CALTRANS HIGHWAY DESIGN MANUAL (HDM), BICYCLE TRANSPORTATION DESIGN

The Caltrans Highway Design Manual contains the policies and procedures for design of all facilities that are part of the state's transportation system. Shared-use trails, bicycle lanes, and other pedestrian and bicycle facilities also fall under the regulatory requirements of the Caltrans Highway Design Manual, Chapter 1000, Bicycle Transportation Design. Where possible, the trail will be designed to comply with both federal guidelines as well as Caltrans standards for shared use, which are contained in the Highway Design Manual. This is especially important where the trail is within Caltrans' ROW, subject to Caltrans-administered funding, or where a Caltrans Design Exception will be needed.

Caltrans policies have recently shifted to allow for more flexible accommodation of bicycle and pedestrian facilities within the state roadway system, with a special emphasis on safety. This includes issuance of Deputy Directive 64-R2: Complete Streets - Integrating the Transportation System, to allow greater flexibility in design as it relates to the provision of multimodal facilities. The memorandum states that Caltrans is continually improving its standards and processes to provide flexibility while maintaining the safety and integrity of the state's transportation system, including a recent update to the Highway Design Manual (HDM) to facilitate the design of Complete Streets, recognizing that the State Highway system needs to be multimodal, not just for cars and trucks.

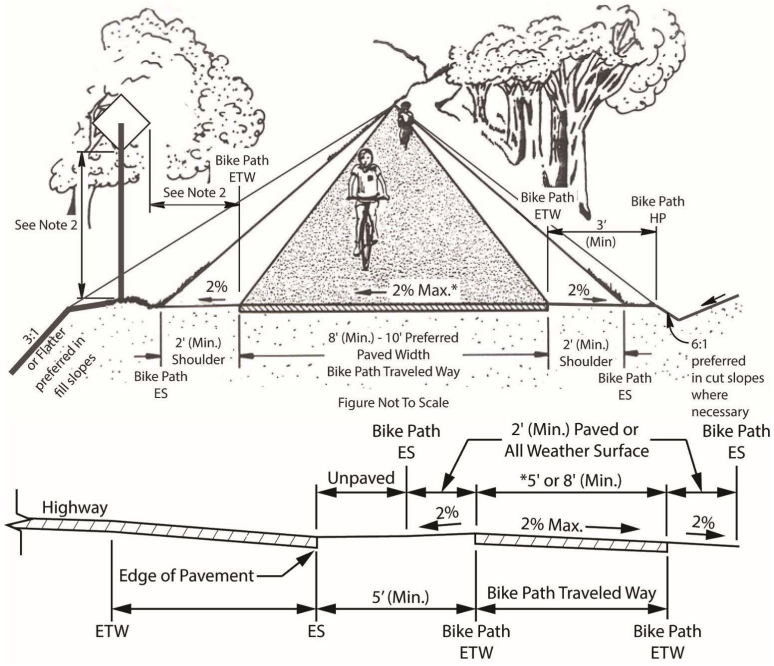
CHAPTER 1000: BICYCLE TRANSPORTATION DESIGN

Chapter 1000 of the HDM (as revised November 2017) specifies the requirements for design of bikeway and pedestrian facilities. Caltrans has five categories of facilities:

Shared Roadway (No Bikeway Designation). This is the current condition for most of the Study area, including all of the rural roads. No separate bicycle or pedestrian facilities are provided. Chapter 1000 notes that providing 4-foot paved roadway shoulders with a standard 4 inch edge line can significantly improve the safety and convenience for bicyclists and motorists along such routes.

Class I Bikeway (Bike Path). Class I bikeways (bike paths) are facilities with exclusive ROW by bicycles and pedestrians, with cross flows by vehicles minimized. Class I bikeways, unless adjacent to an adequate pedestrian facility, are for the exclusive use of bicycles and pedestrians, therefore any facility serving pedestrians must meet accessibility requirements. Class I facilities are required to have a minimum 8 foot width (10 ft. preferred), with a minimum 2 foot (3 foot preferred) shoulder (16 feet total), as well as

5 foot separation from a travel way (road or street). The maximum elevation/grade for Class I facilities is 5%. Within a structure such as a bridge, the minimum clear width is ten feet.



Caltrans Class I Path Standards

Class II Bikeway (Bike Lane). Bike lanes are facilities that are usually provided along roads with significant bicycle demand. They are delineated by a stripe along the edge of the traveled way, and are a minimum of 4 feet wide when no gutter is present, 5 feet with a gutter, and 11-12 feet where parking is allowed. Bike lanes can be painted or striped to increase visibility, and are often used in urban areas adjacent to sidewalks. A Class II facility alone does not accommodate pedestrian use. In some areas, bike lanes are co-located within 8 foot roadway shoulders and shared with motor vehicles.

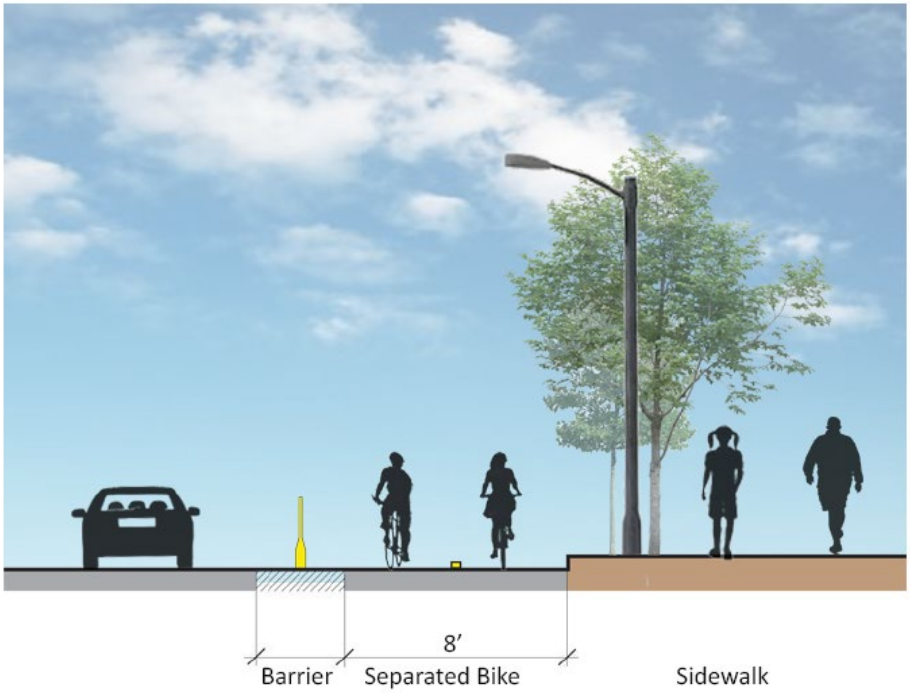
Class III Bikeway (Bike Route). Class III bikeways are designated routes that are shared with motor vehicles on the street. They are intended to connect discontinuous sections of bikeways, and established by placing bike route signs along the roadways. They may also be equipped with shared pavement markings, ("sharrows"), to inform the user of the route designation. These routes do not have designated bicycle or pedestrian improvements.

Class IV Separated Bikeway (Cycletrack). A Class IV Bikeway (separated bikeway) is a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking[11]. Separated bikeways are differentiated from Class I bikeways by their more proximate relationship to the adjacent roadway, and are not intended for pedestrian use; and from Class II bikeways by a vertical element. Separated bikeways can operate as one-way or two-way facilities (FHWA 2015, p. 13). The preferred combined width of a two-way

[11] Caltrans Design Information Bulletin 89 (December 30, 2015) establishes the design criteria for Class IV facilities.

separated bikeway is 12 feet (FHWA 2015, p. 81), with a three foot horizontal buffer area. Separated bikeway design typically follows the standards of design for the adjacent roadway facility.

Since pedestrian use within the cycletrack is prohibited, use of cycletracks would be a potential consideration only on trails where there is an adjacent sidewalk. Typically, a barrier separates the cycle track from adjacent motor vehicles unless it is protected by parking spaces, with a striped 3-foot clear space to allow vehicle access. Cycle tracks could be considered within some of the Downtown areas, especially with limited right of way, with additional analysis needed.



Class IV Bikeway (Cycletrack)

CALTRANS DESIGN INFORMATION BULLETIN (DIB) 82-05 PEDESTRIAN ACCESSIBILITY GUIDELINES FOR HIGHWAY PROJECTS, OCTOBER 2013

This Design Information Bulletin provides guidance for the placement of pedestrian facilities within Caltrans ROW (Trail 25). Trails within the State Highway ROW are considered to be pedestrian facilities if pedestrians may traverse the path, either for their exclusive use or shared with other users.

Every highway within the State Highway right-of-way, regardless of the project sponsor, that proposes to construct pedestrian facilities must be designed in accordance with these policies and standards. Facility requirements include curb ramps, detectable warning surfaces, accessible surface and slope, and conformance with Highway Design Manual.

CALTRANS PROJECT DEVELOPMENT PROCEDURES MANUAL, JULY 1999. CHAPTER 17, ENCROACHMENTS IN CALTRANS RIGHT OF WAY

Chapter 17 of the Caltrans Project Development Procedures Manual describes the policies and procedures for allowing encroachment of facilities within Caltrans ROW, and requirements for obtaining an Encroachment Permit. An encroachment, as defined in Section 660 of the Streets and Highways Code, can be any structure or object which is within the ROW but not a part of the Caltrans facility. Encroachments allow temporary or permanent use of highway ROW by a utility, a public entity, or a private party.

Encroachments also include any temporary or permanent break in access or use of the highway ROW: for grading, excavating, filling or removing of materials by public agencies, developers or private individuals. As stated in the Pedestrian Accessibility Guidelines discussed above, placement of pedestrian facilities within Caltrans property requires an Encroachment Permit, and facilities must be designed or retrofitted to be accessible. This documentation is required at the time of encroachment permit application.

Typically, for Caltrans to approve a longitudinal encroachment permit, the following must be demonstrated as part of the permit process:

- There are no other feasible alternatives
- The encroachment area is not needed for maintenance or other traffic or safety improvements
- The facility design is safe for trail users and users of the adjacent highway facility and follows Caltrans Design Standards
- There are no significant environmental issues that cannot be mitigated.

7.2 ACCESSIBILITY



To the extent feasible, trails within Windsor are recommended to be designed to comply with applicable federal and state guidelines for disabled access. Trails are intended to be an all-weather shared-use trail, capable of accommodating pedestrians, bicycles, and universally accessible modes in compliance with State law. The Town of Windsor completed a Self Evaluation and Transition Plan in 2007 that evaluated compliance with accessibility regulations, and new facilities would need to comply with current regulations and guidelines, to the extent feasible. Guidelines include:

Americans with Disabilities Act (ADA) *www.Access-Board.Gov*

- Title 24, California Building Code
- Architectural Barriers Act, Final Guidelines for Outdoor Developed Areas, November 25, 2013
- American Association of State Highway and Transportation Officials (AASHTO) Manual of Uniform Traffic Control Devices (MUTCD)

- Institute of Traffic Engineering (ITE)
- Federal Highway Administration/National Highway Institute (FWHA, NHI)

Trails should be designed in accordance with ADA accessibility guidelines wherever feasible, which require a firm, stable surface for trails, and design accommodations for grade, cross-slope, width, etc. There are many design standards that provide guidance regarding trail design, and the trail segments will need to comply with one or more standards, depending upon funding, trail classification (hiking only, shared use, bikeway, etc.) and feasibility for compliance with applicable standards. There are numerous standards that may be applicable to implementation of the trail.

Access to project facilities by people of all abilities is subject to regulations and standards set forth by the United States Access Board. The Access Board is an independent federal agency that promotes equality for people with disabilities, and develops and maintains design criteria for the built environment. The Board provides technical assistance and training on these requirements and on accessible design and continues to enforce accessibility standards that cover federally funded facilities. Accessibility is regulated under the Americans with Disabilities Act (ADA), Title 24 of the California Building Code, and may be subject to standards of the Architectural Barriers Act (ABA), which applies to facilities on federal lands (or with federal funding).

Americans with Disabilities Act

The United States Congress enacted the Americans with Disabilities Act (ADA) in 1990 to address discrimination against individuals with physical and mental disabilities. The ADA requires that all facilities and buildings open to the public be accessible to those with disabilities. ADA standards for outdoor areas have not been finalized, but will likely be similar to standards for outdoor areas adopted as part of the ABA (see below). Design and implementation of portions of the trail that connect to parking areas, restrooms, trailheads or other physical facilities might also need to comply with federal regulations contained in the *ADA Accessibility Guidelines for Buildings and Facilities* (ADAAG) http://www.access-board.gov/adaag/html/adaag.htm#4.3. These guidelines require a 36-inch minimum clear trail width, with passing space at minimum 200-foot intervals if the trail is less than 60 inches wide, depending upon the anticipated trail use.

Title 24, California Building Code

The California Building Standards Code (California Code of Regulations, Title 24) is updated every three years, and the current standards went into effect January 1, 2017. CBC contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. These requirements include design guidelines for accessible facilities, incorporating ADA requirements. Most project facilities, including trailheads, access points and related facilities, will be subject to ADA and state accessibility Title 24 regulations. Site furnishings and facilities such as benches, picnic tables, drinking fountains, parking areas, and routes of travel to restrooms or buildings are regulated under Title 24.

Architectural Barriers Act

Standards issued under the Architectural Barriers Act (ABA) apply to facilities designed, built, altered, or leased with certain federal funds. Passed in 1968, the ABA is one of the first laws to address access to the built environment. The law applies to projects built or altered with federal grants or loans.

To address the need for accessibility standards for outdoor areas, the Access Board developed the Architectural Barriers Act Accessibility Guidelines; Outdoor Developed Areas, which became effective November 25, 2013[12]. These guidelines have been incorporated into Chapter 10 of the ABA Standards, and include design standards for facilities such as piers and platforms; outdoor constructed features such as picnic tables, benches and viewing scopes; viewing areas; outdoor recreation access routes; and trails. The standards also outline the conditions for exceptions to accessibility compliance. These guidelines set forth recommended trail width, gradient, cross slope and other factors that affect trail accessibility. Depending upon the type of use, guidelines call for a maximum trail gradient of 5%, or 1 ft. rise in 20 feet of distance, with a maximum 2% cross slope. Under some circumstances, depending on the type of anticipated use and connections to accessible facilities, short distances of trail at up to 10-12% grade may be allowed if a landing is provided:

- 1:20 (5%) any length
- 1:12 (8.33%) for up to 200 feet
- 1:10 (10%) for up to 30 feet
- 1:8 (12.5%) for up to 10 feet
- No more than 30% of the total trail length shall exceed 1:12

AASHTO Guidelines

The primary design guide for bicycle and shared use facilities is the "Guide for the Development of Bicycle Facilities" from the American Association of State Highway and Transportation Officials (AASHTO), 1999 (2012 update, 4th ed.). The AASHTO Guide defines a "shared use path" as a facility on exclusive right-of-way and minimal cross flow by motor vehicles. Users generally include bicyclists, skaters, and pedestrians. In most cases, the AASHTO Guide requires a greater level of accessibility when designing trails for pedestrians, including bicyclists and skaters, than the ABA guidelines, but trails should ideally be designed to comply with both standards.

National Association of City Transportation Officials (NACTO) published an Urban Street Design Guide and Urban Bikeway Design Guide (http://nacto.org/usdg/) also incorporates AASHTO guidelines for the design of complete roadway facilities and shared use paths. Both Caltrans and the US Department of Transportation endorse these guidelines.

Accessibility Exceptions

Final trail design would be in compliance with all applicable guidelines and regulations for accessibility. Most guidelines also contain conditions for exceptions to meeting trail accessibility goals, which might

[12] Architectural and Transportation Barriers Compliance Board, September 26, 2013, Architectural Barriers Act Accessibility Guidelines; Outdoor Developed Areas, Final Rule, 36 CFR Part 1191 RIN 3014-AA22.

apply for some steeper areas where there are constrained areas, steep slopes and environmentally sensitive areas that must be avoided. Conditions for exceptions should be documented as each trail segment is implemented.

Analysis of segment opportunities and constraints included evaluation of slope and terrain, which has been incorporated into the summary of constraints rankings. It is likely that some trail segments would require a documented exception. Segments with grades over 5% would need to be designed with ramps, structures or other design elements to comply with accessibility requirements. However, segments that are within existing street ROW are generally exempted from meeting bikeway grade requirements. Cost is generally not an allowable design exception. Exception conditions include:

Condition 1. Compliance Would Cause Substantial Harm to Cultural, Historic, Religious, or Significant Natural Features or Characteristics
Condition 2. Compliance Would Substantially Alter the Nature of the Setting or the Purpose of the Facility, or Portion of the Facility
Condition 3. Compliance Would Require Construction Methods or Materials That Are Prohibited by Federal, State, or Local Regulations or Statutes
Condition 4. Compliance Would Not Be Feasible Due to Terrain or the Prevailing Construction Practices

7.3 TRAIL INFRASTRUCTURE

Trail segments would be designed as multi-use, separated paths that would be suitable for bicycle and pedestrian use. It is conceivable that some trails could be designed for use by equestrians, such as lands owned by Sonoma County Water Agency, that are widely separated from adjacent roads (Segment 49). If such use is desired, the trail facility could be designed with a separated surface to be used by bicycles and pedestrians, with a widened shoulder or separate path for equestrians. Trails or paths completed as part of street/road improvements would be designed to Town and/or Caltrans standards.

7.3.1 TRAIL WIDTH AND SEPARATION

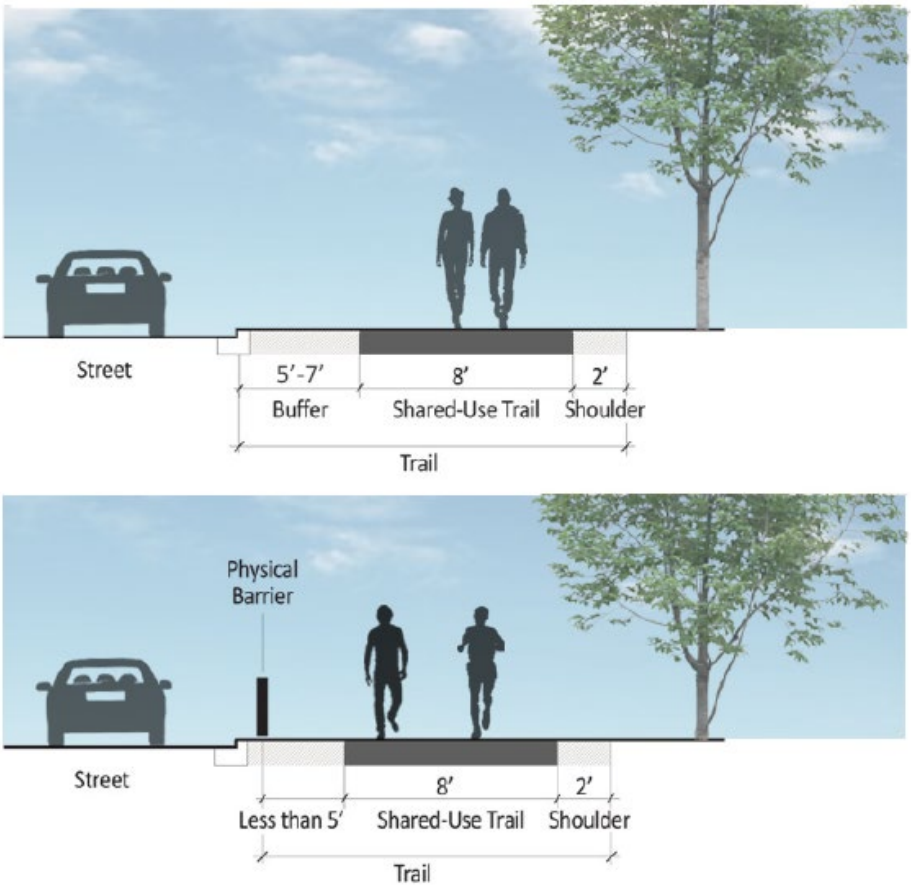
To meet Class I standards, a trail should be a minimum of 8 feet wide with 2-two foot shoulders (12 feet), with a minimum 5 ft. for separation from an adjacent road.

7.3.2 TRAIL SURFACE

The trail must have a firm and stable surface to be ADA-compliant. In general, to accommodate bicycles and occasional motorized use by vehicles, the trail surface would be paved asphalt or concrete. In some areas, such as along the Town's creeks, a permeable trail surface such as stabilized quarry fines or decomposed granite is appropriate to blend in with the natural setting. Paving designs should be selected that provide permeability, where appropriate, and fit with the rural setting.

In some locations, it will be appropriate to remain as "natural" as feasible, and, as noted above, could be constructed as a permeable path with cemented quarry fines over aggregate base or other stabilizer.

Trail sections along ramps, bridges, rail crossings and boardwalk approaches, and any trails that will be routinely utilized by motorized vehicles for access and maintenance should be paved. The trail should generally be elevated slightly above existing grade, with a cross slope of 2% to provide drainage and trail compaction.

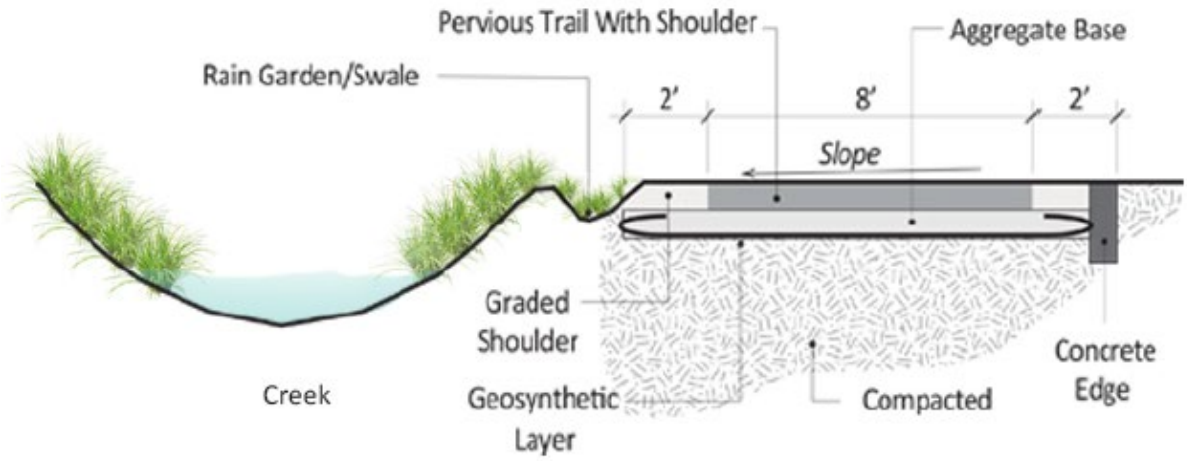


Trail Separation from Street

In high-use areas where new asphalt paving is needed and a Class I trail is feasible, the trail should consist of a minimum 8-foot wide (10-14 ft. recommended) asphalt trail using 3 inches of asphalt concrete, with 2-foot wide (minimum) shoulders of 4 to 8 inches of Class 2 aggregate base (AB).

Flood Prone Areas. Trails located adjacent to areas that may be subject to periodic inundation may need to be reinforced with structural geosynthetics such as geocells to provide a stable trail surface and improve year-round accessibility. The need for structural support will be determined through additional engineering analysis as part of the trail design. Where trails are proposed to cross over such areas, they will require special structures and treatment, such as over-excavation and placement of engineering geotextile such as Geocell, and import of thick section of granular aggregate base. The wettest of these areas will likely require the use of a boardwalk structure supported on short piles or another anchor system.

Pavement Design. Depending on soil conditions and pavement design needs, the use of geotextiles and a permeable trail surface, such as stabilized decomposed granite (DG) or stabilized quarry fines (QF), should be considered. A detailed geotechnical assessment should be prepared to identify the appropriate trail surface, thickness of materials and compaction requirements of the pavement.



Pavement Design Near Creek

Pavement Markings. For most trails to be implemented, striping or pavement markings to delineate lane is not needed. However, in high volume areas, street entry points, ramps or other constrained areas, striping and pavement markings may be useful to delineate areas and to provide a visual cue to trail users. Markings should be non-skid material consistent with California MUTCD.

7.3.3 Bridges and Boardwalks

Bridges, boardwalks or drainage structures (culverts) would be needed where the trail crosses creeks, drainages or other floodplain areas. In addition to design that does not create a visual barrier or affect aesthetics, bridges and crossings must be designed and installed to avoid potential biological and hydrologic impacts, including clearspan structures where feasible, avoiding displacement or alteration of floodways, and inclusion of avoidance and minimization measures to protect sensitive wildlife, both during construction and in long term use.

Vehicular Load Rating for Emergency Access. In general, where the trail is located along a road, design for emergency access is not needed. However, some trail segments would be designed for access by emergency vehicles, with a minimum weight capacity of 10,000 pounds (H-10 load). Heavier load ratings (H-20) may be required by local fire and emergency response units, depending on availability of access and location. Pedestrian bridges where vehicle access may be desirable include:

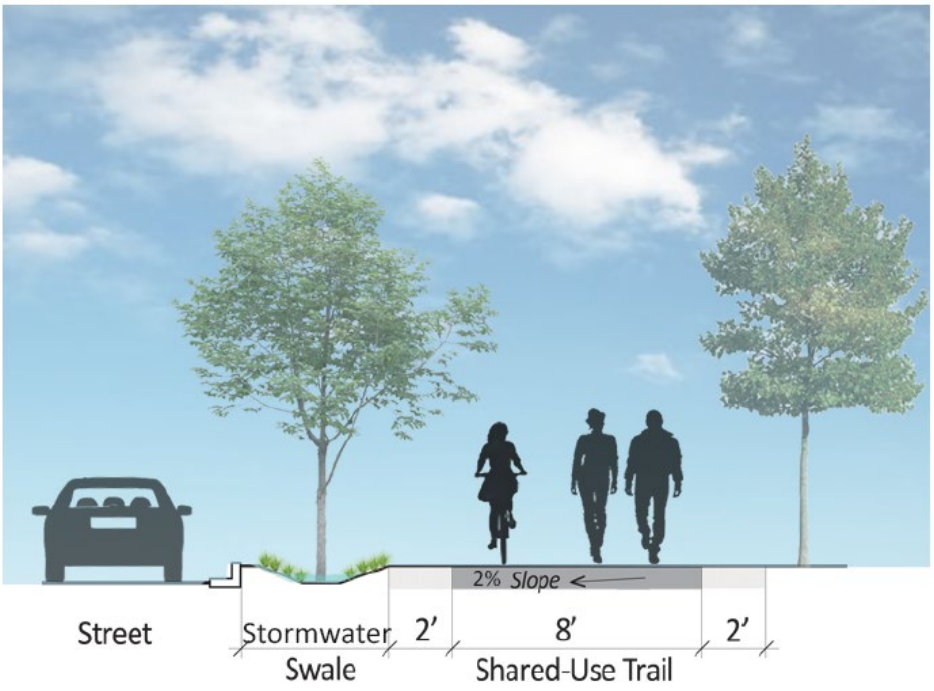
- Segment 4A Oak Street
- Segment 26 Franklin Street Bridge
- Segment 46 Keiser Park

- Segment 66 Pool/Faught Creek
- Segment 67 Old Redwood Greenway

7.4 Low Impact Development and Stormwater Management

Low Impact Development (LID). LID is a group of practices to manage the infiltration, evapotranspiration or use of stormwater to protect water quality and associated aquatic habitat. Key components of LID include preserving natural landscape features, minimizing impervious surfaces, and managing site drainage to filter and treat runoff before it enters the creeks and watershed. For trails projects, this includes siting trails to minimize erosion and slope stability concerns, utilizing permeable pavement to allow filtration, inclusion of stormwater retention features such as raingardens or drainage infrastructure where appropriate, and landscaping to reflect site conditions, reduce erosion potential, and facilitate long-term site management.

Bioretention facilities such as vegetated swales are appropriate to trap sediment and stormwater for retention prior to discharge into adjacent creeks. Trails should be constructed with 2% cross slopes and follow natural contours.

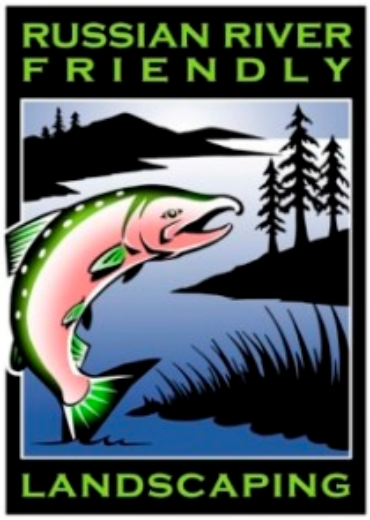


Stormwater Swale

Slope Stability and Erosion Control. Precise trail siting will be needed to avoid and/or address potentially unstable areas. If the trail will cross areas of slope instability, these areas must be carefully evaluated to ensure that trail safety is maintained, and that further degradation of slope conditions does not occur. Geotechnical slope stabilization, including reconstructive slope grading, drainage structures, and retaining walls may be needed in some areas, such as creeks with limited top of bank right of way.

These measures can be expensive, and careful placement of site features will be critical. Control of erosion associated with trail construction (to ensure that sediment input into creeks is minimized) will also be a critical trail design and implementation issue.

Landscaping. Landscaping associated with trail implementation should be designed to enhance trail space, be sustainable to minimize long term maintenance needs, and provide a pleasant environment that encourages public use. Design should utilize Russian River-Friendly Landscape Guidelines (http://www.rrwatershed.org/project/russian-river-friendly-landscape-guidelines/) to select materials and surfaces that are appropriate for the setting and support the principles for a healthy landscape:



- Landscape Locally
- Landscape for Less to the Landfill
- Nurture the Soil
- Conserve Water
- Conserve Energy
- Protect Water and Air Quality
- Create and Protect Wildlife Habitat

In addition to consideration of long-term landscape maintenance needs (weeding, pruning, etc) ecological function, and function in stormwater bio-treatment, landscape plantings should also consider safety and visibility in design. For instance, plant materials near the pathway should not block views in the zone from about 2 feet above ground to 6.5 feet above ground. It is important to keep this area open for clear view as a safety consideration for trail users.

Integrated Pest Management. It is expected that ongoing management of the trail route would utilize Integrated Pest Management (IPM) practices to manage pest populations and for vegetation management. This includes ecologically compatible practices and treatment strategies for the control of plant and animal pests, as well as fire management activities to reduce or maintain wildland fuels at acceptable levels.

7.5 Trail Amenities

7.5.1 Fencing and Barriers

There are three primary fencing or barrier types that may be needed:

- **Decorative Fencing** to define trailhead entry areas, separate adjacent land uses, to keep trail users away from environmentally or culturally sensitive areas or areas with hazards; and/or to define the trail corridor;
- **Security Fencing**, which may be needed to preclude trail users from trespass into secure facilities such as Windsor wastewater facilities.
- **Barriers**, such as fencing, guardrails or walls that separate the trail user from vehicular traffic where the trail must be located within Caltrans ROW.

***Decorative Fencing*.** Fencing may be needed to separate the trail from adjacent uses, to define public spaces, or to prevent access to adjacent areas. Fencing should be designed with sufficient visibility to allow surveillance of the trail, and should be minimized in creek settings where fencing could affect storm flows. Field fencing would generally consist of wire strand field fencing. Split rail or other decorative fencing may be appropriate as a visual guide to define the trail entrance at key locations and in resting areas. This fence would be appropriate at entry locations such as trailheads and at key intersections.

Security Fencing. More specialized fencing may be required adjacent to land uses with security concerns. In addition to setbacks between the traveled vehicle lanes and the trail, there may be a need for buffers or fencing to separate trail users from adjacent land uses. Security fencing will be installed adjacent to SMART rail tracks, and may be required adjacent to the Town wastewater facilities to provide physical separation and prevent entry.

Barriers. A physical barrier is required when a Class I Bike Path is closer than five feet from the edge of the shoulder. Depending on the width of separation, suitable barriers can include a chain link fence or dense shrubs. Low barriers next to a Highway are not recommended because bicyclists could fall over them and into oncoming automobile traffic.

Where there is danger of motorists encroaching into the trail, a positive barrier (such as concrete barrier or steel guardrail) should be provided. Caltrans typically requires protective fencing on portions of pedestrian structures or trails directly adjacent to roadways. Depending on the precise design, Trail 25 (part of the US 101 crossing complex) may need a physical barrier.



***Gates and Bollards*.** Posts at trail intersections and entrances will be necessary in many areas, to keep vehicles from entering. Posts should be designed to be easily moveable by emergency vehicles, such as bollards or a pipe gate and bollard, but consistent with the rural setting. Pipe gates are appropriate at locations where vehicular access will be needed, and would need to be designed to permit wheelchair access. Typically, posts and bollards should only be used where there is a possibility of motor vehicle encroachment, recommended only where such encroachment is likely. Other designs, such as splitting the trail with a landscaped median at intersections could be considered, since it provides less clipping hazard, especially for bikes with trailers.

Removable or moveable (such as posts, bollards or gates) for emergency and maintenance access must leave a flush surface when removed.

7.5.2 Signage, Wayfinding and Interpretive Elements

Almost all of the trails will be part of the trail network managed by Town of Windsor. Signage and way-finding are critical to assist trail users for use and enjoyment of the trail. A common trail signage design scheme should be utilized throughout the community. Multi-use trail signing and markings should follow the guidelines as developed by Caltrans and the Manual on Uniform Traffic Control Devices. This includes advisory, warning, directional, and informational signs for bicyclists, pedestrians, and other users. Striping, marking, and signing plans will be incorporated into trail projects.

Identification signs for the trail should be placed at all staging areas, junctions, and key destinations:

- Milepost and distance markers can provide context for trail location and destination information, and to assist emergency responders when locating trail users.
- Signs should use international symbols as much as possible.
- ADA-compliant portions of the trail should be clearly indicated.
- Wayfinding signs should be consistent throughout the trail, and sign elements should be grouped and designed to minimize visual intrusion.
- Signs should include GPS coordinates to facilitate emergency access.
- Trail use regulations such as keeping dogs on leash, no entry into sensitive areas, and other regulations would also be placed at trail access locations.

Wayfinding. Wayfinding refers to a system of signage and visual cues to guide people through the community. Signage can indicate direction of travel, distance to destinations, connections to other trails and other information. Wayfinding generally incorporates a hierarchy of signs, including informational guides to destinations, signs along the trail to confirm a particular route, and directives where turns or other guidance is needed to inform the user. Other elements of a wayfinding system may include pavement markings, interpretive signs, traffic signs, kiosks or mile markers.





Traffic Signs. The Manual of Uniform Traffic Control Devices (MUTCD) defines the standards to install and maintain traffic control devices on all public streets, Highways, bikeways, and private roads open to public traffic. The MUTCD, and adopted in California by Caltrans, contains standards for all traffic control devices, including road markings, highway signs, and traffic signals. Traffic control devices are defined as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency or official having jurisdiction, or, in the case of a private road, by authority of the private owner or private official having jurisdiction.



In general, all signs should be located two to four feet from the edge of the paved surface, have a minimum vertical clearance of 8.5 feet when located above the trail surface and be a minimum of four feet above the trail surface when located on the side of the trail. All signs should be oriented for clarity to the user.

Interpretive Signage. Interpretive panels, signs, kiosks or other elements can be used in areas where there are points of interest or high trail use. Locations such as trails within Keiser Park, Downtown destinations, adjacent to schools, or other areas may be appropriate for such displays. If a trail is completed in combination with habitat restoration, educational facilities or open space preservation, then interpretive elements may provide useful information and educational opportunities for trail users.

7.5.3 LIGHTING

Trail lighting may be needed on a case by case basis, depending on location, volume and adjacent land use. Lighting is generally not appropriate along the creeks, in areas with low use, or adjacent to residential areas. Lighting should be incorporated into key trail intersections, entry areas, bridges and underpasses and at street crossings. Lighting should generally be pedestrian scale (15 ft. fixtures), or consider in pavement lighting to provide wayfinding guidance. Solar and/or motion activated lighting may be suitable in remote locations.

7.6 STREET/TRAIL CROSSINGS

Where possible, trails should be aligned to minimize street crossings and provide guidance to nearby intersections. Crossings of major streets should be located at signalized intersections. Where the trail is located near low volume roads, signed trail crossings may be considered in conjunction with advance striping. A signalized pedestrian beacon is proposed at a mid block crossing to serve Windsor Middle School and Hiram Johnson Park. Signalized mid block crossings are also planned at SMART trail crossings at Shiloh Road and Mitchell Lane. Signalized crossings should be considered at Old Redwood Highway when the Pool and Faught Creek trails are implemented.



Enhanced Pedestrian Crosswalk, Old Redwood Highway at Kendall Way

7.7 SAFETY AND SECURITY

While residents in the vicinity of trail projects occasionally voice concerns that greater public access would lead to a higher incidence of crime, multiple studies in the U.S. have concluded that trail development does not facilitate increased trespassing, theft, or vandalism. For instance, a study from June 2000 on the effects of recreational trails on property values and public safety in Omaha, Nebraska, found that residents adjacent to three representative trail segments reported very infrequent experiences with trail-related theft and property damage.

In an overview of potential trail impacts from October 2009, the City of San Jose's Trail Program found that trail development can actually improve public safety. With the addition of "eyes on the trail," trail users can "help provide surveillance of otherwise unmonitored locations." A survey of six police departments across the U.S. and review of trail impact studies, published in August 2004 corroborated the City of San Jose's finding that trail development can improve public safety. According to the surveyed police departments in Houston, Texas, and Boulder, Colorado, among other jurisdictions, trail enhancements such as good lighting, easy access for emergency vehicles, and keeping the area free of obstructions contribute to public safety. Criminals also tend to avoid areas of increased visibility.

Crime Prevention through Environmental Design (CPTED). Trail design should utilize techniques such as Crime Prevention through Environmental Design (CPTED), which emphasizes design of the built environment to minimize crime. Additional information is available from the International CPTED Association, http://www.cpted.net/. Trail design should utilize CPTED principles to ensure that the trail is a neighborhood amenity, including:

Natural Surveillance

- Landscape vegetation should be less than 2.5 feet or over 6 feet high adjacent to trails for visibility
- Use lowest, most visible fence where appropriate
- Provide lighting where appropriate at trail entry and key locations

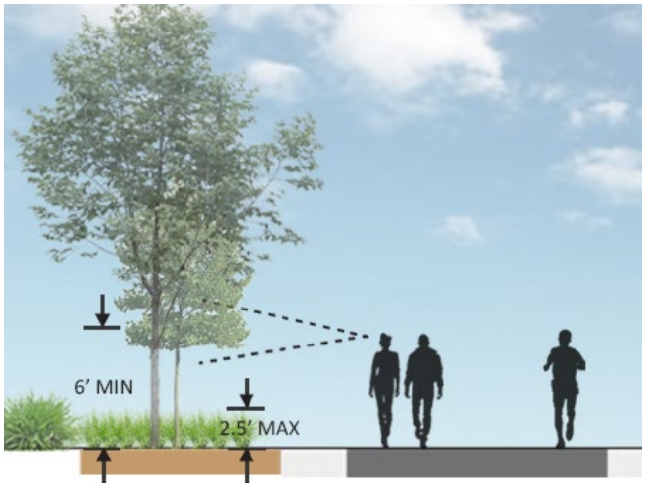
- When designing new facilities, locate streets and trails adjacent to creeks and public space instead of behind developed areas

Access Control

- Provide a well defined, visible point of entry with site furnishings to encourage use.
- Use natural features (thorny shrubs, water feature, etc.) where needed to discourage access
- Provide the appropriate height and type of fence to guide trail route

Territorial Reinforcement

- Place trails adjacent to public spaces to encourage community stewardship
- When designing new facilities, locate streets and trails adjacent to creeks and public space instead of behind developed areas

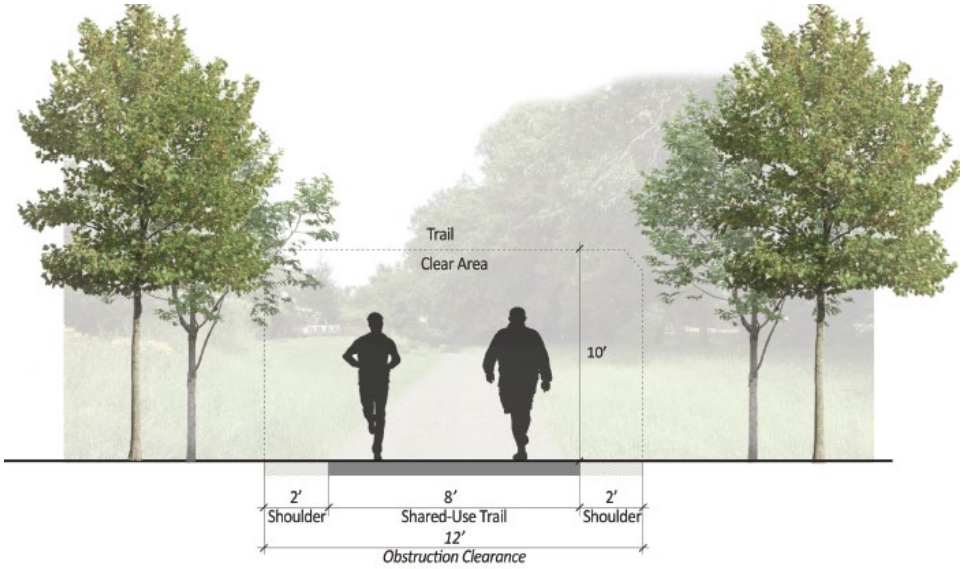


Trail Visual Access

7.8 MAINTENANCE

Operation and maintenance of the trail system is an important component of overall trail implementation. Since it is likely that implementation will occur in phases and possibly by various entities, such as the Town of Windsor, private developers or SMART, commitment to a uniform maintenance strategy is desirable. Where multiple owners are involved, agreements should include policy and cooperative management protocols to facilitate management of the trail.

- Design trails to minimize maintenance needs through use of durable, sustainable materials
- Plant materials that are the appropriate height, density and visibility for the setting
- Utilize Russian River-Friendly Landscape Guidelines to select and maintain appropriate low-maintenance, low-water use plants in the community.



Trail Clear Area

7.9 LIABILITY

Two California laws provide broad liability protection to property owners who allow public access for recreational purposes: California Recreational Use Statute and California Recreational Trails Act. These laws limit liability to private property owners. In addition, the Town of Windsor (as trail manager) would likely enter into agreements or secure ownership which would formalize trail use and define liability/obligations with property owners, if the trail is located on SCWA, SMART or private land. Virtually all of the trail segments would be constructed, operated, and maintained by the local government entity in which it occurs, by agreement with land owners. The Town of Windsor would likely serve as lead agency for environmental review, project permitting, design, and construction oversight. Any trail segment within the Caltrans right-of-way would likely be constructed and operated under their procedures for an encroachment permit, or completed as part of a roadway improvement or complete streets project.

Some areas of the trail are adjacent to sensitive uses, such as the Town Wastewater Treatment Plant, where security cameras, fencing or other methodologies to guide, monitor and preclude public access may be appropriate. Coordinated implementation of an Emergency Response Protocol that includes law enforcement, mapping of trails, wayfinding and, where appropriate, 911 emergency phones in remote areas can all be included in trail implementation projects. Other strategies include:

- User Education Program for safe trail behavior and conflict prevention.
- Conduct inspections for safety hazards, needed repairs and outreach with neighboring property owners, residents and businesses
- Post and enforce trail rules
- Perform trail maintenance and vegetation management for fire safety and sight distance issues.

8. REFERENCES

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APPENDIX

A. COMMUNITY ENGAGEMENT
B. TRAIL LOG
C. SMART TRAIL ISSUES AND OPPORTUNITIES
D. FUNDING STRATEGIES
E. RIGHT OF WAY MAPS
F. WINDSOR TOWN COUNCIL MINUTES NOVEMBER 7, 2018

APPENDIX A: COMMUNITY ENGAGEMENT

Town of Windsor Bicycle and Pedestrian Advisory Committee Meeting

April 18, 2017

Town of Windsor

Class 1 Bicycle and Pedestrian Trail Study

Bicycle and Pedestrian Advisory Committee

April 18, 2017



Questa
Engineering and Landscape Architecture

Parisi Associates
Traffic Engineering

Agenda

- Team
- Town Vision
- Study Goals
- Tasks
- Trail Types
- Alternatives and Ranking
- Opportunities for Input
- Outcomes
- Timeline

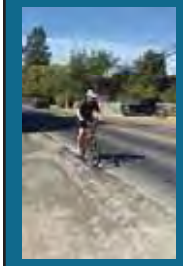
Team

Questa Engineering
- Jeff Peters
- Margaret Henderson
- Josh Abrams

Parisi Transportation Consulting

Town of Windsor
Mona Ibrahim, Engineer I
mibrahim@townofwindsor.com
707-838-5349

Town Vision



"The Town Council strives to foster and promote the Town of Windsor as a friendly, family oriented community with an active, involved citizenry, and as a vital and growing community with small town character…

…achieve a vibrant pedestrian friendly, transit oriented town capable of providing housing with a mix of incomes while preserving our open space and agricultural heritage."

Study Goals



Study includes:
- Audit of existing & proposed trails
- Develop ranking & prioritization process
- Prepare detailed & accurate cost estimates
- Screen projects for environmental clearance & permit requirements
- Prioritize project improvements
- Community Outreach

Community outreach is a key project component.

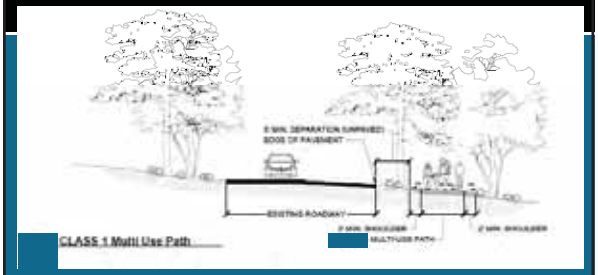
Tasks

- Evaluate trail components and design strategies
- Define independent segments that can be integrated into CIP and implemented in phases
- Identify unique strategies to fund trail alignments and facilitate partnerships
- Evaluate trail crossings and intersections
- Prepare maps and narrative

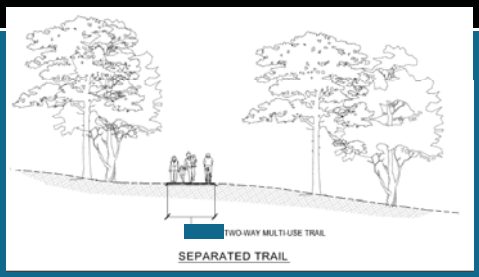
Potential Class 1 Trails



Trail Near Road



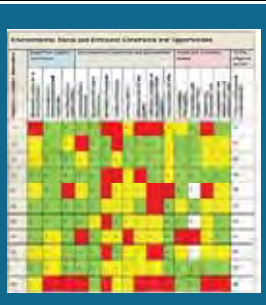
Separated Trail



Alternatives and Ranking

- Alignment options within available ROW
- Alignment options adjacent to ROW (acquisition or easement)
- Alternate routes along linear parallel alignments
- Other trail connections
- Trail segments that can be independently implemented
- Crossing options

Decision Matrix



- Evaluation criteria
- Project options
- Cost/benefit of improvements—project value
- Constructability
- Sustainability
- Stakeholder & public input
- Rank and prioritize improvements
- Match projects to funding & development opportunities

Opportunities for Input

- Social media
- Project website
- Web tool
- Workshops
- Bicycle and Pedestrian Advisory Committee
- Town Council

Web Tool

Web Mapping Tool

Map tool allows for *ongoing* outreach and stakeholder input and feedback that is not limited to workshops or meetings.



Outcomes

Fully Supported Study
- Town
- Stakeholders
- Community

Environmental Assessment Strategy
- Project descriptions
- Mitigation strategies
- Priority ranking factors / environmental complexity

Implementation Program
- Define segments of independent utility that can be implemented as part of development or phased by Town
- Preliminary costs and permitting issues
- Partnerships and funding strategies

Timeline

Spring 2017: Data gathering, mapping, survey of existing conditions.

April 2017: Initial BPAC meeting.

Summer 2017: Survey, screening and ranking; public outreach and meetings. Preliminary environmental screening. Public Workshop.

Fall 2017: Draft costs, permitting, design strategies and environmental analysis, prepare Administrative Draft Study. Public meetings and workshops.

Winter 2017/18: Public review of Draft Study; finalize. Public meetings and workshops.

February-March 2018: Town Council presentation.

Thank you!

Town of Windsor
Mona Ibrahim, Engineer I
mibrahim@townofwindsor.com
707-838-5349

MEMORANDUM

TO: Mona Ibrahim, Engineer I; Alejandro Perez, Senior Engineer **PROJECT NO.** Questa 1600143
Town of Windsor

FROM: Questa Engineering

DATE: April 5, 2017

RE: Class 1 Bicycle and Pedestrian Trails Study – Project Screening and Ranking Criteria

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This Memorandum presents an overview of Screening Criteria and Ranking Methodologies for consideration and use for project prioritization in the Windsor Class 1 Bicycle and Pedestrian Trails Study.

The Purpose of Screening and Ranking

The purpose of this effort is to establish an equitable and transparent screening and ranking methodology to inform decision making for implementation of the Town's Class I Trail Projects. The screening and ranking process engages stakeholders and the public, provides a basis for decision making, and allows the Town to set priorities, manage resources, and implement improvements efficiently and systematically. The results of the effort will help inform project implementation. Other factors such as development opportunity, financial conditions, political leverage, and environmental conditions my influence project implementation as some projects may be easier to implement than others if opportunities arise.

Town Priorities and Proposed Methodology

The Town established a basis for screening priorities in the Request for Proposals and Scope of Work for the project. The criterion established by the Town includes:

1. Projects that have high anticipated use;
2. Projects that close gaps between the ends of existing paths;
3. Projects that link neighborhoods, parks and key activity centers (such as the Town Green and commercial areas); and
4. Projects that can be easily implemented.

Note - Projects that have permitting, environmental, constructability, or Right-of-Way issues would score lower.

To supplement these criteria and provide insight into local and national screening and ranking methodologies for bicycle and pedestrian projects, research was performed to determine the methodologies employed in other jurisdictions. To begin, the National Cooperative Highway Research Program, Report 803 - Pedestrian and Bicycle Transportation Along Existing Roads—ActiveTrans Priority Tool Guidebook (2015) was reviewed. This national guide provides a step-by-step methodology for prioritizing pedestrian and bicycle facility improvements. Although the focus is on 'on-street' routing, the methodology is flexible, allowing the user to assign goals and values that reflect those of the agency and the community. It is also transparent, breaking down the process into a series of discrete steps that can be easily documented and communicated to the public. Review of local efforts including the 2010 Santa Rosa Bicycle and Pedestrian Master Plan, 2014 SCTA

Countywide Bicycle Plan, and the Marin County Non-Motorized Transportation Pilot Program supplemented the national research.

Review of Local Examples

The following efforts were reviewed for comparative analysis and to better understand the methodology employed for project screening and ranking: *Marin County Non-Motorized Transportation Pilot Program* (2007), *Santa Rosa Bicycle and Pedestrian Master Plan* (2010), and the *SCTA Countywide Bicycle Plan + Town of Windsor Chapter* (2014).

Marin County Non-Motorized Transportation Pilot Program – The program utilized separate screening and ranking criteria and scores, to develop a list of improvements and priorities that could help jurisdictions throughout Marin County to achieve specific objectives of the Non-Motorized Transportation Pilot Program. The criteria were developed to select projects that would result in mode shift, i.e., projects that would help get more people to choose to walk or bike for transportation purposes. Screening criteria included 4 categories with a maximum point allocation of 100. Criteria included: 1. Impact on Achieving Modal Shift; 2. Complements Proposed Transportation Network by Providing Needed Support Facilities; 3. Ability and Timeliness of Implementation; and 4. Benefit-to-Cost Determination.

Ranking Criteria included 5 categories with a maximum point allocation of 100. Criteria included: 1. Impact in Achieving Modal Shift; 2. Completes a Portion of the Transportation Network by Providing Connectivity and Access; 3. Improves Safety; 4. Ability and Timeliness of Implementation; and 5. Unique Opportunities.

Santa Rosa Bicycle and Pedestrian Master Plan – The Santa Rosa B&PMP Screening and Ranking Criteria were established by the City's consultant in cooperation with staff and its Bicycle and Pedestrian Advisory Committee. The methodology used a screening, scoring, and ranking process that closely resembles that which is proposed for the Town of Windsor. The screening criteria addressed issues geared towards streets, bicyclists, and pedestrians, some of which are not applicable to Windsor. The criteria included: Traffic Volume, Collision History, Current Demand, Community Interest, and Closure of a Gaps/Increases Connectivity, Technical Ease of Implementation, and Land Use.

SCTA Countywide Bicycle and Pedestrian Plan + Town of Windsor Chapter – The Countywide Bicycle and Pedestrian Plan utilized an internal screening ranking process with project review and prioritization performed internally by staff, the Bicycle and Pedestrian Advisory Committee, and project consultants. Priority assignments considered public input, demand, land-use, cost, opportunity, and connectivity and were categorized as High, Medium, or Low, giving staff flexibility to move forward with project implementation based on opportunity.

Scoring Criteria

The ActiveTrans Priority Tool (ATP) methodology was selected as a basis for project screening and scoring because of its flexibility, transparency, "common sense" approach, and national acceptance. The ATP methodology identifies nine factors that are commonly considered in prioritization processes and can be used to reflect a range of community/agency values.

The ATP factors include:

1. Stakeholder Input
2. Constraints
3. Opportunities
4. Safety Needs
5. Existing Conditions
6. Demand
7. Connectivity
8. Equity
9. Compliance

The ATP factors are defined below, and where appropriate have been modified from the Guidebook to align with the needs of the Town of Windsor and the intent and purpose of the Windsor Class 1 Bicycle and Pedestrian Trails Study. Three factors from the list above have been eliminated; "Existing Conditions" and "Compliance" which both focus on built street environments, and "Equity" which is incorporated into the factors "Linkage and Gap Closure" and "Use and Demand".

Each of the Town's ranking criteria, which are identified at the beginning of this Memo, is reflected and expanded upon within the ATP factors listed below. Initial factor weights have been assigned, but can be adjusted to better reflect the unique importance of each criterion. A certain level of "overlap" occurs between factors such as "Linkage and Gap Closure" and "Use and Demand", where both factors include consideration of land use and destinations in their weighting. However, the process is designed so that factors are segregated with variable weight assignments in order to express the desired level of significance to each of the criteria. The proposed screening factors – **1. Stakeholder Input; 2. Constraints; 3. Opportunities; 4. Traffic Safety; 5. Linkage and Gap Closure; 6. Use and Demand** – and weighting assignments are defined below. The recommended Trail Scoring Matrix **Table 1** is attached.

Recommended Screening Factors for the Windsor Class I Bicycle and Pedestrian Trails Study

1. **Stakeholder Input –** The Stakeholder Input factor considers the amount of public feedback in support of (or against) a pedestrian or bicycle improvement at a particular location. The Stakeholder Input factor can be represented by being consistent with recommendations in an adopted plan, by a citizen advisory committee, via quantitative documentation of requests/comments from the public, and/or by input from staff or elected officials. Information from the "Connect Windsor" survey will also be useful in scoring this factor.

   Weight Scale (0 – 15): Includes quantitative and qualitative analysis of input received from the Town's Bicycle and Pedestrian Advisory Committee; staff and elected officials; and public input received via the on-line mapping tool, written comments, input collected in public meetings, and consistency with adopted plans. This factor receives a weight scale of 0 – 15 to express the importance of stakeholder/public input in the final prioritization of project improvements.

2. **Constraints –** This factor addresses the relative level of difficulty in implementing a project. Constraints are important to consider because they can drain agency resources. Many constraints are framed in terms of cost, and may include right-of-way acquisition, facility design, and construction difficulty (i.e., project requires a foot bridge, hillside cut or fill, retaining walls, etc.), mitigation required, and environmental issues and permitting difficulty (i.e., riparian, wetlands, sensitive species issues). Projects along creeks also need to consider flooding frequency, potential flood damage to trails, creek maintenance access, along with environmental issues. In some cases regulatory agencies may want trails set back from creeks, and/or require the use of soft surfaces or pervious paving treatments. Additionally, constraints may consider available funding (internal and external), and environmental impacts including neighborhood trespass, privacy, and safety concerns.

   Weight Scale (0 – 20): Includes consideration of the factors listed above (Cost, Right-of-Way, Engineering and Design Complexity, Environmental Issues) that impact the ease of implementation and constructability of the proposed projects.

3. **Opportunities –** This factor quantifies the ability to take advantage of resources that support project implementation. These resources may be financial or political, or recognize existing conditions. They are important to consider because they save time and money when implementing projects. For example, financial opportunities include whether or not a proposed improvement is eligible for grant funding, can draw from a dedicated funding source, can be incorporated into a scheduled construction or maintenance project, or can be implemented as a component of a private project through development requirements/agreements. Another example applicable to Windsor is the formalization of existing foot paths through widening, surface improvements, formal trail right-of-way dedication, entry improvements and signage.

   Weight Scale (0 – 15): Includes potential to include project as a component of a private development; project can be matched to a dedicated fund source or likely grant match; political opportunity such as mitigation related to a larger project such as SMART, Caltrans mitigation, or stream restoration; or formalizes an existing route via surface and access improvements.

4. **Traffic Safety –** This factor accounts for the risk of pedestrians or bicyclists being involved in a traffic collision along an adjacent street where the trail alignment provides a safer alternative. Trail/street crossings are also considered. Safety is important because pedestrians and bicyclists are particularly vulnerable to being injured or killed when struck by a motor vehicle. Additionally, concerns about safety can be a significant barrier to people choosing to walk or bicycle. Roadway characteristics play a significant role in determining where pedestrian and bicyclist crashes occur in a community. Given that the proposed projects being evaluated in this effort are exclusively separated Class 1 trails, this factor will also account for the number of roadway crossings in each project segment, the type of street being crossed, and collisions in the project area.

   Weight Scale (0 – 20): Includes a review of community collision histories, an understanding of traffic circulation and roadway characteristics, the number of roadway crossings within a segment, the type of street(s) being crossed, and consideration of the need for crossing improvements. A high score in this criterion would reflect the potential for the project to reduce pedestrian and bicycle vs. vehicle collisions.

5. **Linkage and Gap Closure –** This factor accounts for the degree to which a project allows pedestrians or bicyclists to travel comfortably and continuously throughout Town. Linkage or connectivity is a relevant factor when prioritizing new facilities, particularly when the new facility fills or closes a gap between existing facilities or provides direct links between neighborhoods and parks, and key activity centers such as the Town Green, commercial and employment areas, multi-modal transit resources, and schools. Since students enrolled in Windsor schools commute to grade specific campuses that are distributed throughout the community, the commute boundary may incorporate a larger service area such as a 1-mile radius for elementary schools and a 2-mile radius for middle and high schools. Access to schools can be further quantified by determining the number of schools within the commute boundary of the proposed project, i.e. access to 0-schools, 1-school, 2-schools, 3- or more schools.

   Weight Scale (0 – 20): Includes gap closure between existing paths, linkage and access to major activity nodes such as schools, the Town Green, parks, commercial/employment centers, transit hubs, high density housing development, etc.

6. **Use and Demand –** This factor represents existing or anticipated pedestrian and bicycle activity or use levels. This factor is often closely related to stakeholder input and gap closure, as residents and stakeholders translate demand into their personal priorities. Use and Demand is a key factor to consider if an agency's aim is to add new pedestrian or bicycle facilities where they will be most used. Existing pedestrian and bicycle demand can be measured by counting the number of people on foot and bike at a given time and location. Anticipated or 'latent' pedestrian and bicycle demand can be estimated by considering the proximity of pedestrian or bicycle improvement locations to bicycle and pedestrian attractors or generators, such as schools, parks, transit facilities, and mixed-use and high-density land uses.

   An increasing body of evidence supports the concept of latent demand. For example, the Non-Motorized Transportation Pilot Program (FHWA) demonstrated that walking and bicycling improvements often led to an increase in the total number and rate of people walking and bicycling in the community. Consequently, analyzing latent demand enables communities to focus resources and investments on areas with the greatest potential for multimodal trips, even if current levels of walking and bicycling trips are low.

   Weight Scale (0 – 10): Includes a qualitative assessment of existing and latent demand based upon proximity and/or connection to schools, parks, transit facilities, commercial and employment centers, residential neighborhoods, and high-density development.

Scoring Process

A total score of 100 points is possible for each discrete project using the proposed factors and weight scale described above. The scoring process will utilize existing conditions data developed from field surveys, input received from the public via the on-line mapping tool and in public meetings, stakeholder input, and conclusions developed through analysis completed for the project. It is proposed that the initial scoring of the projects be completed by the project consultant, reviewed by staff, and then confirmed by the Town's Bicycle and Pedestrian Advisory Committee.

Conclusions

Local and national review of project screening and ranking criteria yielded a variety of techniques and methodologies that are employed to develop implementation priorities. The existing list of projects in the 2014 Windsor Bicycle and Pedestrian Master Plan includes a general rank of High, Medium, and Low, but does not provide staff or the public with a transparent process to understand the criteria evaluated and methods employed to achieve the designated rankings. The proposed methodologies and weight scale defined above will help Town staff, stakeholders, and the public to better understand the criteria and considerations that were used to achieve the proposed project ranking priorities the Class 1 Trail Study. The process is transparent, can be easily understood by the staff and the public, is adjustable for future efforts and as priorities change over time, and generates specific numerical scores.

Next Steps

Staff and Advisory Committee review of the Screening and Ranking Criteria and Methodologies and concurrence for use in the Windsor Class 1 Bicycle and Pedestrian Trails Study.

Attachments: **Table 1: Project Scoring Matrix**

Table 1: Trail Scoring Criteria

Quadrant	Project/Segment	Beginning Point	End Point	Screening Factors	1. Stakeholder Input			2. Constraints				3. Opportunities			4. Traffic Safety		5. Linkage and Gap Closure		6. Use and Demand		Total
				Point Scale*	0 - 15			0 - 20				0 - 15			0 - 20		0 - 20		0 - 10		100
					Public Support	Stakeholder Support (Staff, Advisory Committee, others)	Consistency With Adopted Plans	Low Cost	Limited Right-of-Way Constraints	Low Engineering/Design Complexity	Few Environmental Issues	Development Opportunity (Part of a private or public project)	Funding (Matches closely to grant opportunity)	Improvement to Existing Facility (Surface, crossing enhancement, etc.)	Provides Alternative to Arterial Corridor	Requires few Intersection Improvements/street crossings	Gap Closure Between Existing Paths	Connects to Major Activity Nodes/Destinations	Existing Demand (Connects Unserved Areas)	Anticipated Use (Latent Demand)	
Northwest	1 - SMART Trail (West Side of Tracks)	Windsor Town Limits (North)	Windsor River Road																		
	2 - Gumview Trail	Gumview Road	Windsor River Road																		
	3 - Starr Creek Trail	Starr View Drive at Starr Road	Windsor River Road																		
	4 - SMART Connector (West side of Creek)	Oak Park Street	SMART Trail																		
Northeast	5 - Windsor Creek Trail (west side of creek)	Brooks Road	Los Amigos Road																		
	6 - Windsor Creek Trail (east side of creek)	Brooks Road	Natalie Drive																		
	7 - Windsor Creek Trail Extension (East Windsor Creek) Behind Windsor Middle School to Hiram Lewis Park - Enter on Elsbree Ln.	Elsbree Lane	Foothill Drive																		
	8 - Foothill Trail (East Windsor Creek)	Hembree Lane (Apprx. 225' south of Foothill Drive)	Lakewood Drive at Lakewood Hills Entrance																		
	9 - Jensen Trail	Vinecrest Road	Jenson Lane																		
	10 - Franklin Street Bridge	4th Street	Brooks Road South (adjacent to Lakewood Drive)																		
	11 - Jensen Connector Trail (Brooks Road Parking Lot Extension)	Jensen Lane at 3rd Street	US Post Office at Windsor Oaks Shopping Center (Lakewood Drive)																		
Southwest	12 - Windsor Creek Trail	Windsor River Road (Adjacent to Windsor Creek Plaza/US 101 Southbound on-ramp)	Bell Road																		
	13 - SMART Trail (Water Treatment Plant Property) West Side of Tracks	Private Road F	Trione Circle																		
	14 - Windsor Creek Trail	Windsor Road	SMART Trail (adjacent to Trione Circle)																		
	15 - Windsor Creek Trail Connector	Windsor Road (at Reiman Lane)	Windsor Creek Trail (SW 14)																		
	16 - Starr Creek Trail	Windsor River Road	Burgandy Way at Starr Road																		
	17 - SMART Trail (West Side of Tracks)	Golf Course Drive at Pool Creek Trail	Southern Town Limits																		
Southeast	18 - Pool Creek Trail	Old Redwood Highway	Hembree Lane																		
	19 - Faught Creek Trail	Old Redwood Highway	Victory Lane																		
	20 - Shiloh Trail (Pruitt Creek)	Edmund Avenue (Mobile Home Estates)	Shiloh Road																		

Notes: * A point scale of 0-5 or 0-10 points is possible for each Screening Factor's individual scoring criteria.

**

Town of Windsor Community Workshop

September 21, 2017

TOWN OF
WINDSOR

Windsor Trails Workshop

Connecting Windsor along Off-Street Trails

Join us for a public workshop to discuss priorities for a network of community trails.

Town Hall Council Chambers
9291 Old Redwood Highway, #400
Thursday, September 21, 2017 5-7 PM

For more information, please visit:
http://www. *windsortrails.org*

TOWN OF
WINDSOR

¡Conectemos A Windsor!

Crear una red de caminos de Windsor más transitable para los ciclistas y peatones

Town Hall Council Chambers
9291 Old Redwood Highway, #400
Jueves, 21 de Septiembre, 2017, 5-7 PM

Para más información, por favor visite:

http://*www.windsortrails.org*

¡Conectemos a Windsor!

Crear una red de caminos de Windsor más transitable para los ciclistas y peatones

Jueves, 21 de Septiembre 2017 5PM – 7PM

Windsor Town Hall Council Chambers, 9291 Old Redwood Highway, Edificio 400



La ciudad de Windsor invita a la comunidad a aportar ideas para construir una red de caminos fuera de la calle para conectar barrios y destinos. Este sistema de senderos servirá para conectar a ciclistas y peatones a todo el pueblo de Windsor.

Presentación – 5:00 PM

Aprenda sobre el proyecto

Haga sus preguntas al equipo de consultore

Discusión – 5:30 PM

Discuta el proyecto con otros miembros de la comunidad. Comparte lo que es importante para usted.

Para obtener más información, visite a www.windsortrails.org

Windsor Trails Workshop

Connecting Windsor along local off-street trails

Thursday September 21, 2017, 5PM – 7 PM

Windsor Town Hall Council Chambers
9291 Old Redwood Highway, Building 400



The Town of Windsor invites your input on priorities for an off-street trails network connecting pedestrians and cyclists throughout Windsor.

Presentation – 5:00 PM
Learn about the trails study and ask questions.

Open House – 5:30 PM
Share your ideas with fellow Windsor community members

To learn more / Para obtener más información, visit www.windsortrails.org



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Thursday September 21, 2017 5:00 PM – 7:00 PM
Please visit:

www.windsortrails.org

Town of Windsor

Class I Bicycle and Pedestrian Trail Study

Community Workshop

September 21, 2017



Agenda

- Introduction
- Study Tasks and Background
- Town Vision
- Destinations and Connections
- Alternatives and Ranking
- Opportunities for Input
- Outcomes
- Timeline
- Questions?
- Roundtable session
- Next Steps

2

Introduction

This is a study of off-street, separated Class I trails in Windsor. The focus is on trails identified in 2014 Bicycle Plan. *It is not a study to develop bicycle lanes, sidewalks or other facilities, but will identify trail connections and gaps.*

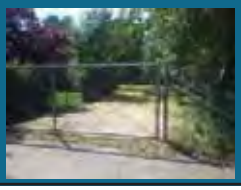
Study Team:
Questa Engineering
- Jeff Peters
- Margaret Henderson

Parisi Transportation Consulting
Town of Windsor
Mona Ibrahim, Engineer II

3

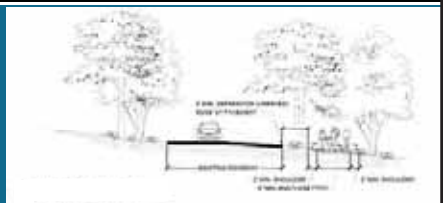
Study Tasks

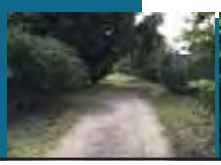
- Define independent trail segments
- Evaluate trail components and design strategies
- Identify funding and implementation strategies
- Evaluate trail crossings and intersections
- Determine priorities, costs and steps to implement
- Provide outreach and incorporate community input

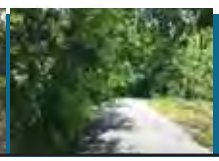


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What is a Class I Trail?

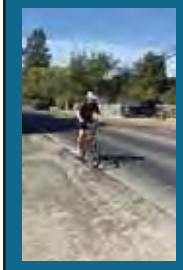






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Town Vision



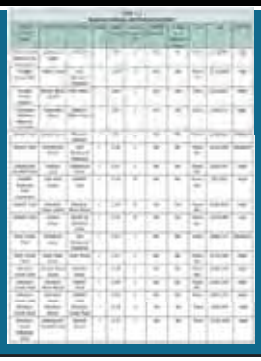
"The Town Council strives to foster and promote the Town of Windsor as a friendly, family oriented community with an active, involved citizenry, and as a vital and growing community with small town character…

…achieve a vibrant pedestrian friendly, transit oriented town capable of providing housing with a mix of incomes while preserving our open space and agricultural heritage."

6

2014 Bicycle/Pedestrian Master Plan: 17 Trails





7

2017 Study

Potential Class I Trails:

34 Segments in 4 Areas



8

Destinations and Connections

- Creeks
- Parks
- Schools
- Shopping Areas
- Other trails and transit facilities











9

Northwest

- Downtown
- SMART
- Starr Creek
- Cali Calmecac School
- 101 Crossing (Separate Study)

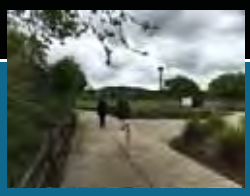




10

Northeast

- North Windsor Creek
- Foothill Regional Park
- Lakewood Hills
- Windsor Middle School

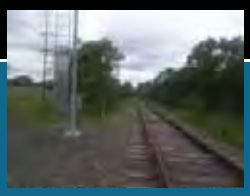


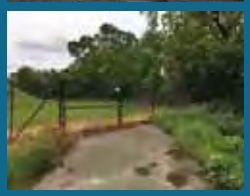


11

Southwest

- SMART
- South Windsor Creek
- South Starr Creek
- Windsor High School
- Keiser Park
- Town Wastewater Facilities





12

Southeast

- Pool Creek
- Faught Creek
- Shiloh Vision Plan Area



13

Connections/Crossings

- HWY 101
- SMART
- Major streets
- Connecting the community ("Ring Trail")



14

Ranking the Trails: Opportunities

1. **Stakeholder Input**
2. **Ease of Implementation**
3. **Connectivity**
4. **Accessibility**
5. **Use**



15

Ranking the Trails: Constraints

1. **Engineering Complexity**
   - Design Complexity
   - Cost
   - Right of Way
   - Structures needed
2. **Environmental Complexity**
   - Biological Resources
   - Geology
   - Flooding
   - Land Use
   - Traffic Safety



16

Decision Matrix

- Rank and prioritize trail segments
- Evaluation criteria
  - Constructability
  - Sustainability
- Public input
- Match projects to funding & development opportunities



17

Opportunities for Input

- Workshops
- Web tool / Project website
- Social media
- Bicycle and Pedestrian Advisory Committee
- Town Council

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Web Tool

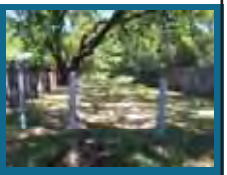
Web Mapping Tool

Map tool allows for *ongoing* outreach and stakeholder input and feedback that is not limited to workshops or meetings.



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Outcomes



Fully Supported Study
- Town
- Stakeholders
- Community

Environmental Assessment Strategy
- Identify issues and challenges
- Include environmental considerations
- Prioritize trails with less environmental complexity

Implementation Program
- Define independent segments
- Determine preliminary costs and permitting issues
- Suggest partnerships and funding strategies

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Timeline

Spring 2017: Data gathering, mapping, survey of existing conditions.

April 2017: Initial BPAC meeting.

Summer/Fall 2017: Survey, screening and ranking; public outreach and meetings. Preliminary environmental screening. Public Workshop.

Fall 2017: Draft costs, permitting, design strategies and environmental analysis, prepare **Administrative Draft Study. Public meetings and workshops.**

Winter 2017/18: Public review of Draft Study; finalize. Public meetings and workshops.

February-March 2018: Town Council presentation.

21

Questions/Answers?

Map Breakout Session

Next Steps

- Please provide input through web tool, comment cards or contact Town staff.
- Please provide input by **November 1** to be included in the evaluation process.

Thank you!

Contact:
Town of Windsor
Mona Ibrahim, Engineer II
mibrahim@townofwindsor.com
707-838-5349

23

Town of Windsor
Class I Trails Study 1st Community Workshop
Meeting Notes
September 21, 2017

Approximately 10 members from the public attended, 2 consultants, 5 staff (3 Public Works and two Parks and Recreation staff)

Meeting Notes

1. **Introductions, including Town staff, Questa and residents.**

2. **Presentation by Questa**

    a. Defined Class I Trails (not Class II bike lanes, or Class III, shared facilities).
    b. Discussed that there are many segments but many connections between segments missing, e.g. the two creek trails in the northeast of Town.
    c. Trail options are being developed with additional segments/connections to be included. The team would like community input on new trails.
    d. SMART trail cuts the Town but it also brings people to the downtown.
    e. The presentation will be available on the website www.windsortrails.org

3. **Suggestions from public – Q&A**

    a. Make destinations part of the ranking criteria.
        - Questa responded that it was included in the matrix, as well as costs, engineering challenges and environmental constraints.
    b. Consider a Windsor "Walkabout" for each neighborhood—I know about my neighborhood but not many others. Find volunteers in each of the four quadrants of the Town to lead walks on the trails. A similar workshop was held about twenty years ago.
        - Study team will discuss this.
    c. Have a workshop/presentation at a Parks and Recreation Commission meeting and to the school district and/or schools.
    d. Do all the trails have to be ADA compliant? Are Class I trails required to be paved to meet Americans with Disability Act (ADA) guidleines?
        - No, a firm and stable surface is required. This can be crushed aggregate or other material, not necessarily asphalt or concrete pavement. In some creek settings, asphalt or concrete pavement is not allowed due to sensitive resources and runoff concerns.
        - For most funding programs, compliance with ADA is required.
        - Not all off-road trails are considered Class I trails.
        - Most trails at Foothill Regional Park are not ADA compliant.

- Since Windsor is mostly flat, compliance with ADA requirements should not be a problem.
- Some of the existing trails along creeks do not meet ADA guidelines and would need to be upgraded to comply.
- Where there are parallel trails (like along both sides of a creek), it might be appropriate to just improve one side for accessibility standards, and leave one "unimproved".

e. There used to be a tunnel under the Highway that you could use to cross.
   - This is probably the existing culvert system, now overgrown with willows and not passable. It is being studied as part of the Highway 101 crossing study.

f. Others also voiced the need to make ADA compliant on all the trails.
g. Keep in mind the recreational uses for Class I trails.
h. Address safety and security issues along the trails.
i. Consider crossing under railroad tracks at Windsor Creek.
   - The team will explore this and meet with SMART to discuss.

j. Consider other social media outreach to neighborhoods:
   - NextDoor
   - Facebook
   - Field workshop, conducted 20 years ago

k. Where is there sufficient grade differential or SMART clearance for a tunnel/underpass?
   - The area north of Mitchell Lane has about 5-6 feet of raised grade above adjacent land, and there would need to be a ramp with 5% max. for accessibility.
   - The area south of Bell Lane is also elevated above adjacent grade.
   - In the north part of town, behind the Windsor School District could be considered, but there is not much difference in elevation.
   - A new SMART overpass is not likely feasible due to projected low volume of use, technical challenges with crossing train tracks, and cost.

4. Small Table discussions and Draft Map Comments



Workshop participants provided input on the draft maps, as summarized below.

General:

- Top priority-Safe crossing 101: north west=northeast

Northwest:

- (Improve) Windsor River road Cali Calmecac to Town Green.
- You guys should make a trails app for bikes and walking trails.



Northeast:

- Look at Jensen Creek Trail (between East Windsor Creek and Hembree)
- Drainage ditch crossing needed (E. Windsor Creek south of Foothill)
- Open fence for bikes (trail between W. Windsor Creek, Lewis Park and E./ Windsor Creek at Foothill)
- Who owns the property along Windsor Creek (24B)? Lakewood Homeowners? [No: part of shopping center, and private ownership].



Southwest:

- (43A) Great idea! If a path/trail along Conde

can't be done, this proposed Class I trail would connect WMCC with downtown.

- A big priority is for Windsor Mobile Country Club to be able to walk downtown.
- A connection (under Bell Road) to get to the SMART Trail that will be on the other side of the tracks.
- This section along Conde (north of Mitchell) would facilitate foot/bike traffic to the brew pub and Downtown.

Southeast:





- Connect discontinuous Cornell between Robbins Park and Hembree. Plans may be in the works to develop the south side of the west end of Cornell, so timing is important.
- The street north of Arthur is likely private. Why not continue the trail southeast along the creek, to connect with Old Redwood Highway. Near Anne and Plymouth, though it looks to be south of Windsor boundary.
- Connect (Pool Creek and Faught Creek) at edge of new development (Victory Oaks).

4. Action Items:

1. Presentation will be placed on website.
2. Town (Alejandro Perez) will reach out to SMART to see if he can set up a meeting.
3. Discuss possible Parks and Recreation Commission presentation, creek walk, and outreach to schools.
4. Potential outreach at other community events.

5. Workshop Photos:









Park and Recreation Commission

December 13, 2017

TOWN OF WINDSOR
AGENDA REPORT

Parks and Recreation Commission Meeting Date: December 13, 2017

To: Chair and Commissioners
From: Alejandro Perez, Senior Civil Engineer
Subject: Class I Pedestrian and Bicycle Trails Study

Recommendation to the Commission:
Receive a presentation and provide comments to the Class I Bicycle/Pedestrian Trails recommendations.

Background and Discussion:
On February 1, 2017, the Town retained Questa Engineering to study existing and potential Class I trails to improve bicycle and pedestrian access in Windsor. The Study examines opportunities to connect neighborhoods with key destinations throughout the community along a network of off-street trails.

The focus of the study is off-street, (Class I) trails. A Class I Trail is defined by Caltrans as a bikeway or multi-use path that provides a "completely separated right of way for exclusive use by bicycles and pedestrians" such as the existing creek-side path along Windsor Creek between Los Amigos Road and Natalie Drive. The study builds on the Class I trails identified in the 2014 Windsor Bicycle and Pedestrian Master Plan Update, which identified approximately nine miles of trails in 17 segments.

On September 21, 2017, the first Windsor Trails Workshop was held. Approximately 10 residents provided input on routes, destinations, challenges and priorities for trail implementation. Additional Class I trail options have been identified during field evaluation, meetings with staff and stakeholders including Sonoma-Marin Area Rail Transit (SMART) and Sonoma County Water Agency, the Bicycle and Pedestrian Advisory Committee and a dedicated website and interactive mapping tool.

As a result of this evaluation and outreach effort, 14 new trail segments have been identified, and some of the previously identified trail segments have been modified based on site conditions, connectivity, and/or opportunity to be independently constructed. Key priorities that have been identified include:

- Provide opportunities for grade separation across the SMART tracks, and coordinate implementation;
- Consider trails that connect to the Downtown area, the US101 crossing and future SMART Trail;
- Provide trails along creeks; and
- SMART Trail can be located on either side of tracks - consider best neighborhood and community connections.

The study includes a ranking methodology to evaluate trails. This information will be used to develop a prioritized list of improvements for inclusion to the Town's Capital Improvement Program that can be funded for implementation by local, regional, state, and federal grant programs. The information will also be used to facilitate phasing, funding, and implementation priorities within a short- and long-range implementation schedule. Cost estimates for proposed trail projects and related improvements will be developed.

Trail concepts and recommendations will incorporate public input, with additional workshops to be scheduled this winter. The study is anticipated to be completed in spring 2018. Additional information is available at the study website at www.windsortrails.org.

Attachments:
Class I Bicycle and Pedestrian Trail Study - Presentation

Prepared by:
Mona Ibrahim
Engineer II

Reviewed by:
Toni Bertolero
Public Works Director/Town Engineer

Recommended by:
Donna Legge
Parks and Recreation Director

Town of Windsor

Class I Bicycle and Pedestrian Trail Study

Parks and Recreation Commission

December 13, 2017



Agenda

- Introduction
- Study Goals
- Town Vision
- Destinations and Connections
- Alternatives and Ranking
- Outreach
- Outcomes
- Timeline
- Questions?
- Roundtable session
- Next Steps

2

Introduction

This is a study of off-street, separated Class I trails in Windsor. The focus is on trails identified in 2014 Bicycle Plan. *It is not a study to develop bicycle lanes, sidewalks or other facilities, but will identify trail connections and gaps.*

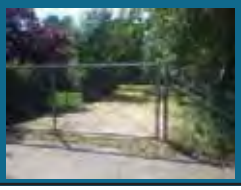
Study Team:
Questa Engineering
- Jeff Peters
- Margaret Henderson

Parisi Transportation Consulting
Town of Windsor
Mona Ibrahim, Engineer II

3

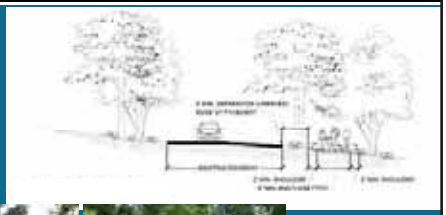
Study Goals

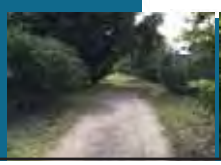
- Define independent trail segments
- Evaluate trail components and design strategies
- Identify funding and implementation strategies
- Evaluate trail crossings and intersections
- Determine priorities, costs and steps to implement
- Provide outreach and incorporate community input

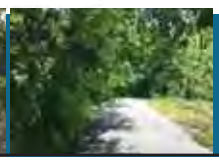


4

What is a Class I Trail?



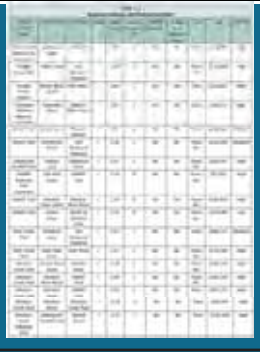




5

2014 Bicycle/Pedestrian Master Plan: 17 Trails





6

2017 Study

40 potential Class I Trail segments

3 rail crossings

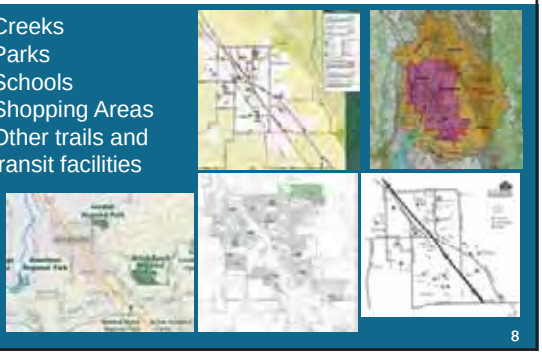
5 bike/ped bridges



7

Destinations and Connections

- Creeks
- Parks
- Schools
- Shopping Areas
- Other trails and transit facilities



8

Northwest

- Downtown
- SMART
- Starr Creek
- Cali Calmecac School
- 101 Crossing (Separate Study)

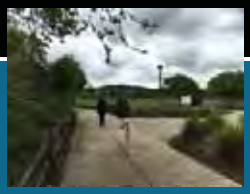




9

Northeast

- North Windsor Creek
- Foothill Regional Park
- Lakewood Hills
- Windsor Middle School

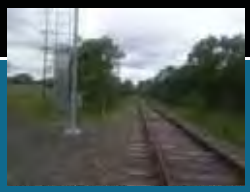




10

Southwest

- SMART
- South Windsor Creek
- South Starr Creek
- Windsor High School
- Keiser Park
- Town Wastewater Facilities



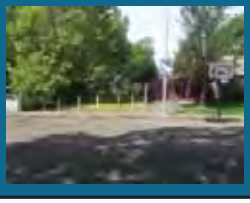


11

Southeast

- Pool Creek
- Faught Creek
- Shiloh Vision Plan Area





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Outreach

- Bicycle and Pedestrian Advisory Committee
- Parks and Recreation Commission
- Community Workshop
- SMART, SCWA
- Web tool / Project website
- Social media
- Town Council

13

Web Tool

Web Mapping Tool

Map tool allows for *ongoing* outreach and stakeholder input and feedback that is not limited to workshops or meetings.



14

Feedback

- Provide grade-separated rail crossing(s)
- Connect to Downtown
- Provide trails along creeks, and creek crossings
- Unite the community
- Connect to SMART trail
- The SMART trail can be on either side of the tracks

15

Connections/Crossings

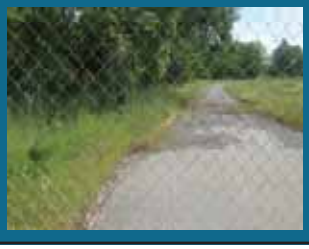
- HWY 101
- SMART
- Major streets
- Connecting the community ("Ring Trail")



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Ranking the Trails: Opportunities

1. **Stakeholder Input**
2. **Ease of Implementation**
3. **Connectivity**
4. **Accessibility**
5. **Use**



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Ranking the Trails: Constraints

1. **Engineering Complexity**
   - Design Complexity
   - Cost
   - Right of Way
   - Structures needed
2. **Environmental Complexity**
   - Biological Resources
   - Geology
   - Flooding
   - Land Use
   - Traffic Safety



18

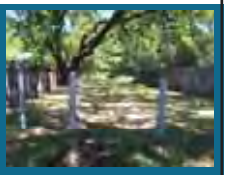
Decision Matrix

- Rank and prioritize trail segments
- Evaluation criteria
  - Constructability
  - Sustainability
- Public input
- Match projects to funding & development opportunities



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Outcomes



Fully Supported Study
- Town
- Stakeholders
- Community

Environmental Assessment Strategy
- Identify issues and challenges
- Include environmental considerations
- Prioritize trails with less environmental complexity

Implementation Program
- Define independent segments
- Determine preliminary costs and permitting issues
- Suggest partnerships and funding strategies

20

Timeline

Spring 2017: Data gathering, mapping, survey of existing conditions.

April 2017: Initial BPAC meeting.

Summer/Fall 2017: Survey, screening and ranking; public outreach and meetings. Preliminary environmental screening. Public Workshop.

Fall/Winter 2017: Draft costs, permitting, design strategies and environmental analysis, prepare Administrative Draft Study. Public meetings and workshops.

Winter 2017/18: Public review of Draft Study; finalize. Public meetings.

February-March 2018: Town Council presentation.

Contact:
Town of Windsor
Mona Ibrahim, Engineer II
mibrahim@townofwindsor.com
707-838-5349

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Town of Windsor Community Workshop

April 26, 2018



Class I Bicycle and Pedestrian Trails Study

Community Workshop #2

Agenda

April 26, 2018

1. **Welcome and Introductions**
2. **Presentation**
3. **Construction Elements**
   a. **Trail Surface and Width**
   b. **Accessibility**
   c. **Crossing techniques**
4. **Round table and break out discussion**
5. **Next Steps and Wrap-Up**

Workshop #2 - Comments

Please use the space below to write any comments you may have regarding the Town of Windsor –Class I bicycle and Pedestrian Study below:

Optional

Name: _____

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record. Please turn in to "Comments Box" at the end of the meeting. Thank you!

Contact: Town of Windsor
Mona Ibrahim, Engineer II
mibrahim@townofwindsor.com
707-838-5349

Class 1 Trails Study Second Community Workshop
April 26, 2018

Sign- In Sheet:

NAME	PHONE NUMBER	EMAIL ADDRESS	ADDRESS
Summer Alves			
Jay Peck			
Michael Clark			
Judy Cobourn			

Town of Windsor
Class I Trails Study 2nd Community Workshop
Meeting Notes
April 26, 2018

Four members from the public attended, 2 consultants, 2 staff

Meeting Notes

1. **Introductions, including Town staff, Questa and residents.**

2. **Presentation by Questa** (see attached)

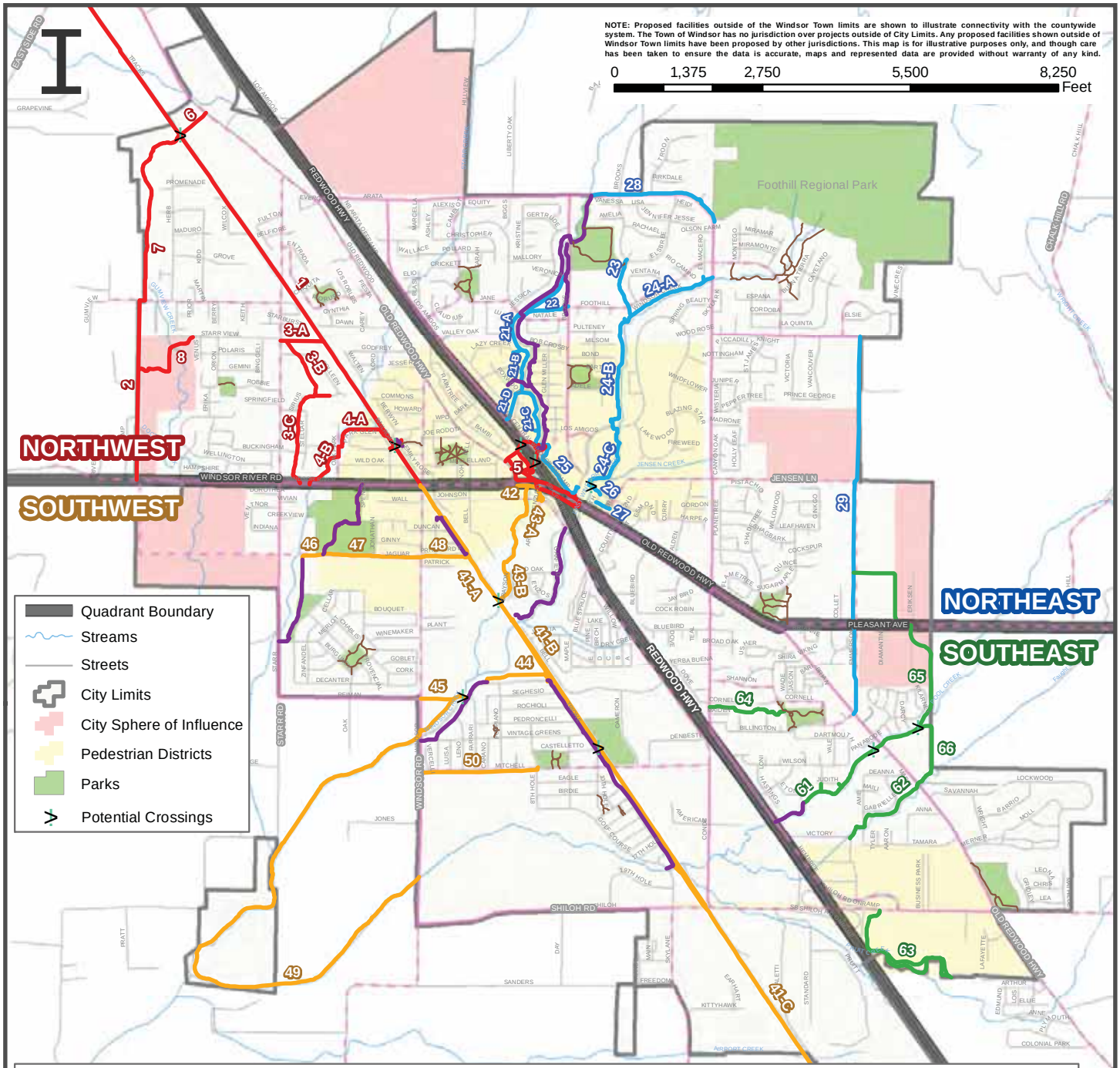
3. **Public Comments**

    a. Where is the website? www.windsortrails.org
    b. How is this advertised through social media? Link to Town of Windsor website and Facebook page.
    c. Have trail counts or use studies been done? No, not a part of project.
    d. Will the SMART Trail have protection? Yes, there will be a fence. The Town just received notice that funding for the extension to Windsor was approved.
    e. Could ranking matrix be provided to interested parties? Yes.
    f. Is there a date for the Town Council meeting? Not yet.
    g. Comment Card:
        - Concern about sidewalks and bike lanes along Gumview Road especially school children.
        - Response: Gumview Road is designated on the adopted Town Bicycle and Pedestrian Facilities Map to be improved with Class II (bicycle lanes) and Class III (signage) improvements. Future Class I trails would connect to these facilities, and provide an opportunity for off-street trail use.

4. Workshop Photo:



Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS



PROPOSED CLASS I TRAILS

NORTHWEST QUADRANT

1. SMART
2. Gumview Trail
3. North Starr Creek Trail
4. East Starr Creek Trail
5. 101 Crossing Complex
6. Park & Ride Connector
7. SMART-Gumview Connector
8. Gumview Creek Trail

NORTHEAST QUADRANT

21. West Windsor Creek Trail
22. East Windsor Creek Trail
23. Windsor Middle School
24. Foothill RP Connector
25. Lakewood-Amigos Trail
26. Franklin Street Bridge
27. 3rd - 4th St Connector
28. Hiram Lewis Connector
29. Jensen Lane Connector

SOUTHWEST QUADRANT

41. SMART
42. Conde Lane Connector
43. South Windsor Creek Trail
44. Trione Connector
45. WWTP Connector
46. South Starr Creek Trail
47. Windsor High School Connector
48. SMART-Windsor Rd Connector
49. Windsor-Pool Creek Loop
50. Vintage Oaks Park Connector

SOUTHEAST QUADRANT

61. Pool Creek Trail
62. Faught Creek Trail
63. Shiloh Vision
64. Robbins Park Connector
65. Pool Creek-Jensen Lane Connector
66. Faught-Pool Creek Connector

- Class I Existing Trails
- Class II and III Existing Trails
- Park Trails
- Class II and III Proposed Trails

TOWN OF WINDSOR AND VICINITY

PROPOSED AND EXISTING BICYCLE AND PEDESTRIAN FACILITIES, SONOMA COUNTY, CA

TOWN OF WINDSOR

QUESTA

DATE REVISED:
4/24/2018 3:46:10 PM

QUESTA PROJECT NO.
1600143

FIGURE 1

Town of Windsor

Class I Bicycle and Pedestrian Trail Study

Community Workshop

April 26, 2018



1

Introduction

This is a study of off-street, separated Class I trails in Windsor. The focus is on trails identified in 2014 Bicycle Plan. *It is not a study to develop bicycle lanes, sidewalks or other facilities, but will identify trail connections and gaps.*

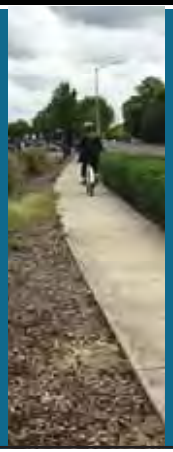
Study Team:
Questa Engineering
- Jeff Peters
- Margaret Henderson

Town of Windsor Public Works Department

2

Study Goals

- Define independent trail segments
- Evaluate trail components and design strategies
- Identify funding and implementation strategies
- Evaluate trail crossings
- Determine priorities, costs and steps to implement
- Provide outreach and incorporate community input



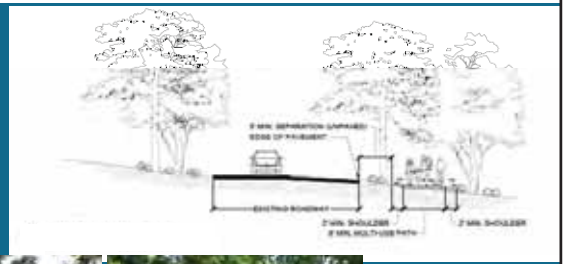
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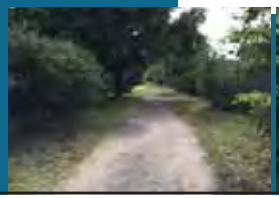
Tonight's Meeting Objectives

- Discuss Study process and input received
- Review trail routes
- Explain trail ranking and priorities
- Discuss trail construction elements, techniques and relative costs
- Discuss special construction components, such as undercrossing of SMART and bridges for creek crossings
- Review trail implementation options

4

What is a Class I Trail?







5

2014 Bicycle/Pedestrian Master Plan: 17 Trails





6

Current Study

40 Potential Class I Trail segments

4 Rail Crossings

5 Bicycle and Pedestrian Bridges



7

Outreach

- Bicycle and Pedestrian Advisory Committee
- Parks and Recreation Commission
- Community Workshop
- SMART, SCWA
- Web tool / Project website
- Social media
- Town Council

8

Web Tool

Web Mapping Tool

Map tool allows for *ongoing* outreach and stakeholder input and feedback that is not limited to workshops or meetings.



9

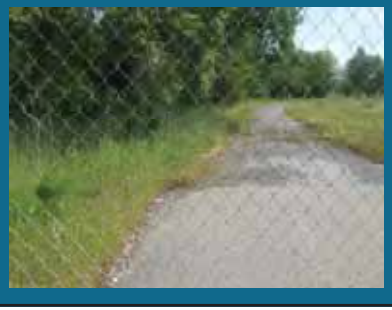
Feedback

- Provide grade-separated rail crossing(s)
- Connect to Downtown
- Provide trails along creeks, and creek crossings
- Unite the community
- Connect to SMART trail
- The SMART trail can be on either side of the tracks

10

Ranking the Trails: Opportunities

1. Stakeholder Input
2. Ease of Implementation
3. Connectivity
4. Accessibility
5. Use



11

Ranking the Trails: Constraints

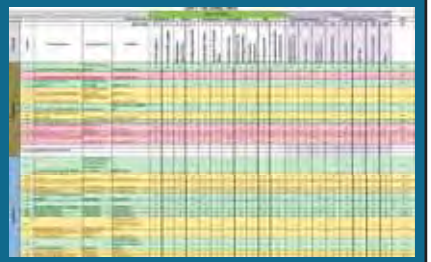
1. **Engineering Complexity**
   - Design Complexity
   - Cost
   - Right of Way
   - Structures needed
2. **Environmental Complexity**
   - Biological Resources
   - Geology
   - Flooding
   - Land Use
   - Traffic Safety



12

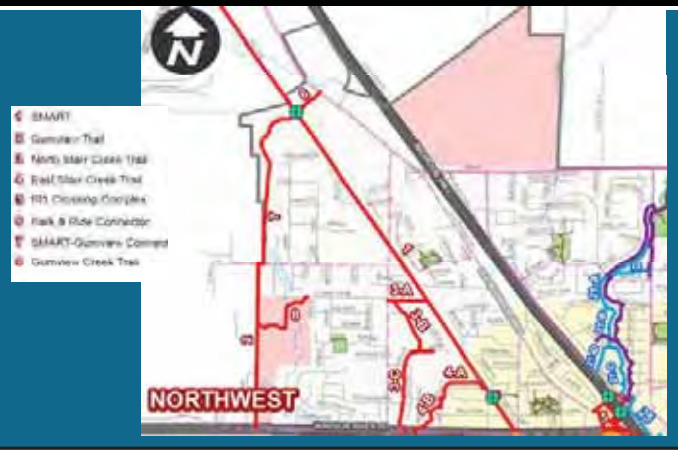
Decision Matrix

- Rank and prioritize trail segments
- Evaluation criteria
  - Constructability
  - Sustainability
- Public input
- Match projects to funding and development opportunities



13

Northwest Trails

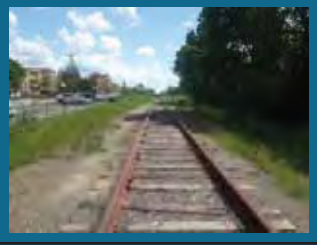


14

High Priority Trails Northwest

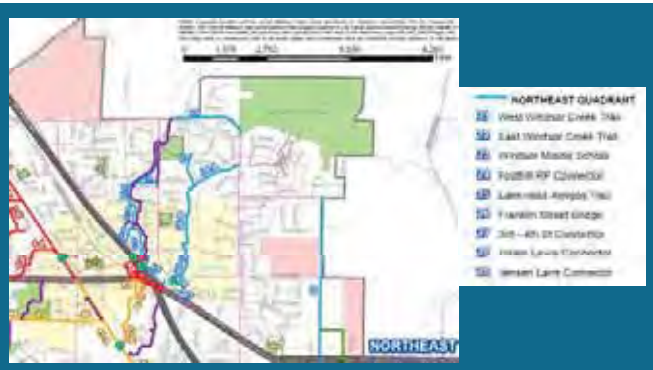
1: SMART Trail
3A: Starr View Connector
4A: East Starr Creek
5: Highway 101 Crossing Complex





15

Northeast Trails



16

High Priority Trails Northeast

21A: West Windsor Creek (Brooks-Natalie) Mid Block Crossing
22: East Windsor Creek
23: Windsor Middle School Connector
24A & B: East Windsor Creek Foothill Regional Park Connector
26: Franklin Street Bridge



17

Southwest Trails



18

High Priority Trails Southwest

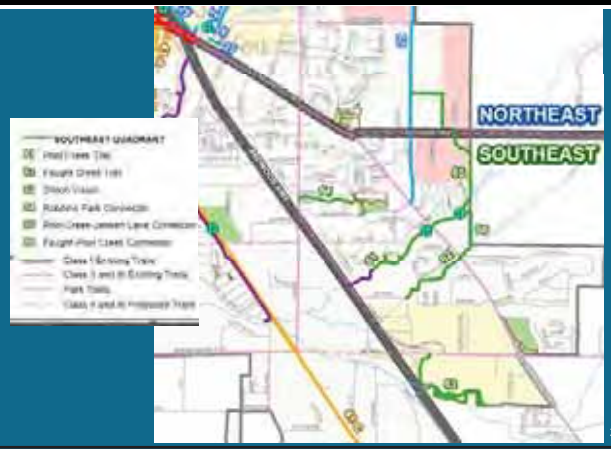
41A: SMART West
41B: SMART East
41C: SMART South of Mitchell Lane
42: Conde Lane Connector
43A-B South Windsor Creek
47 Jaguar Way extension





19

Southeast Trails



20

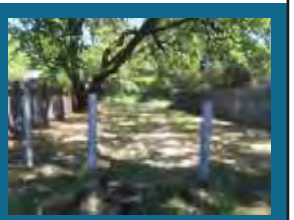
Mid Priority Trails Southeast

61: Pool Creek
62: Faught Creek
64: Robbins Park



21

Trail Implementation



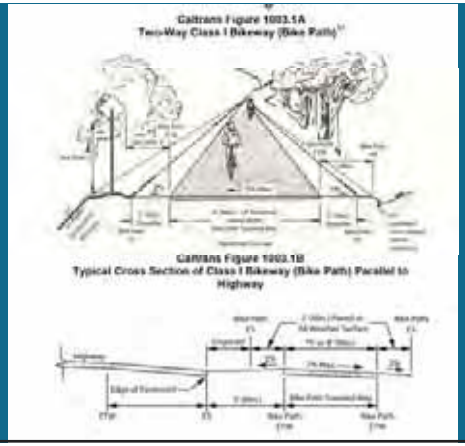
Existing Roads and Paths
- No Additional Environmental Review
- Widening and grading
- Trail surface improvements
- Signs and crosswalks

New trails
- Environmental analysis
- Use agreements or easement
- Earthwork, structures, surface improvements
- Signs and crosswalks
- Potential environmental mitigation

New trails as part of development
- Environmental analysis as part of project
- Concurrent construction
- Cost and implementation efficiency

22

Trail Surface and Width



23

Connections and Crossings

- Highway 101 Crossing Complex
- Grade Separation at SMART tracks (up to 4 locations)
- Pedestrian bridge creek crossings
  - Keiser Park
  - Windsor Creek, north and south
  - Pool Creek
  - Faught Creek

24

Highway 101 Crossing



Connecting Central Windsor Study

25

SMART Underpass







Davis, CA *Santa Clara, CA* *Fremont, CA*

26

Bicycle and Pedestrian Bridges





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Next Steps

Spring 2017: Data gathering, mapping, survey of existing conditions.

April 2017: Initial BPAC meeting.

Summer/Fall 2017: Survey, screening and ranking; public outreach and meetings. Preliminary environmental screening. Public Workshop.

Fall/Winter 2017: Draft costs, permitting, design strategies and environmental analysis, prepare Administrative Draft Study. Public meetings and workshops.

Spring 2018: Community Workshop.

Summer 2018: Finalize Study and Town Council presentation.

Contact:
Town of Windsor
Mona Ibrahim, Engineer II
mibrahim@townofwindsor.com
707-838-5349

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Additional Information

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Town Projects Update

- Connecting Central Windsor Study – Council Acceptance Scheduled 5-2-2018
- Grant application for Brooks Road South/Hiram Lewis Park Mid Block Crossing – Council Approved Resolution of Support on 4-18-2018. Waiting for grant approval from Sonoma County Transit Authority (STCA). Need to schedule Council date to amend the budget to include funding the project.
- Jaguar Way Extension Study – website for info: www.jaguarwayextension.org
- Windsor River Road at SMART Roundabout – preliminary design concepts and outreach in progress.
- Status of development projects with trails:
  - Victoria Oaks (Between Pool Creek and Faught Creek - Trails 61&62) – In construction
  - Creek Walk (6405 Old Redwood Hwy near Pool Creek - Trail 61) – In referral/entitlement phase
  - Mill Creek (Bell Road Project near Windsor Creek – Trails 41A&43B) – In referral/entitlement phase
  - Draper Estates (Herb Road - Trail 7) – Pre-application/referral
  - Jensen Lane Annexation and Subdivision (Trail 29) - Pre-application/referral

Table 1: Trail Scoring Criteria

					Opportunities											Constraints								
		Screening Factors			Stakeholder		Ease of		Connectivity		Accessibility		Use			Engineering Complexity			Environmental Complexity					Total
		Point Scale [1]			0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	0 - 3	-3-0	-3-0	-(0 - 3)	-3-0	-3-0	-3-0	-3-0	-3-0	33
Quadrant	Number	Trail Description	Beginning Point	End Point	Public Support	Stakeholder Support	Development Opportunity	Funding Opportunity	Closes Gap in Paths	Connects to Activity Node	Improves Access	Enhancements to Existing Facilities	Existing Use (estimated)	Anticipated Use	Provides Alternative to Arterial Street	Design Complexity / Implementation Costs	Right-of-Way 2	Complexity of Design/Structures	Biological Resources	Geology/Hazards	Hydrology	Land Use Consistency	Traffic 3	
Northwest	1	SMART (Windsor River Road North)	Windsor Town Limits (North)	Windsor River Road	3	3	3	3	3	3	3	2	1	3	3	-1	0	0	-1	-1	0	0	-2	28
	2	Gumview -Windsor River Connector	Gumview Road	Windsor River Road	3	1	3	0	1	2	3	0	0	3	3	0	-1	0	-1	0	0	0	0	14
	3A	N Starr Creek (Starr View Connector)	Starr View Drive at Starr Road	SMART Trail	1	3	1	3	3	3	3	3	0	3	3	-1	0	0	0	0	-1	0	0	25
	3B	N Starr Creek (Abbie Court North)	Starr View Drive at Starr Road	Abbie Court	3	3	1	2	2	3	3	2	2	2	3	-1	0	0	-1	0	-1	0	0	23
	3C	N Starr Creek (Abbie Court South)	Abbie Court/Stellar Lane	Windsor River Road	3	3	1	2	2	3	3	2	2	2	3	-1	0	0	-1	0	-1	0	0	23
	4A	E Starr Creek (Oak Park - Railroad)	Oak Park Street	Railroad Avenue / SMART Trail	3	3	3	3	3	3	3	2	0	3	3	-1	0	-1	-1	0	-1	0	0	25
	4B	E Starr Creek (Oak Park -Windsor River Road)	Oak Park Street	Windsor River Road	1	3	1	2	3	3	3	2	0	3	3	-1	0	-1	-1	0	-1	0	0	20
	5	HWY 101 Crossing Complex	Windsor River Road	Los Amigos Road	3	3	3	3	3	3	3	2	3	3	3	-3	-2	-3	-1	-1	0	0	-1	24
	6	Windsor School District SMART Trail Connector	Old Redwood Highway	Herb Road	1	2	1	3	3	2	3	0	0	3	3	-1	-1	-2	0	-1	-1	-1	0	14
	7	Gumview Trail North	Herb Road	Gumview Road	1	1	3	0	3	3	3	0	0	3	3	-1	-3	0	-1	0	0	-1	0	14
	8	Starr View-Gumview Connector Trail	Gumview Trail	Starr View Road	2	1	3	0	3	3	3	0	0	3	2	-1	-3	0	-1	0	0	-1	0	14
	9 to 20	RESERVED FOR FUTURE USE																						
Northeast	21A	W Windsor Creek (Brooks-Natalie)	Brooks Road (across from Hiram Lewis Park adjacent to Jessica Drive)	Natalie Drive	3	3	0	3	3	3	3	3	3	3	3	-1	0	-1	-1	-1	-1	0	0	25
	21B	W Windsor Creek (Natalie-Lazy Creek)	Natalie Drive	Lazy Creek Drive	3	3	0	3	3	3	3	3	0	3	3	-1	0	-1	-1	-1	-1	0	0	22
	21C	W Windsor Creek (Lazy Creek-Los Amigos)	Lazy Creek Drive	Los Amigos Road	3	3	0	3	3	3	3	1	0	3	3	-2	0	-1	-2	-1	-1	0	0	18
	21D	Foxwood Connector	Foxwood Drive	Los Amigos Road	1	1	0	1	2	3	3	3	1	2	2	0	0	0	0	0	0	0	0	19
	22	E Windsor Creek Extension (Foothill-Natalie)	Brooks Road	Natalie Drive	3	3	2	3	3	3	3	3	3	3	3	0	-2	0	-1	0	0	0	0	29
	23	Windsor Middle School Connector	Elsbree Lane	Foothill Drive	3	3	0	3	3	3	3	3	3	3	3	-1	-2	-1	0	-1	0	0	0	25
	24A	Foothill RP Connector	Foothill Drive	Hembree Lane	3	3	0	3	3	3	3	3	3	3	3	-1	0	-1	0	0	-1	0	0	27
	24B	Foothill RP Connector	Foothill Drive	Lakewood Drive	3	3	1	3	3	3	3	3	3	3	3	-1	0	-2	-1	-1	-2	0	0	24
	24C	Foothill RP Connector	Lakewood Drive	Brooks Road South (adjacent to Lakewood Drive)	3	3	3	1	3	3	3	2	2	3	3	-1	-3	-1	-1	0	-1	-1	-1	20

	25	Lakewood-Amigos Pathway (Part of 101 crossing Complex)	Old Redwood Highway	Los Amigos Road	3	3	3	3	3	3	3	3	1	3	3	-2	-2	-2	0	0	0	-1	-1	21
	26	Franklin Street Bridge	4th Street	Brooks Road South (adjacent to Lakewood Drive)	3	3	1	3	3	3	3	3	2	3	3	-1	-1	-1	-1	-1	-1	0	0	24
	27	3rd St - 4th St Connector	3rd Street	4th Street	2	1	1	1	2	3	3	3	2	2	3	-1	0	-1	0	0	0	0	0	21
	28	Arata/Foothill Park Connector	Arata Lane	Foothill Park	1	2	1	1	3	3	3	3	1	2	3	-1	0	-1	0	0	0	0	0	21
	29	Jensen Lane Connector	Jensen Lane Extension		3	3	3	1	2	2	3	3	3	3	3	-1	-1	-1	-1	0	-1	0	0	24
	30 to 40	RESERVED FOR FUTURE USE																						
Southwest	41A	SMART -West side of Tracks	Windsor River Road	Trione Circle	3	3	3	3	3	3	3	2	1	3	3	-2	0	-2	-1	-1	-1	0	0	24
	41B	SMART - East Side of Tracks	Windsor River Road	Mitchell Lane	3	3	3	3	3	3	3	2	1	3	3	-1	0	-2	-1	-1	-1	0	0	24
	41C	SMART - East Side of Tracks	Mitchell Lane	Town Limits	3	3	3	3	3	3	3	2	1	3	3	-1	0	0	-1	-1	-1	0	0	27
	42	Conde Lane Connector	Old Redwood Highway	Conde Lane	3	3	3	2	3	3	3	3	1	3	3	-1	0	0	-1	0	0	0	-1	27
	43A	S Windsor Creek	Conde Lane	Windsor Creek Elementary School	3	3	3	3	3	3	3	2	3	3	3	-1	-2	-1	-1	0	0	0	-1	26
	43B	S Windsor Creek	Windsor Creek Elementary School	Bell Road	3	3	3	3	3	3	3	2	3	3	3	-1	-2	-1	-1	0	0	0	0	26
	44	Trione Connector	Trione Circle	Trione Circle	3	3	0	1	3	2	3	3	1	3	3	-1	0	-1	0	0	0	0	0	22
	45	WWTP Connector	Windsor Road	Trione Circle	3	3	2	2	3	3	3	2	1	3	3	-1	0	-2	-2	0	-1	0	0	20
	46	S Starr Creek	Keiser Park	Starr Creek Park	3	3	1	3	3	3	3	3	2	3	3	-1	0	-2	-2	-1	-1	0	0	23
	47	Jaguar Way	Starr Road	Windsor Road	3	3	2	2	3	3	3	3	3	3	3	-1	0	-1	-1	0	0	0	-1	27
	48	Town of Windsor Connector	Windsor Road	SMART Trail	1	1	1	2	3	3	3	2	0	3	3	-1	0	-1	-2	-2	-1	0	0	15
	49	Windsor/Pool Creek Loop	Windsor Road	Windsor Road	1	2	0	3	1	1	1	3	0	2	2	-1	0	0	-1	0	-1	0	0	13
	50	Mitchell Lane	Windsor Road	Mitchell Lane	1	1	2	0	1	1	2	3	2	3	3	-1	0	-1	-1	-2	-2	0	0	12
	51- to 60	RESERVED FOR FUTURE USE																						
Southeast	61	Pool Creek (Old Rwd HWY - Hembree)	Old Redwood Highway	Hembree Lane	3	3	3	2	3	2	3	2	1	3	3	-2	-1	-2	-3	-2	-3	0	0	15
	62	Faught Creek (Old Rwd HWY - Victory)	Old Redwood Highway	Victory Lane	3	3	2	1	3	3	3	2	1	3	3	-1	-1	-1	-1	-1	-2	0	-1	19
	63	Shiloh Vision (Pruitt Creek)	Edmund Avenue (Mobile Home Estates)	Shiloh Road	3	3	3	0	0	3	2	0	0	1	2	0	-1	0	-1	0	-1	0	0	14
	64	Robbins Park Connector	Hembree Lane	Robbins Park	2	2	3	1	2	3	3	1	2	3	2	-1	-1	-1	-1	0	-1	0	0	19
	65	East Pool Creek	Old Redwood Highway	Pleasant Avenue/Jensen Lane Trail	2	2	2	1	3	2	3	0	1	2	2	-2	-1	-1	-1	-1	-1	0	0	13
	66	East Faught Creek	Old Redwood Highway	Pool Creek	2	2	2	1	3	2	3	0	1	2	2	-2	-1	-1	-1	-1	-1	0	0	13
	67-80	RESERVED FOR FUTURE USE																						

Notes:

1. Overall Ranking: High = 24-33 points; Medium = 15-24 points; low = <15 points

2. A point scale of 0 - 3 points is possible for each criteria under the Opportunity factors. Zero to -3 points can be deducted for criteria under the Constraints factors. The weighting scale represents low, medium, and high.

3. Right-of-Way includes consideration of acquisition challenges and costs.

4. Considers traffic impacts and street crossing improvement needs.

Workshop #2 - Comments

Please use the space below to write any comments you may have regarding the Town of Windsor –Class I bicycle and Pedestrian Study below:

Concern on sidewalks and a bike lane on Gumview Rd

Safety Issue school children on road in the morning and afternoon walking down the road

Presently no sidewalks across s/o t from Hembree to Starr

No Bikelane at all

Optional

Name: Jana A Peck Jay Peck

Email or Phone: [redacted]

(Please print)

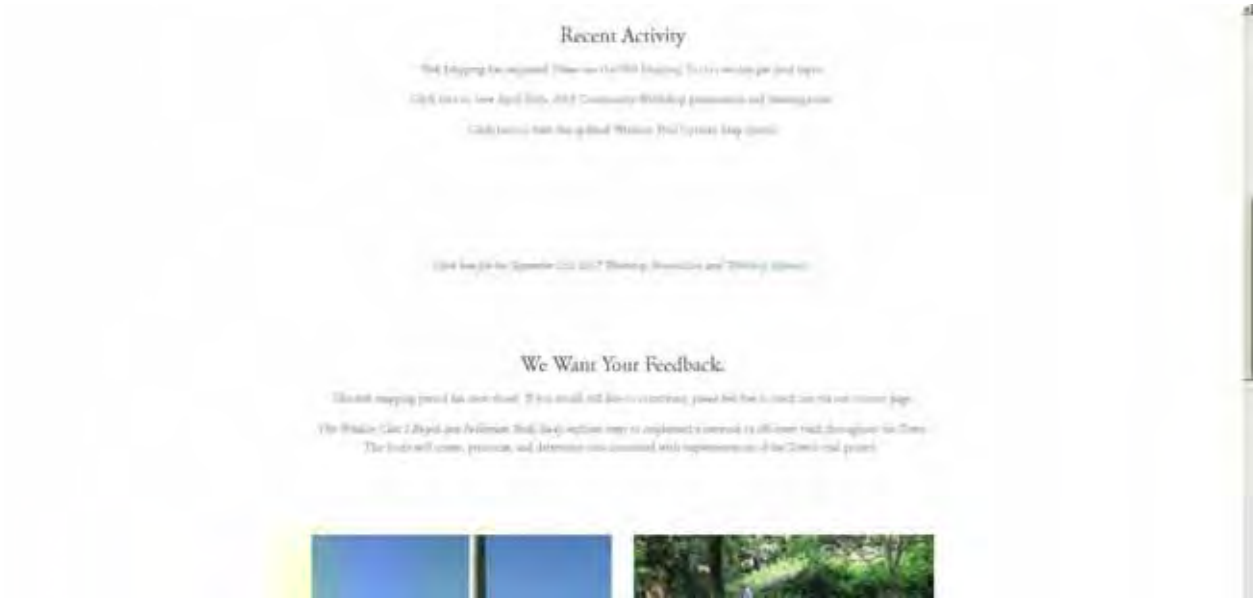
Please note that comments and information submitted become part of the public record. Please turn in to "Comments Box" at the end of the meeting. Thank you!

Contact: Town of Windsor
Mona Ibrahim, Engineer II
mibrahim@townofwindsor.com
707-838-5349

Summary of Website Participation

- 840 Unique Visitors
- Approximately 2000 page views
- Approximately 50 web comments






Give us feedback.
1. Navigate to the specific location on the map where you wish to contribute.
2. Click a marker from the list below. You will need to zoom in on the map for the markers to appear on the list.
3. Click the location on the map to drop the marker.
4. Add information to your marker's pop up box. Add any attachments you may wish to include, such as images and PDFs. Note: Not all fields are required if you wish to remain anonymous.
5. Save your comment. That's it!
TOWN OF WINDSOR
Welcome to the Class I Bicycle and Pedestrian Trails Public Outreach Web Map!
This application was designed to help gather your opinions with our bicycle and pedestrian trail plans, optimizing the allocation of our resources. Please comment, attach photographs, and make suggestions to help us build the best trails possible!
OK
Proposed Class I Trails
Existing Trails
Private Trails
Quadrants
Other Trails
City Limits
Existing Parks


Give us feedback.
1. Navigate to the specific location on the map where you wish to contribute.
2. Click a marker from the list below. You will need to zoom in on the map for the markers to appear on the list.
3. Click the location on the map to drop the marker.
4. Add information to your marker's pop up box. Add any attachments you may wish to include, such as images and PDFs. Note: Not all fields are required if you wish to remain anonymous.
5. Save your comment. That's it!
Concern
Like
Dislike
Comments
Reply
Proposed Class I Trails
Existing Trails
Crossings
Park Trails


TRAFFIC OVERVIEW
Mar 1, 2017–Jun 6, 2018
All devices
Unique Visitors
840
yr/yr
Visits
1,205
yr/yr
Pageviews
1,986
yr/yr
Visits by week (Wed, Mar 1, 2017–Wed, Jun 6, 2018)

Visits by **DEVICE TYPE**



- **Desktop**
  813 (67%)
- **Mobile**
  246 (20%)
- **Tablet**
  132 (11%)
- **Unknown**
  16 (1%)

Visits by **SOURCE**



- **Direct**
  623 (52%)
- **townofwindsor.com**
  236 (20%)
- **Facebook**
  191 (16%)
- **Google**
  75 (6%)
- **Others**
  82 (7%)

Visits by **BROWSER**



- **Chrome**
  500 (42%)
- **Mobile Safari**
  150 (13%)
- **Facebook App**
  147 (12%)
- **IE**
  106 (9%)
- **Others**
  287 (24%)

Visits by **OPERATING SYSTEM**

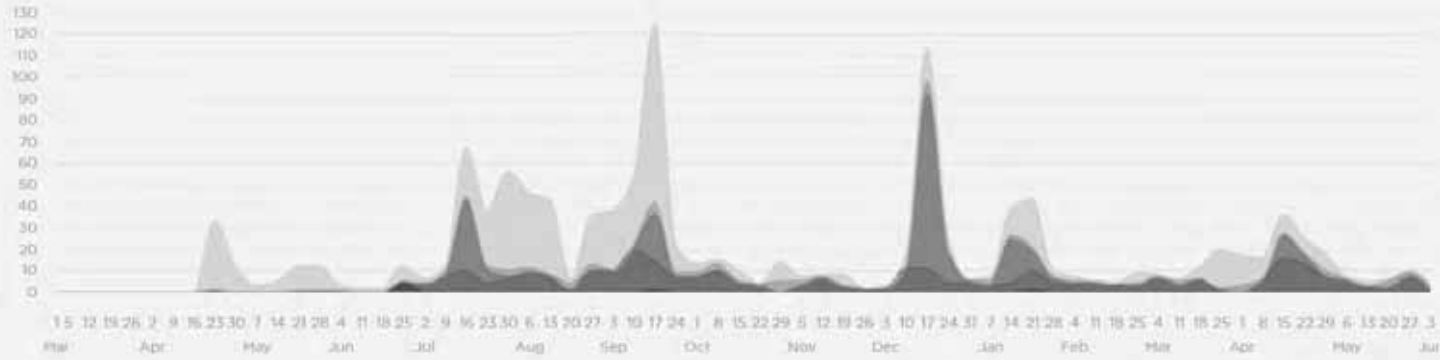


- **Windows**
  688 (58%)
- **iOS**
  290 (24%)
- **Android**
  72 (6%)
- **macOS**
  57 (5%)
- **Others**
  83 (7%)

TRAFFIC SOURCES

Mar 1, 2017–Jun 6, 2018 | All devices

Visits by week (Wed, Mar 1, 2017–Wed, Jun 6, 2018)

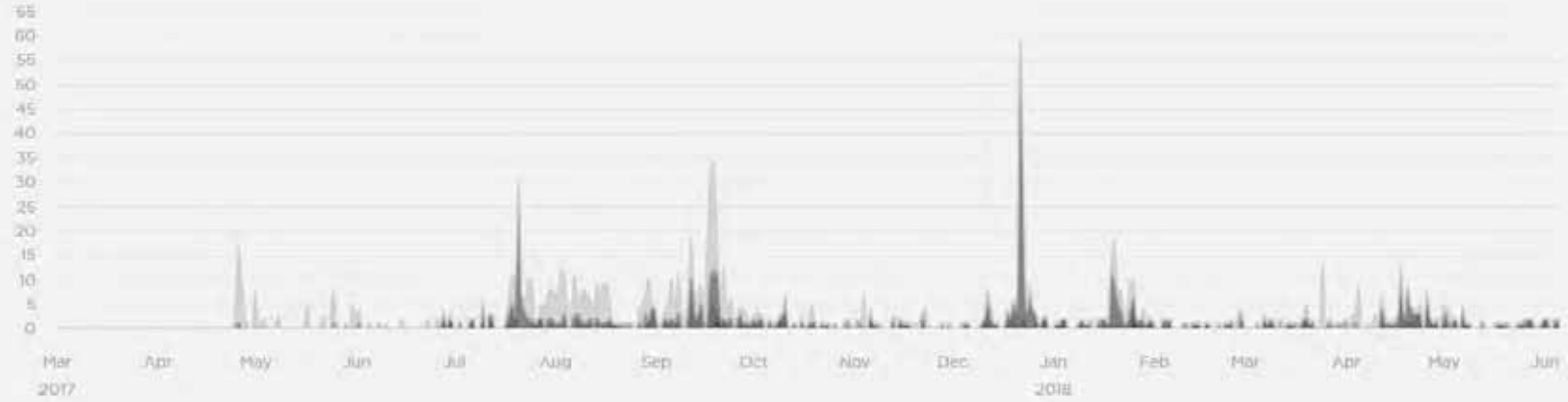


SOURCES	Visits ▾
Direct	622 (52%)
▸ Referral	286 (24%)
▸ Social	188 (16%)
▸ Search	83 (7%)

TRAFFIC SOURCES

Mar 1, 2017–Jun 6, 2018 | All devices

Visits by day (Wed, Mar 1, 2017–Wed, Jun 6, 2018)



SOURCES	VISITS ▼
Direct	622 (52%)
▸ Referral	286 (24%)
▸ Social	188 (16%)
▸ Search	83 (7%)

APPENDIX B: TRAIL LOG

Northwest Quadrant
1. SMART Trail (Windsor Town Limits - Windsor River Road)

Description / Existing Use: Rail corridor. Currently there is no use or very limited use. The ROW is heavily overgrown with black berries, scrub, and oak saplings. There is an existing foot path on west side of tracks with foot paths/desire lines to

Adjacent Streets / Intersections / Traffic: Railroad at-grade crossings at intersections with Starr Road and Herb Road. Starr Road is a two lane arterial street, Herb Road is a one-lane private residential drive.

Nearby Destinations: The corridor is surrounded by single and multi-family residential development. A variety of destinations are located along Starr Road including churches, the Windsor Christian Academy Private School, commercial and industrial uses, and transit resources, Downtown Core, Town Green, SMART Train Station and Intermodal Transit Center, Town Hall and Municipal Offices, Police Department, Shopping, Dining, Services, single and multi-family residential developments.

EXISTING CONDITIONS

Length (feet)	13,200	**Flooding / Hydrology**	North of Starr Road: Area of Minimal Flood Hazard; south of Starr Road: drainage swales flank both sides of the tracks. Starr Creek is within the FEMA floodway and 100 year floodplain.
Width ROW / Private Lands	80' ROW. 40' from Centerline of Tracks to Edge of ROW per SMART. Solid Barrier required per SMART	**Soils / Geology**	Compacted gravel, RR Ballast, and drainage swales.
Longitudinal Slope	Less than 2%. Level railroad grade.	**Distance to Creek / Tree Canopy**	Scrub and saplings growing in ROW.
Cross Slope	2 - 5% or greater. Significant grade differentials exist within RR ROW. Track elevated on gravel ballast, drainage swales flank both sides of the elevated ballast.	**Encroachment (Type, Location)**	Limited RR infrastructure such as signal boxes, signal masts, and crossing gates at intersections, and switching equipment within the segment.
Fencing / Guard Rails / Walls	Backyard fences, mix of solid walls, wood, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	RR tracks, ties, ballast, signal boxes at intersections, signal equipment and crossing gates, switching infrastructure, ROW fencing and/or adjacent backyard fences.

Issues/Recommendations: To be built as part of SMART expansion. Evaluate potential grade separated crossings at Windsor School District or north of Windsor Christian Academy (undeveloped parcel) to connect east-west across the rail corridor from Old Redwood Hwy. Install a solid barrier between the track and trail per SMART Design Guidelines. Active and passive



On Trail 1, North of Gumview Rd in the Vicinity East of Starr Rd



On Trail 1, in the Vicinity of Wilcox Rd and Starr Rd Intersection

Northwest Quadrant
2. Gumview -Windsor River Connector (Gumview Road - Windsor River Road)

Description / Existing Use: Paper trail proposed along the western town limits. Project identified for inclusion in Town build out. Existing private property, pasture/open space.

Adjacent Streets / Intersections / Traffic: Gumview Road at the north end of the trail, Windsor River Road at the south end of the trail.

Nearby Destinations: Single family residential development, Cali Calmecac School.

EXISTING CONDITIONS

Length (feet)	3,400	**Flooding / Hydrology/Geotech Issues**	Open space, no defined creek channel. Area of Minimal Flood Hazard.
Width ROW / Private Lands	Private property.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Unknown. Private property, limited access.	**Distance to Creek / Tree Canopy**	Not applicable.
Fencing / Guard Rails / Walls	None.	**Structures**	None, rural residential development.

Issues/Recommendations: Incorporate trail as a component of future build out. Consider the potential to incorporate the Gumview Trail into a "Windsor Ring Trail". Propose east-west pathway connection along Gumview Road between Gumview Trail and Starr Road connecting to West Starr Creek Trail. Consider connection north to Herb Lane, and trail connections to Starr View Road.



Vicinity of Entrance onto Trail 2 from Windsor River Rd, Looking North



Vicinity of Entrance onto Trail 2 from Gumview Rd, Looking South

Northwest Quadrant
3A. Starr View-SMART Connector (Starr View Drive to SMART)

Description / Existing Use: Paper street public ROW connects Starr Drive to SMART trail. Significant encroachment into public ROW APN 161-290-011 (814 Starburst Court). Otherwise, provides excellent opportunity for Safe Routes to Schools connection to SMART Trail.

Adjacent Streets / Intersections / Traffic: Starr Road

Nearby Destinations: Single family residential development, Cali Calmecac School, Starr Creek Trail, SMART

EXISTING CONDITIONS

Length (feet)	800	**Flooding / Hydrology/Geotech Issues**	May require minor crossing of concrete channelized creek section
Width ROW / Private Lands	30 -40 feet, public land but fenced to preclude access	**Longitudinal/Cross Slope**	less than 5 %
Encroachment (Type, Location)	Fenced to preclude public access. Significant encroachment/structures	**Distance to Creek / Tree Canopy**	crosses Starr Creek
Fencing / Guard Rails / Walls	Fence across parcel	**Structures**	Outbuildings and landscape structures appear to be within ROW

Issues/Recommendations: Gap in sidewalk at entrance on Starr Road. Existing Bollards. Needs curb ramp. Lines up with Starr View Drive; install school zone crosswalk consistent with other intersection markings. Install entry improvements and crossing treatments at road intersections and the entrance at Abbie Court. Install way finding features.



Entrance onto Trail Segment 3A from Starr Rd, Looking East

Northwest Quadrant
3B. North Starr Creek Trail (Starr View Drive - Stellar Lane)

Description / Existing Use: Mix of SCWA access roads and more natural creek bank with passable foot path. Access behind backyard fences. Mix of solid and wire fences, predominantly wood fences. SCWA Access Gates. Concrete lined channel near Windsor River Road.

Adjacent Streets / Intersections / Traffic: This segment of Starr Creek is roughly parallel to and east of Starr Road. From north to south intersection crossings include Starr Road at Starr View Lane, Colleen Drive, and Stellar Lane. Access to the trail would also be provided from Abbie Court cul-de-sac. Starr Road is an arterial street, Colleen Drive and Stellar Lane are residential streets.

Nearby Destinations: Single family residential development, Cali Calmecac School, commercial development on Starr Road, Kaiser Community Park, Starr Creek Trail South.

EXISTING CONDITIONS

Length (feet)	1,300	**Flooding / Hydrology/Geotech Issues**	Within FEMA 100-year floodplain, expansive creek soils.
Width ROW / Private Lands	Unnamed ROW access to SCWA parcel (066-400-007) width 100 ft. SCWA access from north to private parcel (066-060-029) width 90 ft. Private Parcel crossing length 375 ft. SCWA access to private parcel from south 87 ft. Abbie Ct access to SCWA parcel (066-410-018) 20 ft.	**Longitudinal/Cross Slope**	Moderate cross slope drains to creek. Recent bank stabilization plantings. Trail implementation may require cut and fill to create a stable bench.
Encroachment (Type, Location)	Continuous SCWA ROW is interrupted between Colleen Drive and Stellar Lane by parcel # 066-060-029.	**Distance to Creek / Tree Canopy**	Distance varies , however, in the absence of a cut bench at the top of the bank, some trees are within the area where a bench would be graded to establish a trail.
Fencing / Guard Rails / Walls	Backyard fences, mix of wood, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	SCWA steel entry gates, concrete channelization, culverts and bridge walls at road crossings, backyard

Issues/Recommendations: May require tree removal, grading, creek restoration and bank stabilization plantings on SCWA lands. Potential flood control project. Access on east side of creek. Segments of stable bank and access road interspersed with segments without sufficient banktop and moderate cross slopes to creek. Limited access between Colleen Drive and Stellar Lane. Private property precludes through trai. Gap in sidewalk at entrance on Starr Road. Existing Bollards. Needs curb ramp. Lines up with Starr View Drive: install school zone crosswalk consistent with other intersection markings. Install entry improvements and crossing treatments at road intersections. Install way finding features.



Entrance onto Route Segment 3B from Abbite Ct, Looking West



Entrance onto Trail Segment 3B from Colleen Dr, Looking North

Northwest Quadrant
3C. North Starr Creek (Stellar Lane - Windsor River Road)

Description / Existing Use: The segment consists of SCWA access roads, town lnds and natural creek bank with passable foot path. Existing public ROW with informal footpath to Abbie Court. Access is behind backyard fences which are a mix of solid and wire fences, but are predominantly wood fences. SCWA access gates and/or bollards are installed at street intersections/entry points. The creek includes concrete lining/flood control measures at the south end adjacent to Windsor River Road. Town owned lands adjacent to WIndsor River Road.

Adjacent Streets / Intersections / Traffic: Intersections include Stellar Lane, Buckingham Drive, and Windsor River Road. Stellar Lane and Buckingham Drive are residential streets. Access is also provided from the Abbie Court residential cul-de-sac. Windsor River Road is a two lane arterial with sidewalks and bike lanes.

Nearby Destinations: Keiser Park and Windsor High south of Windsor River Road. Cali Calmecac School on Starr Road between Buckingham Drive and Stellar Lane. Single family residential development flanks the corridor.

EXISTING CONDITIONS

Length (feet)	2,100	**Flooding / Hydrology/Geotech Issues**	Concrete flood channelization improvements near Windsor River Road. Sections of vehicle accessible bench on top of creek combined with expansive creek soils and bank stabilization plantings adjacent to
Width ROW / Private Lands	Stellar Ln access to SCWA parcel (066-470-056) width 80 ft. Buckingham Dr ROW access to SCWA parcel (066-470-057) width 70 ft. Windsor River Rd ROW access to town parcel (066-060-063) width 165 ft. SCWA ROW and vehicle access on top of creek bank	**Longitudinal/Cross Slope**	Less than 2% for most of the route Approximately 5 % slopes on the north and south sides of Buckingham Drive where a cut bench is absent and the creek bank ramps up to and down from the street grade.
Encroachment (Type, Location)	Vegetation, trees.	**Distance to Creek / Tree Canopy**	Distance varies , however, in the absence of a cut bench at the top of the bank near Buckingham Drive, a few mature trees are within the area where a bench would be graded to establish a trail.
Fencing / Guard Rails / Walls	Backyard fences, mix of wood, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	Water Agency Steel Entry Gates, concrete channelization, culverts and bridge walls at road crossings, backyard fences.

Issues/Recommendations: Segments of stable bank and cut bench that are vehicle accessible interspersed with segments without stable bank that have moderate cross slopes to creek and longitudinal slopes from the street grade down to creek channel on the north and south sides of Buckingham Drive (approximately 300 foot section south of Buckingham Drive, and approximately 750 foot section between Stellar Lane and Buckingham Drive). Recent bank stabilization plantings have been installed. There are a few mature trees in the area where a bench would be graded to accommodate a trail. Evidence of the creek topping the bank was observed through the sections on the north and south sides of Buckingham Drive. Formalize existing access to Abbie Court from creek. Consider Windsor River Road improvements to connect the North and East Starr Creek Trails, to provide a designated trail crossing, and to connect to Keiser Park. Install way finding features.



Entrance onto Trail Segment 3C from Windsor River Rd, Looking North



Entrance onto Trail Segment 3C from Buckingham Dr, Looking South



Vicinity of Trail Segment 3C Midpoint between Buckingham Dr and Stellar Ln, Looking North



Vicinity of Trail Segment 3C Midpoint Between Windsor River Rd and Buckingham Dr, Looking North



Entrance onto Trail Segment 3C from Buckingham Dr, Looking North



Trail Segment 3C North of Stellar Ln, Vicinity of 3B Abbie Ct Connector Intersection

Northwest Quadrant
4A. East Starr Creek Trail (Oak Park Steet - Railroad Ave/SMART Trail)

Description / Existing Use: The segment would utilize the existing SCWA access road on south and east side of the creek between Railroad Avenue and Oak Park Street. An existing bench on top of the creek includes a compacted dirt/gravel road that accommodates maintenance vehicles. The segment runs along the backyard fences of homes along Glen Park Drive, and then turns north-south to its intersection with Oak Park Street.

Adjacent Streets / Intersections / Traffic: Low volume residential streets, Oak Park Street, Park Glen Drive, Railroad Avenue. Segment 4B would connect to Windsor River Road at the southern end. Sidewalks and bike lanes are provided along Windsor River Road.

Nearby Destinations: East end of trail, SMART Trail, SMART Train Station and Intermodal Transit Center, Town Green. Single family residential homes along the route. Starr Creek Trail, Keiser Community Park, Windsor High School at the south end of the proposed trail.

EXISTING CONDITIONS

Length (feet)	1,300
Width ROW / Private Lands	Oak Park St access to SCWA parcel (066-371-001) realistic width 25 ft. SCWA parcel borders Oak Park St ROW on west side for 385 ft. Windsor Ave/ Railroad Ave ROW access to SCWA parcel width 85 ft, width south of creek centerline 60ft. SCWA ROW with vehicle access on top of creek bank. Bench accommodates vehicles. Surface is a mix of dirt / gravel.
Encroachment (Type, Location)	Backyard fences. 40 ft. bridge needed between the at Oak Park Street at Daybrook Drive.
Fencing / Guard Rails / Walls	Backyard fences of homes along Park Glen Drive. Fences are a mix of solid wood, wire and/or chain link.

Flooding / Hydrology/Geotech Issues	Within FEMA 100-year floodplain and floodway. Minor drainage swale on backyard side of bench/creek maintenance road. Will require grading to achieve cross slope to drain towards creek. Compacted dirt and gravel access
Longitudinal/Cross Slope	Less than 2%, however cross slope generally drains to backyard fences instead of creek. Minor grading required to direct runoff into creek and away from houses.
Distance to Creek / Tree Canopy	Maintained channel, bench on top of bank is free of trees and vegetation.
Structures	Entry gates and bollards, SCWA chain link fencing and gate at Railroad Ave. Backyard fences.

Issues/Recommendations: A 40 ft. trail bridge would be required across Starr Creek from the entry on Oak Park at Daybrook Street in order to use the maintenance road on the east/south sides of the creek. The bridge would connect the trail segments and provide an east west connection between neighborhoods. Establish connection between north end of trail at Railroad Avenue and the SMART Trail. Public ROW along Railroad Avenue, which is just north of the Intermodal Transit Center, may present opportunities for landscaping, plaza improvements, or public art installation. Install way finding features. Alternative route would be to intsall trail as part of future development along west and north side of creek. Several large rural properties exist between Oak Park Street and Stellar Drive. Future development opportunities of these rural parcels including numbers 066-060-007, 066-060-021 should consider a new trail connection between the East and North Starr Creek Trails and the SMART trail.



Entrance to Trail Segment 4A at Oak Park St and Daybrook Dr, Looking East



Trail Segment 4A East of Oak Park St and Daybrook Dr, Looking East



Entrance to Trail Segment 4A at Railroad Ave, Looking West



Trail Segment 4A, Looking South Laong Railroad Ave Towards Glen Park Dr

Northwest Quadrant
4B. East Starr Creek Trail (Oak Park Street - Windsor River Road)

Description / Existing Use: The trail would utilize the existing SCWA access road on the west side of East Starr Creek. The existing bench on top of the creek includes a compacted dirt/gravel road that accommodates maintenance vehicles and extends roughly north-south between Oak Park Street and Windsor River Road.

Adjacent Streets / Intersections / Traffic: Low volume residential streets surround the creek including Oak Park Street, Park Glen Drive, and Railroad Avenue. The trail segment would connect to Windsor River Road at the southern end. Sidewalks and bike lanes are provided on Windsor River Road and would connect the East Starr Creek Trail to the North Starr Creek Trail and to Kaiser Community Park.

Nearby Destinations: Destinations include single family residential homes along the route. Windsor River Road, Keiser Community Park, and Windsor High School are located south of Segment 4B. Segment 4A at the north and east end of the trail connects to the SMART Trail, Intermodal Transit Center, Town Green, downtown civic and commercial resources.

EXISTING CONDITIONS

Length (feet)	1,100
Width ROW / Private Lands	Windsor River Rd access to SCWA parcel (066-490-028) width 240 ft, width west of creek centerline 35 ft. Oak Park St access to SCWA parcel width 80 ft, width north of creek centerline 28 ft. Minimum length of trail segment on Oak Park St ROW 65 ft. SCWA ROW with vehicle access on top of creek bank. Surface is a mix of dirt / gravel.
Encroachment (Type, Location)	Backyard fences, chain link fencing at Oak Park Street trail entrance.
Fencing / Guard Rails / Walls	Backyard fences of homes along Oak Park Street, Glenbrook Court, and Windsor River Road. Fences are a mix of solid wood, wire and/or chain link. Culverts and bridge walls at street crossings, concrete flood control infrastructure in creek channel adjacent to Windsor River Road.

Flooding / Hydrology/Geotech Issues	Within FEMA floodway and 100-year floodplain. Drainage swale on fence side of bench/road/trail. Will require grading to achieve cross slope to drain towards creek. Compacted dirt/gravel road on bench top on creek bank.
Longitudinal/Cross Slope	Less than 2%.
Distance to Creek / Tree Canopy	Maintained channel, bench on top of bank is generally free of trees and vegetation.
Structures	Entry gates and bollards, SCWA chain link fencing. Backyard fences, concrete lined channel/flood control structures in creek adjacent to Windsor River Road. Culverts and bridge walls.

Recommendations: Trail entry and crossing improvements required at Oak Park Street and at Windsor River Road. Redirect trail users along Windsor River Road to established crossings at Starr Road or Oak Park Street. Evaluate potential to connect East and West Starr Creek Trails via enhancements to Windsor River Road. Alternative to redirect users along Windsor River Road sidewalks east to Oak Park Street crosswalk to Keiser Park. Install way finding features.



Entrance to Trail Segment 4B on Windsor River Rd, Looking North



Entrance to Trail Segment 4B on Oak Park St, Looking West

Northwest Quadrant
5. HWY 101 Crossing Complex

Location/Description: The study identified three HWY101 crossing options: Improvements to the existing Old Redwood Highway/Windsor River Road streets; a pedestrian/bicycle undercrossing parallel to Windsor Creek (north of Old Redwood Highway) and an overpass connecting Los Amigos Road and Windsor River Road west of Windsor Creek.

Description / Existing Use: See Connecting Windsor East-West Pedestrian & Cyclist Connection Study

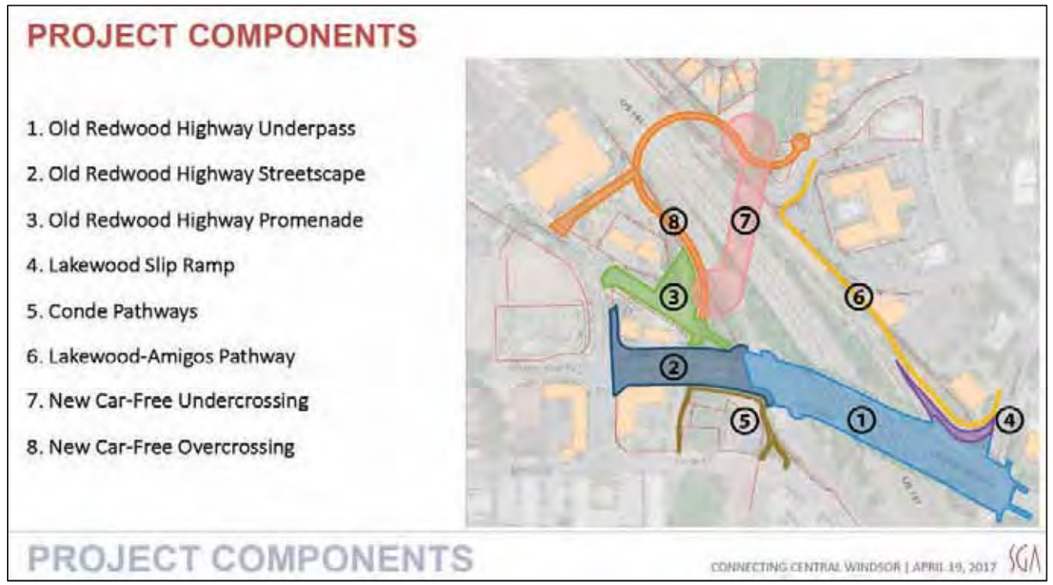
Adjacent Streets / Intersections / Traffic: HWY 101, Los Amigos Road, Old Redwood Highway, Windsor River Road.

Nearby Destinations: Downtown Windsor, Lakewood Hills shopping area.

EXISTING CONDITIONS

Length (feet)	Varies (5,900, All improvements, horizontal length)	**Flooding / Hydrology/Geotech Issues**	Proposed Car-Free Undercrossing south/ west segment is within the FEMA floodway. Proposed Car-Free Overpass also in FEMA floodway at same location.
Width ROW / Private Lands	N/A	**Longitudinal/Cross Slope**	N/A
Encroachment (Type, Location)	N/A	**Distance to Creek / Tree Canopy**	N/A
Fencing / Guard Rails / Walls	N/A	**Structures**	N/A

Issues/Recommendations: Please refer to separate Connecting Windsor East-West Pedestrian & Cyclist Connection Study.



Northwest Quadrant
6 North Windsor School District-SMART Connector

Description / Existing Use: The trail would utilize the existing SCWA access road on the west side of East Starr Creek. The existing bench on top of the creek includes a compacted dirt/gravel road that accommodates maintenance vehicles and extends roughly north-south between Oak Park Street and Windsor River Road.

Adjacent Streets / Intersections / Traffic: Low volume residential streets surround the creek including Oak Park Street, Park Glen Drive, and Railroad Avenue. The trail segment would connect to Windsor River Road at the southern end. Sidewalks and bike lanes are provided on Windsor River Road and would connect the East Starr Creek Trail to the North Starr Creek Trail and to Kaiser Community Park.

Nearby Destinations: Destinations include single family residential homes along the route. Windsor River Road, Keiser Community Park, and Windsor High School are located south of Segment 4B. Segment 4A at the north and east end of the trail connects to the SMART Trail, Intermodal Transit Center, Town Green, downtown civic and commercial resources.

EXISTING CONDITIONS

Length (feet)	700
Width ROW / Private Lands	Windsor River Rd access to SCWA parcel (066-490-028) width 240 ft, width west of creek centerline 35 ft. Oak Park St access to SCWA parcel width 80 ft, width north of creek centerline 28 ft. Minimum length of trail segment on Oak Park St
Encroachment (Type, Location)	Backyard fences, chain link fencing at Oak Park Street trail entrance.
Fencing / Guard Rails / Walls	Backyard fences of homes along Oak Park Street, Glenbrook Court, and Windsor River Road. Fences are a mix of solid wood, wire and/or chain link. Culverts and bridge walls at street crossings, concrete flood control infrastructure in creek channel adjacent to Windsor River Road.

Flooding / Hydrology/Geotech Issues	Within FEMA floodway and 100-year floodplain. Drainage swale on fence side of bench/road/trail. Will require grading to achieve cross slope to drain towards creek. Compacted dirt/gravel road on bench top on creek bank.
Longitudinal/Cross Slope	2-5%
Distance to Creek / Tree Canopy	Maintained channel, bench on top of bank is generally free of trees and vegetation.
Structures	Entry gates and bollards, SCWA chain link fencing. Backyard fences, concrete lined channel/flood control structures in creek adjacent to Windsor River Road. Culverts and bridge walls.

Recommendations: Trail entry and crossing improvements required at Oak Park Street and at Windsor River Road. Redirect trail users along Windsor River Road to established crossings at Starr Road or Oak Park Street. Evaluate potential to connect East and West Starr Creek Trails via enhancements to Windsor River Road. Alternative to redirect users along Windsor River Road sidewalks east to Oak Park Street crosswalk to Keiser Park. Install way finding features.



Vicinity of Trail 6, Aerial (Top of Image is North)



Trail 6 Entrance from Old Redwood Hwy, Looking West

Northwest Quadrant
7 Gumview Trail North

Description / Existing Use: To be considered as part of future development projects, completion of this trail would facilitate access around the perimeter of Windsor, SMART, and areas east of Highway 101 via Arata Lane.

Adjacent Streets / Intersections / Traffic: Low volume residential streets abut the project area, including Herb Road.

Nearby Destinations: Destinations include single family residential homes along the route. Windsor River Road, Keiser Community Park, and Windsor High School are located south of the area, and the trail could connect to the SMART Trail, Intermodal Transit Center, Town Green, downtown civic and commercial resources.

EXISTING CONDITIONS

Length (feet)	3,700	**Flooding / Hydrology/Geotech Issues**	No identified issues. To be reviewed as part of future development project.
Width ROW / Private Lands	Private Lands	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Backyard fences, structures, etc may be present.	**Distance to Creek / Tree Canopy**	N/A
Fencing / Guard Rails / Walls	Fences and structures may be present depending on selected alignment.	**Structures**	May be present.

Recommendations: Consider inclusion of separated bicycle /pedestrian facilities associated with future development projects, with a focus on conectivity to SMART trail and Gumview trail to the south.



Trail 7 Entrance from Gunview Rd, Looking North



Trail 7 Vicinity, Herb Rd Looking North

Northwest Quadrant
8 Gumview Creek Trail

Description / Existing Use: To be considered as part of future development projects, completion of this trail would facilitate access to Starr View Drive.

Adjacent Streets / Intersections / Traffic: Low volume residential streets abut the project area.

Nearby Destinations: Destinations include single family residential homes and Cali Calimecac School.

EXISTING CONDITIONS

Length (feet)	1,600	**Flooding / Hydrology/Geotech Issues**	No identified issues. To be reviewed as part of future development project.
Width ROW / Private Lands	Private Lands	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Backyard fences, structures, etc may be present.	**Distance to Creek / Tree Canopy**	N/A
Fencing / Guard Rails / Walls	Fences and structures may be present depending on selected alignment.	**Structures**	May be present.

Recommendations: Consider inclusion of separated bicycle /pedestrian facilities associated with future development projects, with a focus on connectivity to Starr View Drive.



Trail 8 Entrance from Starr View Dr, Looking West

Northeast Quadrant
21A. West Windsor Creek (Brooks Road - Natalie Drive)

Description / Existing Use: Existing SCWA maintenance road on the west side of West Windsor Creek which consists of a wide compacted gravel surface that is currently well utilized as a trail by pedestrians and bicyclists. Bollards, chain link ROW fencing, and driveway ramps are installed at the trail entrances on Brooks Road and Natalie Drive. Segment 21A begins at Brooks Road across from Hiram Lewis Park near Jessica Drive and extends south along the west side of the creek to Natalie Drive.

Adjacent Streets / Intersections / Traffic: Brooks Road is a primary north-south arterial with two- to four-lanes that is located east of and roughly parallels the creek corridor. Jessica Drive is a two lane residential street that follows the contour of West Windsor Creek on the west side. Natalie Drive is a two-lane residential collector that crosses the trail corridor and provides access to Brooks Elementary School.

Nearby Destinations: Single family residential development, Brooks Elementary School, Hiram Lewis Park, Windsor Skate Park, Windsor Middle School, Windsor Boys and Girls Club. South of Segment 21A destinations include the Hembree House Cultural Center, Windsor Senior Center, Windsor Pool, single family residences, and major commercial areas in Central Windsor adjacent to Los Amigos Road/Brooks Road.

EXISTING CONDITIONS

Length (feet)	2,000	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway and 100-year floodplain. Significant bank stabilization and native plant restoration project located approximately 200 feet downstream from the Brooks Road entrance. Stable, compacted gravel/dirt trail surface approximately 8 - 12 feet wide, vehicle accessible. Alluvial fan/ toeslope silt loam.
Width ROW / Private Lands	Brooks Rd S ROW access to SCWA parcel (161-190-056) north of creek centerline width 120 ft. Natalie Dr ROW access to SCWA parcel (161-220-051) west of creek centerline width 60 ft. SCWA ROW and gravel access top of creek bank. Bench accommodates vehicles. Existing trail surface is a mix of gravel/dirt, approximately 8-12 feet wide.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Backyard fences.	**Distance to Creek / Tree Canopy**	Trail surface / bench on top of bank is free of trees and vegetation. 15 foot plus clearance to canopy or creek.

Issues/Recommendations: Segment 21A is located on west side of creek. A parallel trail is proposed and/or existing on the east side of the creek as well. Existing bench and gravel maintenance road are already well utilized as a trail. Chain link ROW fencing is installed up against and runs along backyard fences through the segment. Crosswalk improvements needed at Natalie Drive. Install entry improvements and crossing treatments at intersections. Install crosswalk on Brooks Road between Hiram Lewis Park and Jessica Drive to the north of the trail entrance, and/or evaluate location for mid-block crossing between trail entrances. Install crosswalk for west leg of West Windsor Creek Trail across Natalie Drive. Improve surface as needed for accessibility. Install way finding features.



Trail Segment 21A , on Trail Looking South to Natalie Dr



Entrance to Trail Segment 21A from Brooks Rd, Looking Southwest

Northeast Quadrant
21B. West Windsor Creek (Natalie Drive - Lazy Creek Drive)

Description / Existing Use: Existing SCWA 8 ft. maintenance road on the west side of West Windsor Creek which consists of a wide compacted gravel surface that is currently well utilized as a trail by pedestrians and bicyclists. Bollards, chain link ROW fencing, and driveway ramps are installed at the trail entrances on Natalie Drive and Lazy Creek Drive. Segment 21B begins at Natalie Drive and extends south along the west side of West Windsor Creek to Lazy Creek Drive. A strip of public ROW between residences provides vehicle access between Lazy Creek Drive and the creek.

Adjacent Streets / Intersections / Traffic: Jessica Drive and Lazy Creek Drive are low volume residential streets that follow the contour of West Windsor Creek and are located west of the trail. Segment 21B intersects Natalie Drive. A short spur of the trail diverts west and connects to Lazy Creek Drive.

Nearby Destinations: Major destinations are located at the north and south ends of the project, Segments 21A and 21C. Within segment 21B destinations include Brooks Elementary School, Windsor Senior Center, Windsor Pool, Hembree House Cultural Center and Museum, and residential development.

EXISTING CONDITIONS

Length (feet)	1,100	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway, 100-year floodplain. Lazy Creek Dr connector within 500-year floodplain.Stable, compacted gravel/dirt trail surface is approximately 8 feet wide, vehicle accessible. Riverwash soils.
Width ROW / Private Lands	Natalie Dr access to SCWA parcel (161-200-050) west of existing Windsor Creek Trail (east) width 100 ft, west of creek centerline width 60 ft. Lazy Creek Dr ROW access to town parcel (161-400-076) width 20 ft. Public ROW (SCWA & Town) gravel access road on top of creek bank. Existing road/trail surface is a mix of gravel/dirt, approx. 4-12 feet wide.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Backyard fences.	**Distance to Creek / Tree Canopy**	Trail surface / bench on top of bank is free of trees and vegetation. 15 foot plus clearance to canopy or creek.
Fencing / Guard Rails / Walls	Backyard wood fences generally 6' tall.	**Structures**	Chain link ROW fencing. Chain link fencing and entry bollards at Brooks Road and Natalie Drive, culverts and bridge walls at road crossings. , and Lazy Creek Drive , Pedestrian bridge (signed Walk Bikes) between Windsor Creek Path on East side of Creek roughly Tommy Dorsett Court to Hembree House

Comments: Route is located on west side of West Windsor Creek. A parallel path exists on the east side of West Windsor Creek. Existing bench and gravel maintenance road are currently well utilized as a trail. Solid wood backyard fences line the corridor. A trail spur connects to Lazy Creek Drive. Crosswalk improvements needed at Natalie Drive. The gravel maintenance road ends at Lazy Creek Drive, a foot path continues south into the next segment, 21C. Crossing improvements are installed across Natalie Drive for the exiting trail segment on the east side of the creek.

Issues/Recommendations: Route is located on west side of West Windsor Creek. A parallel path exists on the east side of West Windsor Creek. Existing bench and gravel maintenance road are currently well utilized as a trail. Solid wood backyard fences line the corridor. A trail spur connects to Lazy Creek Drive. Crosswalk improvements needed at Natalie Drive. The gravel maintenance road ends at Lazy Creek Drive, a foot path continues south into the next segment, 21C. Crossing improvements are installed across Natalie Drive for the exiting trail segment on the east side of the creek. Install entry improvements and crossing treatments at intersections. Install way finding features. Improve surface as needed for accessibility, especially between Lazy Creek and Museum.



Trail Segment 21B , on Trail Looking West to Lazy Creek Dr



Trail Segment 21B, on Trail North of Lazy Crek Dr Connection Looking East

Northeast Quadrant

21C. West Windsor Creek Trail (Lazy Creek Drive - Los Amigos Road)

Description / Existing Use: This project would formalize the trail on the west side of West Windsor Creek. Segment 21C A begins at Lazy Creek Drive and extends south to Los Amigos Road. The segment consists of Town of Windsor public ROW. A wide unimproved bench is open on top of the creek's bank and dirt foot trail follows between the creek and backyard fences. Bollards, chain link fencing, and driveway ramps are installed at the trail entrance on Lazy Creek Drive. A steel pipe gate provides vehicle access from the Cottontail Way cul-de-sac. A bicycle and pedestrian bridge is installed across the creek adjacent to Los Amigos Road where a concrete path and curb ramp to the street are provided.

Adjacent Streets / Intersections / Traffic: Residential streets parallel the route including Lazy Creek Drive, Foxwood Drive. Gated access is provided from the Cottontail Way cul-de-sac. The south end of the trail terminates at Los Amigos Road, where an existing trail bridge connects over the creek to the trail on the east side.

Nearby Destinations: Destinations within segment 21C include single family residential development, the Windsor Senior Center, Windsor Pool, Hembree House Cultural Center and Museum, and a variety of commercial development located off of Los Amigos Road, Brooks Road, and Lakewood Drive adjacent to the southern terminus of the trail. This segment would serve as an important connection to the Central Windsor Highway 101 Crossing Complex.

EXISTING CONDITIONS

Length (feet)	2,500	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway, 100-year floodplain. Foxwood Dr connector within 500-year floodplain. Level bench on top of the creek, expansive creek/ riverwash soils.
Width ROW / Private Lands	Foxwood Dr ROW access (21-D connector) to town parcel (161-070-024) width 100 ft. Cottontail Wy ROW access to town parcel width 20 ft. Los Amigos Rd ROW access to town parcel (161-560-037) via existing Windosr Creek Trail (east) trail on private parcel (161-560-044) width 25 ft. Public ROW, Town of Windsor.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Backyard fences, Hembree House Cultural Center landscape improvements extend to the creek bank.	**Distance to Creek / Tree Canopy**	Distance varies, the creek setback is generally greater than 25 feet. Dense tree canopy (oaks) hangs to the ground.
Fencing / Guard Rails / Walls	Mix of solid wood and wire backyard fences. Minor rock walls and landscaping on the Hembree House Property extends to the top of the creek bank.	**Structures**	Existing Pedestrian Bridge (signed Walk Bikes) across the creek between the Senior Center, Pool, and Hembree House on west side and the trail on the east side adjacent to Tommy Dorsett Court. Pipe gate and driveway cut at Cottontail Court. Bollards and chain link ROW fencing at Lazy Creek Drive. Landscape improvements extend to the top of the creek bank in the vicinity of the Hembree House.

Issues/Recommendations: The gravel roadbed that defines the northern segments of the trail ends at Lazy Creek Drive and a dirt footpath continues along the top of the bank in the public ROW. Minor landscape improvements associated with the Hembree House Cultural Center and Museum, Senior Center, and Windsor Pool extend to the top of the creek bank. A pedestrian bridge crosses the creek between the Museum on the west side and Tommy Dorsey Court on the east side. Available ROW on top of the bank widens south of the Hembree House property. Existing curb ramp to street and bike lanes on Los Amigos Road does not appear to meet minimum ADA standards. Coordinate southern end of the trail with the Highway 101 Crossing Complex improvements. Formalize entry improvements at Los Amigos Road, consider pocket park, public art, or creek interpretive feature. Consider access for bicyclists to and from the southbound bike lanes on Los Amigos Road. Install way finding features with expanded focus on destinations in Central Windsor.



Trail Segment 21C, at Segment 21B Intersection Looking South



Trail Segment 21C, on Trail Looking East to Cottontail Wy

Northeast Quadrant
21D. Foxwood Connector (W Windsor Creek Trail - Foxwood Drive)

Description / Existing Use: A landscape strip approximately 75 feet wide parallels the west side of Foxwood Drive between the Hembree House Cultural Center and Los Amigos Road. This project would establish a trail in the landscape strip providing access from Los Amigos Road to the community facilities on Foxwood Drive including the pedestrian bridge across Windsor Creek and the East and West Windsor Creek Trails.

Adjacent Streets / Intersections / Traffic: Foxwood Drive a residential collector parallels the route. The south end of the trail terminates at Los Amigos Road approximately 675 feet north of the West Windsor Creek Trail.

Nearby Destinations: Destinations within Segment 21D include single family residential development, the Windsor Senior Center, Windsor Pool, Hembree House Cultural Center and Museum, and a variety of commercial developments located south of the site in Central Windsor.

EXISTING CONDITIONS

Length (feet)	500	**Flooding / Hydrology/Geotech Issues**	Open space, outside of creek corridor.
Width ROW / Private Lands	Los Amigos Rd ROW access to town parcel (161-230-066) width 90 ft. Foxwood Drive ROW access to town parcel 80 ft. Town parcel borders Foxwood Dr ROW on west for 500 ft. Public ROW, Town of Windsor.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Backyard fences, landscaping and decorative fencing.	**Distance to Creek / Tree Canopy**	No creek in ROW. Distance to trees varies.
Fencing / Guard Rails / Walls	Wood backyard privacy fences.	**Structures**	Sidewalks and street lights along Foxwood Drive. Decorative subdivision sign in ROW at Foxwood Drive/Los Amigos Road. Decorative fencing, gardens, and landscaping along the frontage of the Hembree House Cultural Center.

Issues/Recommendations: Formalize existng access road as an off street trail behind landscaping. Establish entry improvements at Los Amigos Road. Provide markings and crossing treatments for cyclists that need to transition to or from the southbound bike lanes on Los Amigos Road. Install way finding features with expanded focus on destinations in central Windsor. Install trail crossing of Foxwood Drive adjacent to the Hembree House potentially using the southern leg of the Summer Rain Drive/Foxwood Drive intersection, or a mid-block location between Summer Rain Drive and Partridge Court.



Entrance to Trail Segment 21D from Foxwood Dr, Looking South



Entrance to Trail Segment 21D from Los Amigos Rd, Looking North

Northeast Quadrant
22 Windsor Creek Connectorl (Natalie Drive - Brooks Road)

Description / Existing Use: This trail would foramlize existing social trails that connect the Windsor Creek Trail at Natilie Drive to Brooks Road. This is a popular connection due to proximity to Windsor Middle School. This project would extend the existing East Windsor Creek Trail from the end of the paved trail at Natalie Drive north to Brooks Road. The existing East Windsor Creek Trail extends south from Natalie Drive to Los Amigos Road. A crosswalk is provided across Natalie Drive for the for the trail. North of Natalie Drive a compacted gravel trail ranging from approximately 4 - 8 feet wide is provided. Currently the trail follows the creek north from Natalie Drive and then turns east through private land and runs along the backyard fences of the homes on the north side of Natalie Drive. The trail connects to the parking lots for the Windsor United Methodist Church and La Petite Academy Preschool. The well utilized gravel foot trail routes users to parking lot, the closest street access is at the intersection of Brooks Road and Foothill Drive on the south side of Windsor Middle School. School zone crosswalks are provided on the north and east legs of the Brooks Road/Foothill Drive intersection. Extension of the trail to the north along the creek behind the church extending to Brooks Road would require easement or agreement from property owner. The trail would connect to Brooks Road on the north side of the Church's driveway across from the central pedestrian access point to Windsor Middle School.

Adjacent Streets / Intersections / Traffic: Natalie Drive intersects the south end of the trail segment. Brooks Road intersects the north end. Jessica Drive parallels the contour of the creek on the west side. Brooks Road is a primary north south arterial in Windsor. In the vicinity of the project Brooks Road has two travel lanes, a continuous two way left turn lane, bike lanes and sidewalks. Natalie Drive 25 mph speed limit. Brooks Road 25 mph speed limit (school zone).

Nearby Destinations: Single family residential development, Brooks Elementary School, Hiram Lewis Park, Windsor Skate Park, Windsor Middle School, Windsor Boys and Girls Club. South of Natalie Drive destinations include the Hembree House Cultural Center, Windsor Senior Center, Windsor Pool, single family residences, and major commercial areas adjacent to Los Amigos Road/Brooks Road.

EXISTING CONDITIONS

Length (feet)	2,000	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway and 100-year floodplain. Stable, compacted gravel/dirt trail surface 4 - 10 feet wide, vehicle accessible. Soil conditions along creek behind church are unknown. Native soils include alluvial fan/ toeslope silty loams and riverwash soils.
Width ROW / Private Lands	Brooks Rd S ROW access to SCWA parcel (161-190-056) south of Brooks Rd S creek crossing width 475 ft (parcel parallels road). SCWA parcel Brooks Rd S ROW access to SCWA parcel (161-200-051) width 100 ft. SCWA ROW along east bank of creek narrows to less than 15 ft from creek centerline behind church building. Existing access through Church is on private property. Natalie Dr ROW access to SCWA parcel (161-200-051) east of creek centerline width 45 ft. SCWA, Public ROW.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Existing trail alignment appears to encroach upon private property, passing through the Church property	**Distance to Creek / Tree Canopy**	Current trail alignment is set back from creek and tree canopy, no impact.
Fencing / Guard Rails / Walls	Chain link fence, bollards, and bridge walls at Natalie Drive trail entrance. Wood backyard fences along Natalie Drive.	**Structures**	Existing trail alignment utilizes an informal route through the Windsor United Methodist Church and La Petite Academy parking lots.

Issues/Recommendations: Formalize access through the United Methodist Church property. Route the trail between the parking lot and backyard fences or mark a route through the parking lot. Establish a new trail connection along the creek behind the Church, connecting directly to Brooks Road across from the central pedestrian access to Windsor Middle School. Evaluate the location for viability of a mid-block school crosswalk and trail crossing near Wnidsor Creek entrance. Install way finding features.



Entrance to Trail 22 from Natalie Dr, Looking North



Trail 22 Looking West, West of Church Parking Lot

Northeast Quadrant
23 Windsor Middle School Connector-East Windsor Creek (Elsbree Lane - Foothill Drive)

Location/Description: The Windsor Middle School Connector is a proposed extension of the East Windsor Creek Trail. The trail is a local route that would extend between the East Windsor Creek Trail at Foothill Drive and Elsbree Lane. An existing foot trail is provided along the east side of the East Windsor Creek, which boarders the back side of Windsor Middle School. Access to the existing foot trail is provided from Foothill Drive at the south end of the segment via a pedestrian pass through in the chain link fence. At the north end of the segment, access from Elsbree Lane is unrestricted. The soft surface foot trail is on top of the level bank, is set back from the creek, and is vehicle accessible until about 300' south of Elsbree Lane where the ROW narrows and the foot trail moves closer to the riparian growth.

Description / Existing Use: Existing foot trail along creek. Access from Foothill Drive is via a pedestrian pass through gate. Access from Elsbree Lane is unrestricted.

Adjacent Streets / Intersections / Traffic: Foothill Drive is a two-lane residential collector with a 25 mph speed limit and sidewalks on both sides of the street. Elsbree Lane is a residential collector with a 25 mph speed limit and sidewalks on both sides of the street.

Nearby Destinations: Hiram Lewis Park, Windsor Skate Park, Windsor Boys and Girls Club, Windsor Middle School, Windsor United Methodist Church, La Petite Academy Preschool, single family residential neighborhoods.

EXISTING CONDITIONS

Length (feet)	1,000	**Flooding / Hydrology/Geotech Issues**	Southernmost 180 ft (connecting into 24-B) is within FEMA 100-year floodplain. Minor slope issues on east dside of path. Small drainage
Width ROW / Private Lands	Elsbree Ln ROW access to town parcel (161-070-054) width 65 ft. ROW width unknown through school district property (161-420-035). Foothill Dr ROW access to town parcel (161-430-082) width 60 ft. Town, County ROW.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Sewer manhole, old bridge footing to school.	**Distance to Creek / Tree Canopy**	Varies, 25 - 75 feet +, narrowest near Elsbree pinches to approximately 25 feet between riparian vegetation and backyard fences.
Fencing / Guard Rails / Walls	Backyard fences, wood. Generally 6' tall +. Chain link fencing and pedestrian "pass through" gate at Foothill Drive entrance.	**Structures**	Sewer manhole along creek, old bridge footing to school? Sidewalk and landscaping from Elsbree Lane to Hiram Lewis Park on the northwest side of the creek.

Issues/Recommendations: Extension of Windsor Creek Trail from Foothill Road to Elsbree Lane. Runs along the east side of Windsor Creek East, behind Windsor Middle School. Connects to Hiram Lewis Park access from Elsbree Lane. Existing foot path. Pedestrian pass through gate at Foothill Rd. Backyard fences, wood. Sewer infrastructure, old bridge footing to school. Wide level bench, pinches to about 25 foot setback from riparian vegetation close to Elsbree. Confluence of drainage and creek at Elsbree. Creek goes underground at Elsbree. Pave trail extension from Foothill Drive to Elsbree Lane. Install formal trail entry features at Foothill Drive and Elsbree Lane entrances. Install crosswalk across Foothill Drive. Install way finding and interpretive features. Consider pedestrian bridge to connect trail with Lewis Park paths, or relocate trail to west side of creek by moving school fences.



Entrance to Trail 23 from Elsbree Ln and Candace Ct Intersection, Looking South



Trail 23 North of Foothill Dr, Looking South

Northeast Quadrant
24A Foothill RP Connector Trail - East Windsor Creek (Hembree Lane - Foothill Drive)

Description / Existing Use: This segments starts on the north end where Windsor Creek crosses Hembree Lane approximately 225 feet south of Foothill Drive. The trail runs along the west side of the creek behind backyard fences. The existing trail is well utilized, consists of compacted dirt/gravel, and ranges from approximately 4 - 10 feet wide. The trail crosses a tributary approximately 400 feet south of Foothill Drive. Segment 23 East Windsor Creek Trail Extension extends north from the tributary crossing to Foothill Drive, then across Foothill Drive behind Windsor Middle School to Elsbree Lane.

Adjacent Streets / Intersections / Traffic: Hembree Lane is two-lane arterial street with a 40 mph speed limit, bike lanes, and sidewalks that extends roughly north-south through Windsor from Arata Lane to Shiloh Road. Foothill Drive is a two-lane residential collector with a posted speed limit of 25 mph and sidewalks. Street crossings are at Hembree Lane and Lakewood Drive, there are no street crossings within the corridor. Segment 23 East Windsor Creek Trail Extension branches off just south of Foothill Drive and continues north behind Windsor Middle School to Elsbree Lane, includes a mid-block crossing of Foothill Drive. Additional crossing of Foothill Drive will be required if the trail is extended north east of Hembree Lane.

Nearby Destinations: Direct connection to Windsor Middle School at Foothill Drive. Northeast extension to Foothill Regional Park. Single Family Residential Development flanks both sides of creek corridor. Segment 24B includes access to a wide array of shopping and service destinations, the post office, transit services, and destinations throughout Central Windsor.

EXISTING CONDITIONS

Length (feet)	2,000	**Flooding / Hydrology/Geotech Issues**	Area of minimal flood hazard. Stable, compacted gravel foot trail width ranges from 2 - 10 feet.
Width ROW / Private Lands	Hembree Ln ROW access to town parcel (162-230-024) width 85 ft, width north from creek centerline 55 ft.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	SCWA steel pipe gates. Residential stairs (wood) from backyards to existing foot path. Portable children's play equipment.	**Distance to Creek / Tree Canopy**	Varies average 15 - 50 plus feet. Narrow points approximately 10 feet from edge of existing foot path.
Fencing / Guard Rails / Walls	Backyard fences, mix of wood privacy, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	SCWA pipe gates for vehicle access, culverts and bridges at intersection crossings.

Recommendations: Minor improvements to popular trail, potential to explore extension east of Hembree Lane, subject to discussions with HOA. Several online comments opposed or supported this extension.



Entrance to Trail Segment 24A from Hembree Ln, Looking West



Trail Segment 24A, Looking North to La Contenta Ct Connection

Northeast Quadrant
24B Foothill RP Connector Trail - East Windsor Creek (Hembree Lane - Lakewood Drive)

Description / Existing Use: This section of the Foothill Trail which follows Windsor Creek roughly extends north-south. Brooks Road parallels the route to the west and Lakewood Drive parallels the route to east. An existing gravel trail is provided with some improvements, (grass pavers 10' wide plus) behind Office development and Chancellor Place of Windsor. Gravel foot trail for most of segment width ranges from 2 - 10'. The majority is 2 - 6' foot wide. The trail crosses a tributary of Windsor Creek, but no improvements are provided.

Adjacent Streets / Intersections / Traffic: Lakewood Drive and Brooks Road run roughly adjacent and parallel to the creek. Foothill Drive, which marks the north end of the segment, is a two-lane residential collector with a posted speed limit of 25 mph and sidewalks. Brooks Road is a north-south arterial street located west of the creek corridor with two travel lanes, a continuous two way left turn lane, a posted speed limit of 25 mph, bike lanes and sidewalks. Lakewood Drive has two distinct profiles through the corridor. East of the trail it is a private two-lane residential street, west of the trail it is a four-lane boulevard with a planted center median. Street crossings are at the trail entry points on Foothill Drive and Lakewood Drive. There are no street crossings within the corridor. Segment 23 East Windsor Creek Trail Extension branches off of the main trail just south of Foothill Drive and continues north across Foothill Drive and behind Windsor Middle School to Elsbree Lane. East Windsor Creek Trail Extension includes a mid-block crossing of Foothill Drive. A crossing of Lakewood Drive will be required if the trail is extended south of Lakewood behind Raley's market and the Post Office.

Nearby Destinations: Segment 24B includes access to a wide array of shopping and service destinations, the post office, transit services, and destinations throughout Central Windsor.

EXISTING CONDITIONS

Length (feet)	2,500	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway and 100-year floodplain. Stable, compacted gravel foot trail width ranges from 2 - 10 feet.
Width ROW / Private Lands	Hembree Ln access to town parcel (161-440-052) width 48 ft. La Contenta Ct ROW access to town parcel width 75 ft. Lakewood Dr ROW to private parcel (161-100-048, medical center plaza) width 40 ft.	**Longitudinal/Cross Slope**	Less than 2%. 2 - 5% slopes for a short segment where the creeks converge and the trail crosses the tributary approximately 400' south of Foothill Drive.
Encroachment (Type, Location)	SCWA steel pipe gates.	**Distance to Creek / Tree Canopy**	Varies average 15 - 50 plus feet. Narrow points include the tributary crossing just south of Foothill Drive, and various locations where the riparian growth and creek bank are approximately 15 - 20 feet from edge of existing foot path.
Fencing / Guard Rails / Walls	Backyard fences, mix of solid block walls, wood privacy, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	SCWA pipe gates for vehicle access, culverts and bridges at intersection crossings.

Recommendations: Improve accessibility to comply with ADA. Evaluate the grass pavers behind the office complexes at the trail's southern entrance from Lakewood Drive for ADA accessibility. Consider access improvements to connect with Lakewood Meadows Park (private property agreements needed). Install a 50 ft. bridge across the Windsor Creek Tributary, located approximately 400 feet south of Foothill Drive. Extend trail improvements to Lakewood Drive.



Trail Segment 24B, West of 23 and 24A Intersection



Trail Segment 24B, Near Medical Plz Intersection, Looking North

Northeast Quadrant
24C Foothill RP Connector - East Windsor Creek (Lakewood Dr. - Brooks Rd. South)

Description / Existing Use: This segment consists of a service road and adjacent landscaping for the Lakewood Shopping Center. There is a private parcel west of the creek that is accessed from Jensen Lane.

Adjacent Streets / Intersections / Traffic: Lakewood Drive, east of the route, it is a private two-lane residential street, west of the route it is a four-lane boulevard with a planted center median. Street crossings are at the trail entry points on Foothill Drive and Lakewood Drive. There are no street crossings within the corridor. A crossing of Lakewood Drive will be required if the trail is extended south of Lakewood behind Raley's market and the Post Office.

Nearby Destinations: Segment 24C includes access to a wide array of shopping and service destinations, the post office, transit services, and destinations throughout Central Windsor.

EXISTING CONDITIONS

Length (feet)	1,550	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway and 100-year floodplain.
Width ROW / Private Lands	Lakewood Dr ROW access to private parcel (161-100-012, community center) width 25 ft. Access throughout this private parcel.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	SCWA steel pipe gates.	**Distance to Creek / Tree Canopy**	Varies average 15 - 50 plus feet. Narrow points include the tributary crossing just south of Foothill Drive, and various locations where the riparian growth and creek bank are approximately 15 - 20 feet from edge of existing foot path.
Fencing / Guard Rails / Walls	Backyard fences, mix of solid block walls, wood privacy, wire, and chain link residential fences. Generally 5 - 6' tall.	**Structures**	SCWA pipe gates for vehicle access, culverts and bridges at intersection crossings.

Recommendations: Extend trail south from Lakewood Drive behind Raley's Market and the Post Office to Exchange Bank and the proposed Jensen Connector Trail and the Franklin Street Bridge. ROW and/or easement agreement may be required. Trail may utilize drive aisle or route along creek bank. Creek bank utilization may require relocation of existing utility infrastructure, trash enclosures, parking spaces, etc. Opportunity for redevelopment of shopping center to orient businesses towards creek as a site amenity.



South of Entrance to Trail Segment 24C from Lakewood Dr, Looking South



Vicinity of Southern End of Trail Segment 24C, Looking North

Northeast Quadrant
25 Lakewood - Amigos Pathway (part of 101 Crossing Complex)

Description / Existing Use: City parcel on east side of creek, and private lands. Residential use.

Adjacent Streets / Intersections / Traffic: Jensen Lane is a paved residential street blocked at Hembree lane to preclude vehicular access.

Nearby Destinations: Single family residential development.

EXISTING CONDITIONS

Length (feet)	1,400	**Flooding / Hydrology/Geotech Issues**	Westernmost 480 ft are within the FEMA 100- year floodplain. Westernmost 300 ft are within the FEMA floodway and 100-year floodplain.
Width ROW / Private Lands	Easternmost 414 ft of trail is on private property. 3rd St ROW access to private parcel (161-100-072) width 60 ft.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Caltrans onramp	**Distance to Creek / Tree Canopy**	No creek or riparian corridor.
Fencing / Guard Rails / Walls	Private property, developed farm infrastructure.	**Structures**	Rural residential development, farm infrastructure, barns, pens, fences, etc.

Recommendations: Part of 101 Crossing Complex, this segment would utilize ROW within Caltrans NB onramp to provide connection to Los Amigos Road.



East Entrance to Trail 25 from Lakewood Dr, Looking West



West Entrance to Trail 25 from Los Amigos Rd, from Crosswalk Looking South

Northeast Quadrant
26 Franklin Street Bridge (4th Street - Brooks Road South)

Description / Existing Use: Existing trail installed by residential development on the east side of the creek from Franklin St. Existing foot path heavily used to cross the creek.

Adjacent Streets / Intersections / Traffic: 4th Street is a short two-lane residential street with sidewalks and a 25 mph speed limit. Franklin Street is a two-lane residential street with a sidewalks and 25 mph speed limit. Lakewood Drive and Brooks Road South are multi-lane arterials in the vicinity of the proposed project, carrying traffic to and from the Central Windsor US 101 interchange and major activity nodes in central Windsor.

Nearby Destinations: Major shopping centers, Post Office, private school, Church, Town Green, transit resources, civic resources, Central Windsor, low-, medium-, and high-density residential developments.

EXISTING CONDITIONS

Length (feet)	300	**Flooding / Hydrology/Geotech Issues**	Easternmost 90 ft of trail within FEMA 500-year floodplain. Remainder of trail is within FEMA floodway/ 100-year floodplain.
Width ROW / Private Lands	Town parcel ROW (164-040-062) on east side of creek with existing path leading from Franklin St ROW leading to creek, installed by developer. Creek ownership Sfc 9 Lakewood Hills, Use Code Description common area w/o structures. Private property (161-100-010) on west side of creek.	**Longitudinal/Cross Slope**	2-5%
Encroachment (Type, Location)	Requires coordination with shopping center/Exchange Bank on west side	**Distance to Creek / Tree Canopy**	Heavy riparian growth, oaks and other species.
Fencing / Guard Rails / Walls	Backyard fences of adjoining/adjacent residential units.	**Structures**	Chain link ROW fencing along housing development.

Recommendations: Public right of way and existing trail segment leading to creek on east side. Bridge would land in landscaping on east side of parking lot just north of Exchange Bank. Dense riparian vegetation. Deep and narrow creek channel. Clear span bridge needed, with clear route through parking lot to street. Existing foot path heavily used. Design/install bridge to connect residential areas east of Windsor Creek to the Lakewood shopping areas and Central Windsor. Coordinate route from bridge west to Central Windsor Interchange routes. Ensure bridge designs meet Class I and ADA standards for widths, slopes, and clearances. Consider interpretive opportunities and/or creek overlooks. Install way finding features.



East Entrance to Trail 26 from Franklin St and 4th St Intersection, Looking West



West Entrance to Trail 26 from Parking Lot, Looking East

Northeast Quadrant
27 Jensen - 3rd Street Connector Trail (3rd St. - 4th St.)

Description / Existing Use: Existing alley between Pueblo Viejo Park. Key neighborhood connection if Franklin Street Brdige is built.

Adjacent Streets / Intersections / Traffic: Franklin Street, old Redwood Highway, Third Street, Fourth Street.

Nearby Destinations: Major shopping centers, Post Office, private school, Church, Town Green, transit resources, civic resources, Central Windsor, low-, medium-, and high-density residential developments.

EXISTING CONDITIONS

Length (feet)	300	**Flooding / Hydrology/Geotech Issues**	Undeveloped street
Width ROW / Private Lands	Public street row	**Longitudinal/Cross Slope**	Less than 2%.
Longitudinal Slope	Level.	**Distance to Creek / Tree Canopy**	not near creek
Cross Slope		**Encroachment (Type, Location)**	Adjacent to Pueblo Viejo Park, some encroachement, parking, etc.
Fencing / Guard Rails / Walls	Adjacent residential fences	**Structures**	N/A

Recommendations: Complete this segment as part of the Franklin Bridge installation for cost and engineering efficiency.



East Entrance to Trail 27 from 3rd St, Looking West



West Entrance to Trail 27 from 4th St, Looking East

Northeast Quadrant
28 Arata - Foothill Park Connector Arata Lane to Foothill Park)

Description / Existing Use: This trail would connect future development on the north side of Arata Lane and the existing Windsor Creek trails to Foothill Park. Currently it is a landscaped strip or undeveloped.

Adjacent Streets / Intersections / Traffic: Arata Lane, Brooks Road

Nearby Destinations: Single family residential, Foothill Regional Park, Windsor Middle School, Windsor Creek trail system.

EXISTING CONDITIONS

Length (feet)	2,600	**Flooding / Hydrology/Geotech Issues**	N/A
Width ROW / Private Lands		**Longitudinal/Cross Slope**	Sections of trail up to 10%, may require retaining wall for ADA compliance
Encroachment (Type, Location)	Private Property fences adjacent to right of way	**Distance to Creek / Tree Canopy**	Heavy riparian growth, oaks. Could not gain access to determine precise location.
Fencing / Guard Rails / Walls	Adjacent to gated residential development.	**Structures**	Landscaping adjacent to residential development.

Recommendations: Implement bicycle and separated pedestrian facilities as part of development north of Arata Lane, and when Arata Lane is completed and improved on north side of street.



West End of Trail 28, on Arata Ln Looking East



East End of Trail 28, on Arata Ln at Foothill RP Connection Point, Looking North

Northeast Quadrant
29 Jensen Lane East Connector (Vinecrest to Pleasant Avenue)

Description / Existing Use: The Jensen Trail is a proposed local trail located along Windsor's eastern limit line between Vinecrest Road and Jensen Lane. The trail partially completes a connection from Foothill Regional Park southwest to Old Redwood Highway in central Windsor. The proposed project is currently a 'paper trail' proposed along the eastern town limits for inclusion in future build out. The Jensen Trail should be considered part ofa "Windsor Ring Trail". The Jensen Trail is proposed in an area of open space, rural residential development, and agriculture (vineyards) along the Town's eastern limit line. Jensen Lane is a paved single lane residential road that extends north/south between vineyards and serves a handful of rural residences.

Adjacent Streets / Intersections / Traffic: Jensen Lane is a single lane paved residential drive that provide access to a handful of rural residences and vineyards on the eastern edge of Windsor.

Nearby Destinations: Single family residential development. South of the trail segment are Mattie Washburn Elementary School and Pleasant Avenue Park.

EXISTING CONDITIONS

Length (feet)	7,100	**Flooding / Hydrology/Geotech Issues**	Area of Minimal Flood Hazard. Northern section crosses Healdsburg Fault (seismically active right-lateral strike slip fault). Maximum credible earthquake expected to be generated by this fault is 7.5.
Width ROW / Private Lands	Southernmost 1650 ft follow Jensen Lane ROW. Northern 1053 ft of trail on private property.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private Property, fences, personal property storage - collection of antique farm equipment.	**Distance to Creek / Tree Canopy**	Heavy riparian growth, oaks. Could not gain access to determine precise location.
Fencing / Guard Rails / Walls	Private property, rural type residential development. Property fences and gated driveways. Pubic ROW for creek channel is fenced, chain link.	**Structures**	Private property, homes, outbuilding, property fencing, creek channel ROW fencing.

Recommendations: Implement Class I trail improvements as part of future residential development. Include connections and project segments in a larger proposal for a Windsor 'Ring Trail'.



Entrance to Trail 29 from Vinecrest Rd, Looking South



Entrance to Trail 29 from Pleasant Ave, Looking North

Northeast Quadrant
30 Jensen Lane Trail (Hembree Lane to Jenes Lane East Connector)

Description / Existing Use: The Jensen Lane Trail would be located along Jensen east of Hembree Lane and include a new trail within a proposed future development. The existing raod is popular for local residents as a one-lane road. The Jensen Trail would provide a connection from downtown to the future "Windsor Ring Trail". in an area of open space, rural residential development, and agriculture (vineyards) along the Town's eastern limit line. Jensen Lane is a paved single lane residential road that extends north/south between vineyards and serves a handful of rural residences.

Adjacent Streets / Intersections / Traffic: Jensen Lane is a single lane paved residential drive that provide access to a handful of rural residences and vineyards on the eastern edge of Windsor.

Nearby Destinations: Single family residential development. South of the trail segment are Mattie Washburn Elementary School and Pleasant Avenue Park.

EXISTING CONDITIONS

Length (feet)	2,700	**Flooding / Hydrology/Geotech Issues**	Area of Minimal Flood Hazard. Northern section crosses Healdsburg Fault (seismically active right-lateral strike slip fault). Maximum credible earthquake expected to be generated by this fault is 7.5.
Width ROW / Private Lands	Jensen Lane ROW.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private Property, fences adjacent to south side of road.	**Distance to Creek / Tree Canopy**	N/A.
Fencing / Guard Rails / Walls	Private property, rural type residential development.	**Structures**	Private property, homes, outbuilding, property fencing.

Recommendations: Implement Class I trail improvements as part of future residential development. Include connections and project segments in a larger proposal for a Windsor 'Ring Trail'. On existing developed section of Jensen Lane, extend sidewalk or path to connect to existing improvements. Consider extending Jensen Lane Trail west of Hembree Lane along Jensen Creek, which is a drainage facility owned by Lakewood Hills HOA. This would b e an ideal trail connection along the creek to connect to downtown Windsor, but is privately owned and would need agreement, easement or acquistion to make a complete trail segment.



Jensen Lane Trail



Northeast Quadrant
31 Lakewood Connector (Jensen Lane to East Windsor Creek)

Description / Existing Use: The Lakewood Connector would provide a connection from the Jensen Lane Bicycle Bouldevard to East Windsor Creek. Potientially an alternative to the Franklin Street Bridge, this segment crosses private property and several driveway entrances. Potential creek restoration or redevelopment in this area would iimprove implementation potential.

Adjacent Streets / Intersections / Traffic: Jensen Lane is a single lane paved residential drive that provide access to a handful of residences in old east Windsor.

Nearby Destinations: Single family residential development. West of the connector is East Windsor Creek.

EXISTING CONDITIONS

Length (feet)	400	**Flooding / Hydrology/Geotech Issues**	Near Windsor Creek, potential localized flooding.
Width ROW / Private Lands	Private	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private Property, fences, personal property storage - collection of antique farm equipment.	**Distance to Creek / Tree Canopy**	Riparian growth, oaks. Could not gain access to determine precise location.
Fencing / Guard Rails / Walls	Private property, rural type residential development. Property fences and gated driveways.	**Structures**	Private property, homes, outbuilding, property fencing.

Recommendations: Implement Class I trail improvements as part of future redevelopment or creek restoration. Explore options for trails within Lakewood Hills HOA drainage easement to north and east.





Lakewood Connector Vicinity

Southwest Quadrant
41A SMART - West Side of Tracks (Windsor River Road - Trione Circle)

Description / Existing Use: Completion of SMART trail on west side of tracks between Windsor River Road and Trione Circle. Incorporates existing trails completed as part of adjacent development. Segment is proposed on Town property through the treatment

Adjacent Streets / Intersections / Traffic: Windsor Road west of Water Treatment Plant, Bell Road east of RR ROW.

Nearby Destinations: Residential development, Windsor Public Works, Windsor Fire #2, Windsor High School.

EXISTING CONDITIONS

Length (feet)	4,400
Width ROW / Private Lands	80' ROW. Centerline of single tracks is 40' from edge of ROW per SMART.
Encroachment (Type, Location)	Riparian growth, trees, drainage swales along track ballast, Windsor Creek East and West under
Fencing / Guard Rails / Walls	Security fencing around water treatment plant, sections of ROW fencing along the SMART Corridor.

Flooding / Hydrology/Geotech Issues	Partially within FEMA floodway, 100- and 500-year floodplains around Windsor Creek. Confluence of Windsor Creek, RR ROW Drainage, and Water Treatment Plant Ponds and Levees. Flowing water, standing water, significant grade changes including creek channel and built RR ballasts and pond levees. Compacted gravel, RR Ballast, and drainage swales. Native soil terrace/ footslope loam.
Longitudinal/Cross Slope	Level longitudinal RR grade. Less than 2%. Significant cross slopes. RR ROW, track elevated on ballast, drainage flanks both sides of ballast, East and West Windsor Creek Tributaries and Pond Levees all converge.
Distance to Creek / Tree Canopy	Dense riparian vegetation flanks the ROW. Scrub and saplings in the ROW.
Structures	ROW fencing, Water Treatment Plant fencing, Water Treatment Ponds, open deck RR bridges over East and West Windsor Creek tributaries, double tracking and rail switching equipment.



On Trail Segment 41A in Vicinity of Wastewater Treatment Facility, Looking South

Recommendations: Requires bridges over East and West Tributaries of Windsor Creek. The RR ROW is constrained by double tracks and deep drainage swales that flank both sides of the RR tracks, two tributaries of Windsor Creek cross the segment, dense riparian vegetation flanks the corridor, the Windsor Water Treatment Plan is adjacent to the ROW and there are significant grade differentials and drainage issues associated with the pond levees, creek confluence, and drainage swales that flank the tracks. SMART Plans identify the segment outside of their ROW on Town property. At the north end of the segment ROW acquisition/easement may be necessary from parcel 164-030-032 where the RR corridor is double tracked. South of that parcel is Town property, the Water Treatment Plan. Consider routing the trail on top of the pond levees. East and West Windsor Creek tributaries flow between the ponds, bridges over both tributaries will be required. Consider maintaining alignment along the eastern boundary of the water treatment plan to maintain continuity with the larger SMART trail alignment. Alternative alignments could follow East or West Windsor Creek tributaries which bisect the water treatment plant property and ponds and then connect eastward back to corridor along segment 43.Evaluate the potential to route the trail on top of the treatment pond levees and/or to route the trail through the treatment plant utilizing either the East or West Windsor Creek tributary. Determine potential bridge crossing locations and limitations, and identify security fencing requirements and access restrictions associated with the treatment plant. Evaluate the potential to route the trail on the maintenance roads on top of the treatment pond levees. To maintain a route parallel to the SMART corridor, the trail would utilize the maintenance road on top of Pond 2 with a bridge across the West Windsor Creek Tributary to maintenance road on top of Pond 4 with a second bridge across the East Windsor Creek Tributary to the maintenance road on top of Pond 5. Previous efforts by the Town identify a northeast to southwest trail alignment through the Water Treatment Plan along the west side of the East Windsor Creek Tributary routing between Ponds 4, S1, S2, S3 and Pond 5. Determine potential bridge crossing locations and limitations, and identify security fencing requirements and access restrictions associated with the water treatment plant. Identify location for grade separated (under or over) crossing of the RR ROW to connect east and west Windsor. Install lane striping, speed limit signs, warning advisory signs, pavement legends, reassurance markings, etc. to facilitate orderly operations, provide wayfinding information, and encourage courtesy among varied users in consideration of the level of use anticipated for this regional facility.

Southwest Quadrant
41B SMART East Side of Tracks (Windsor River Road - Mitchell Lane)

Description / Existing Use: SMART trail on east side of tracks to Mitchell Lane.

Adjacent Streets / Intersections / Traffic: Bell Road

Nearby Destinations: Windsor RV Park, Windsor Creek Elementary School, Town Green,SMART Station

EXISTING CONDITIONS

Length (feet)	7,600	**Flooding / Hydrology/Geotech Issues**	Partially within FEMA floodway, 100- and 500-year floodplains around Windsor Creek. Confluence of Windsor Creek, RR ROW Drainage, and Water Treatment Plant Ponds and Levees. Flowing water, standing water, significant grade changes including creek channel and built RR ballasts and pond levees. Compacted gravel, RR Ballast, and drainage swales. Native soil terrace/ footslope loam.
Width ROW / Private Lands	80' ROW. Centerline of single tracks is 40' from edge of ROW per SMART.	**Longitudinal/Cross Slope**	Level longitudinal RR grade. Cross slopes vary, adjacent land is level.
Encroachment (Type, Location)	N/A	**Distance to Creek / Tree Canopy**	Route crosses Windsor and East Windsor Creeks, significant vegetation and swales adjacent to alaignment.
Fencing / Guard Rails / Walls		**Structures**	

Recommendations: Install a solid barrier between the track and trail per SMART Design Guidelines. Live planted barriers or combination solid and live barriers can help to soften the visual, audible, and operational impacts of the railroad. Install active and passive pedestrian warning and crossing features at grade crossings per SMART Design Guidance and best practices. Install lane striping, speed limit signs, warning advisory signs, pavement legends, reassurance markings, etc. to facilitate orderly operations, provide wayfinding information, and encourage courtesy among varied users in consideration of the level of use anticipated for this regional facility.



Trail Segment 41B in Vicinity of Vintage Greens Bike Path Connection, Looking North

Southwest Quadrant
41C SMART East Side of Tracks (Mitchell Lane - Town Limits)

Description / Existing Use: Rail corridor. Currently there is no use or very limited use. The ROW is overgrown with black berries, scrub, and oak saplings.

Adjacent Streets / Intersections / Traffic: Bell Road, Mitchell Lane

Nearby Destinations: Corridor connection between Downtown Windsor and SMART/Airport Station.

EXISTING CONDITIONS

Length (feet)	5,000
Width ROW / Private Lands	80' ROW. Centerline of single tracks is 40' from edge of ROW per SMART.
Encroachment (Type, Location)	N/A
Fencing / Guard Rails / Walls	A solid barrier will be installed as part of SMART implementation.

Flooding / Hydrology/Geotech Issues	Majority of trail is mapped in an area of minimal flood hazard. However, the trail crossing at Pool Creek is within FEMA floodways and 100- and 500-year floodplain. The segment of trail south of Shiloh Rd is less than 60 ft west of a 500-year floodplain area. No significant geotechnical
Longitudinal/Cross Slope	Less than 2%
Distance to Creek / Tree Canopy	Crosses Pool Creek
Structures	N/A

Recommendations: Install a solid barrier between the track and trail per SMART Design Guidelines. Live planted barriers or combination solid and live barriers can help to soften the visual, audible, and operational impacts of the railroad. Install active and passive pedestrian warning and crossing features at grade crossings per SMART Design Guidance and best practices. Install lane striping, speed limit signs, warning advisory signs, pavement legends, reassurance markings, etc. to facilitate orderly operations, provide wayfinding information, and encourage courtesy among varied users in consideration of the level of use anticipated for this regional facility.



North Entrance onto Trail Segment 41C from Shiloh Rd, Looking South

Southwest Quadrant
42 Conde Lane Connector (Old Redwood Highway - Conde Lane)

Description / Existing Use: Proposed trail alignment follows West Windsor Creek between Windsor River Road near the Central Windsor Interchange south across Conde Lane, along the western boarder of Windsor Creek Elementary School, then south along Grayson Way to Bell Road ending at the SMART Corridor. The creek is inaccessible in many locations due to private property and heavy riparian growth. No clear alignment was identified on either the east or west side of the creek.

Adjacent Streets / Intersections / Traffic: Northern trail entrance is via Windsor River Road, alignment would cross Conde Lane. The creek continues south and parallels Armando Renzullo Way, Grayson Way and Bell Road follow the southern alignment of segment. In the vicinity of the trail northern trail entrance, Windsor River Road is heavily trafficked.

Nearby Destinations: Central Windsor including major retail, service, and employment destinations, Town Green, civic resources, Windsor Creek Elementary School, low-, medium-, and high-density residential developments, SMART Trail.

EXISTING CONDITIONS

Length (feet)	200	**Flooding / Hydrology/Geotech Issues**	Within/ very close to FEMA floodway and 100-year floodplain.
Width ROW / Private Lands	Private property parcel numbers: 164-020-023 east side of creek Conde to Elementary School, 160-020-041 west side of creek Elementary School to SMART.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private property, Windsor Creek Elementary School.	**Distance to Creek / Tree Canopy**	Dense riparian growth.
Fencing / Guard Rails / Walls	Unknown.	**Structures**	Private property fences and structures, Elementary School, SMART ROW fencing.

Recommendations: Improve existing trail to Class I standards.



West Entrance onto Trail 42 from Windsor River Rd, Looking South



East Entrance onto Trail 42 from Conde Ln, Looking North

Southwest Quadrant
43A South Windsor Creek (Conde Lane - Windsor Elementary School)

Location/Description:

Description / Existing Use: Proposed trail alignment follows West Windsor Creek between Windsor River Road near the Central Windsor Interchange south across Conde Lane, along the western boarder of Windsor Creek Elementary School, then south along Grayson Way to Bell Road ending at the SMART Corridor. The creek is inaccessible in many locations due to private property and heavy riparian growth. No clear alignment was identified on either the east or west side of the creek.

Adjacent Streets / Intersections / Traffic: Northern trail entrance is via Windsor River Road, alignment would cross Conde Lane. The creek continues south and parallels Armando Renzullo Way, Grayson Way and Bell Road follow the southern alignment of segment. In the vicinity of the trail northern trail entrance, Windsor River Road is heavily trafficked.

Nearby Destinations: Central Windsor including major retail, service, and employment destinations, Town Green, civic resources, Windsor Creek Elementary School, low-, medium-, and high-density residential developments, SMART Trail.

EXISTING CONDITIONS

Length (feet)	1,500	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway and 100-year floodplain.
Width ROW / Private Lands	Private property parcel numbers: 164-020-023 east side of creek Conde to Elementary School, 160-020-041 west side of creek Elementary School to SMART.	**Longitudinal/Cross Slope**	Less than 2%.
Longitudinal Slope	Less than 2%.	**Distance to Creek / Tree Canopy**	Dense riparian growth.
Structures	Private property fences and structures, Elementary School, SMART ROW fencing.	**Encroachment (Type, Location)**	Private property, Windsor Creek Elementary School.
Fencing / Guard Rails / Walls	Unknown.		

Structures: N/A

Recommendations: Construct creek trail and bridge connection to school as part of future development project.



Trail Segment 43A Entrance from Conde Ln, Looking South

Southwest Quadrant
43B South Windsor Creek (Windsor Elementary School - Bell Road)

Description / Existing Use: Proposed trail alignment follows West Windsor Creek between Windsor River Road near the Central Windsor Interchange south across Conde Lane, along the western boarder of Windsor Creek Elementary School, then south along Grayson Way to Bell Road ending at the SMART Corridor. The creek is inaccessible in many locations due to private property and heavy riparian growth. No clear alignment was identified on either the east or west side of the creek.

Adjacent Streets / Intersections / Traffic: Northern trail entrance is via Windsor River Road, alignment would cross Conde Lane. The creek continues south and parallels Armando Renzullo Way, Grayson Way and Bell Road follow the southern alignment of segment. In the vicinity of the trail northern trail entrance, Windsor River Road is heavily trafficked.

Nearby Destinations: Central Windsor including major retail, service, and employment destinations, Town Green, civic resources, Windsor Creek Elementary School, low-, medium-, and high-density residential developments, SMART Trail.

EXISTING CONDITIONS

Length (feet)	900	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway, 100- and 500-year floodplain.
Width ROW / Private Lands	Private property parcel numbers: 164-020-023 east side of creek Conde to Elementary School, 160-020-041 west side of creek Elementary School to SMART.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private property, Windsor Creek Elementary School.	**Distance to Creek / Tree Canopy**	Dense riparian growth.
Fencing / Guard Rails / Walls	Unknown.	**Structures**	Private property fences and structures, Elementary School, SMART ROW fencing.

Recommendations: Construct creek trail and bridge connection to school as part of future development project.



Entrance to Trail 43B from Old Oak Rd, Looking West

Southwest Quadrant
44 Trione Connector (Trione Circle - Trione Circle)

Description / Existing Use: The segment of the Windsor Creek Trail extends between SMART Railroad corridor and Windsor Road. The East and West Tributaries of Windsor Creek merge approximately 1,300 feet west of the RR tracks. Town ROW along the south side of water treatment ponds, north side of Windsor Creek. Existing paved maintenance road extends east from Windsor Road. Existing maintenance road on north side of creek extends approx. 800 feet into water treatment property. On south side of creek, wide sidewalks and trail extend along Trione Circle from approximately Vintage Greens Drive to Foppiano Way . Existing trail on south side of creek ends approx. 250 feet west of Trione Circle/Foppiano Way, but vehicle access on the bench above the creek continues.

Adjacent Streets / Intersections / Traffic: Windsor Road at west end of trail segment, collector with bike lanes, sidewalks, and enhanced crossings. Trione Circle, a residential street, roughly follows the corridor from Windsor Road to the SMART corridor.

Nearby Destinations: SMART Trail corridor, Windsor Public Works Department, Windsor High School, Windsor Fire Station #2

EXISTING CONDITIONS

Length (feet)	1,300
Width ROW / Private Lands	Town ROW along the south side of water treatment ponds, north side of Windsor Creek
Encroachment (Type, Location)	Existing vehicle access road.
Fencing / Guard Rails / Walls	Existing maintenance road (12 foot wide) begins at Windsor Road, parallels the creek and extends to southeast corner of Pond X? Existing driveway and steel entry gate at Windsor Road.

Flooding / Hydrology/Geotech Issues	Westernmost 850 ft of trail is within/ very close to FEMA floodway/ 100-year floodplain.
Longitudinal/Cross Slope	Appears to be 2% or less, gains some elevation from west to east.
Distance to Creek / Tree Canopy	Existing paved maintenance road is approx. 150 feet from creek
Structures	Treatment ponds, levees, security fencing

Recommendations: Improve existing maintenance road.



West End of Trail 44, Looking East

West End of Trail 44, Looking East

Southwest Quadrant
45 Waste Water Treatment Plant Connector (Windsor Road - Trione Circle)

Description / Existing Use: Existing maintenance access roadseast of Windsor Road.

Adjacent Streets / Intersections / Traffic: Windsor Road, Reiman Road at the west end of the trail.

Nearby Destinations: Windsor Public Works, Windsor High School, Residential development, SMART Trail.

EXISTING CONDITIONS

Length (feet)	1,500	**Flooding / Hydrology/Geotech Issues**	Open Space setback from creek corridor. Within FEMA floodway, 100- and 500-year floodplain.
Width ROW / Private Lands	Public ROW	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Windsor Water Treatment Plan property.	**Distance to Creek / Tree Canopy**	Route is removed from the influence of tree canopy and creek until they merge at end of the maintenance access road.
Fencing / Guard Rails / Walls	Chain link security fence extends along the base of treatment pond levee .	**Structures**	Chain link fence, pond levee.

Recommendations: Paper trail shown along the base of the southern water treatment pond. Alignment would extend east from the end of Reiman Lane at Windsor Road. Bridge Crossing needed to connect to SMART trail and Segment 44.



On Trail 45, West of Creek Crossing, Looking South



South Entrance toTrail 45 from Windsor Rd, Looking Northeast

Southwest Quadrant
46 South Starr Creek (Keiser Park - Starr Creek Park)

Description / Existing Use: Proposed segment of the Starr Creek Trail to connect existing trails in Keiser Park to Starr Creek Park, in vicinity of proposed aquatic center. Project would include bridge crossing to eliminate existing social trail.

Adjacent Streets / Intersections / Traffic: Starr Road roughly parallels the north-south route on its east side. Windsor River Road

Nearby Destinations: Keiser Community Park, Windsor High School, Starr Creek Park

EXISTING CONDITIONS

Length (feet)	1,000	**Flooding / Hydrology/Geotech Issues**	The trail section from Windsor River road to the football field vicinity is an area of minimal flood hazard.
Width ROW / Private Lands	Within Town lands	**Longitudinal/Cross Slope**	level, except at creek. Bridge needed.
Encroachment (Type, Location)	trees in creek	**Distance to Creek / Tree Canopy**	Dense riparian vegetation.
Fencing / Guard Rails / Walls	Residential fences.	**Structures**	Backyard fences, landscaping, outbuildings, etc.

Recommendations: Existing path connects along east side of Starr Pocket Park from Starr Creek Road @ ?? Road . connects to/behind Windsor High School. Formalize a short section of pathway through meadow to existing pathway in Keiser Park and prvide bridge crossing. Existing path is 8 feet



On Trail 46, Looking West to Starr Rd Intersection

Southwest Quadrant
47 Jaguar Way

Description / Existing Use: Extension of Jaguar Way to Starr Road.

Adjacent Streets / Intersections / Traffic: Windsor Road, Jaguar Way, Astarr Road.

Nearby Destinations: Keiser Community Park, Windsor High School, Starr Creek Park

EXISTING CONDITIONS

Length (feet)	2,500	**Flooding / Hydrology/Geotech Issues**	The trail section from Windsor River road to the football field vicinity (where it meets with S Star Creek Trail) is an area of minimal flood hazard.
Width ROW / Private Lands	Route would cross no private properties.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Public School Property, Community Park Property	**Distance to Creek / Tree Canopy**	Sparsely vegetated along the north side of the trail, where residential trees have been planted.
Fencing / Guard Rails / Walls	Residential fences on north side.	**Structures**	Backyard fences, landscaping, outbuildings, etc.

Recommendations: Complete Class I trail improvements, including crosswalks to high School, as part of street improvement project.



On Trail 47, Looking East

Southwest Quadrant
48 SMART - Windsor Road Connector (Windsor Road - SMART)

Description / Existing Use: Proposed trail segment extends east-west along an unnamed private road that is parallel to and directly south of Private Road F. The trail segment connects to the Windsor High School - SMART Connector Trail at Jaguar Way to the west, and terminates at the SMART property just south of southernmost extent of the existing trail behind Windsor Park Apartments. This segment could also be located on Town lands, subject to further analaysis. Key connection to

Adjacent Streets / Intersections / Traffic: Windsor Road.

Nearby Destinations: Keiser Community Park, Windsor High School, SMART

EXISTING CONDITIONS

Length (feet)	1,000	**Flooding / Hydrology/Geotech Issues**	The trail section s in an area of minimal flood hazard.
Width ROW / Private Lands	Crosses 6 private properties along a paved road 22' in width	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Private Property, Private Business Ownership (Multifamily use) along the north side	**Distance to Creek / Tree Canopy**	Sparsely vegetated along the north side of the trail, where young trees have been planted.
Fencing / Guard Rails / Walls	Residential fences on south and north sides.	**Structures**	Backyard fences, landscaping, outbuildings, etc.

Recommendations: While this private road runs through 6 private parcels, access to these parcels (with the exception of APN 164-030-032) are accessed via Patrick Lane, which runs parallel to the proposed trail alignment on the southern end of the parcel boundaries. Property 164-030-032 is undeveloped empty lot. Alternatively, create roaute on Town lands.



Entrance to Trail 48 from Windsor Rd, Looking East

Southwest Quadrant
49 SMART - Windsor- Pool Creek Loop (Windsor Road - Windsor Road)

Location/Description:

Description / Existing Use: Existing maintenance road serving SCWA and Town reclaimed water lands. Proposed trail segment extends southwest from Vintage Greens Road and Windsor Road intersection along Windsor Creek. Loop turns east and then northeast at Windsor Creek and Pool Creek confluence. Trail follows Pool Creek northeast back to Windsor Road were it emerges at the center of the westernmost edge of the Windsor Golf Club parcel boundary (approximately 2,600 feet south of Vintage Greens Drive - Windsor Road intersection).

Adjacent Streets / Intersections / Traffic: Windsor Road

Nearby Destinations: Windsor Golf Club, Vintage Oak Park

EXISTING CONDITIONS

Length (feet)	12,000	**Flooding / Hydrology/Geotech Issues**	Entire proposed trail alignment in FEMA floodway or 100-year flood zone.
Width ROW / Private Lands	Route would cross 2 private properties, or could be located on public lands.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Public Ownership, Crosses 2 private parcels (pasture and vineyard) along Pool	**Distance to Creek / Tree Canopy**	Dense Riparian Growth
Fencing / Guard Rails / Walls		**Structures**	Backyard fences, landscaping, outbuildings, etc.

Recommendations: Consider agreement with SCWA for trial or interim use of existing maintenancce access road, perhaps as special event. Consider working with Sonoma County Regional Parks to develop trail as part of regional trail connection to Riverfront parks on Westside Road.



North Entrance to Trail 49 from WIndsor Rd, Looking West



South Entrance to Trail 49 from WIndsor Rd, Looking West

Southwest Quadrant
50 Mitchell Lane (Windsor Road - Mitchell Lane)

Description / Existing Use: Proposed trail segment extends east-west along Mitchell Lane from Windsor Road in the west to Vintage Oaks Park

Adjacent Streets / Intersections / Traffic: Windsor Road, Golf Course Drive

Nearby Destinations: Vintage Oaks Park, Windsor Golf Club, Windsor Creek Trail, Windsor Ranch Soccer Park

EXISTING CONDITIONS

Length (feet)	2,300	**Flooding / Hydrology/Geotech Issues**	N/A
Width ROW / Private Lands	Parcel on corner of Mitchell and Windsor Road is proposed for development.	**Longitudinal/Cross Slope**	Some cross slope if trail is located on reclaimed water levees.
Encroachment (Type, Location)	Incorporate into proposed development project	**Distance to Creek / Tree Canopy**	Sparsely vegetated along the north side of the trail, where residential trees have been planted.
Fencing / Guard Rails / Walls	Residential fences on north and south sides.	**Structures**	Backyard fences, landscaping, outbuildings, etc.

Recommendations: Incorporate into proposed devlopment project, or future street improvements. Onsider widening existing sidewalks.



Entrance to Trail 50 from Windsor Rd and Mitchell Ln, Looking East



Near Entrance to Trail 50 from 8th Hole Dr and Mitchell Ln, Looking West

Southeast Quadrant
61 Pool Creek (Old Redwood Hwy - Hembree Lane)

Description / Existing Use: Existing compacted dirt maintenance road approximately 8 - 10 feet wide extends along the north side of the creek between Hembree Lane and Judith Court with gated access to Edinburgh Court mid-way. Private development proposed on the south side of the creek at Old Redwood Hwy (Creekwalk #14-21), and on the south side of the creek at Hembree Lane (Victoria Oaks #05-28). A minor subdivision of 5 residential lots on 2.5 acres is located at 345 Wilson Lane on the north side of the creek at the intersection of Wilson Lane and Dartmouth Way (APN 163-240-011).

Adjacent Streets / Intersections / Traffic: Old Redwood Highway is a two-lane arterial street with bike lanes and an ADT of 9,700 vehicles in the vicinity of the project. No sidewalks, curb, or gutter are provided in the immediate vicinity of the project, pedestrians use variable width shoulders. Hembree Lane is a two-lane arterial street that fronts US 101 in the vicinity of the project. Hembree Lane has an ADT of 8,900 vehicles, bike lanes, an intermittent center median, curb, gutter, and a sidewalk on the east side of the street. Pipe style maintenance gates provide vehicle access to the south side of the creek at Edinburgh Court and Judith Lane. Old Redwood Highway, Wilson Lane, Judith Lane, Edinburgh Court, Hembree Lane, US 101.

Nearby Destinations: Shiloh area shiopping and parks

EXISTING CONDITIONS

Length (feet)	2,300	**Flooding / Hydrology/Geotech Issues**	Within FEMA floodway, 100- and 500-year floodplain.
Width ROW / Private Lands	Private lands, some are proposed development projects.	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)		**Distance to Creek / Tree Canopy**	Riparian vegetation and trees in creek channel
Fencing / Guard Rails / Walls	Backyard fences	**Structures**	potential on private lands

Recommendations: Trail access on north side of creek, existing access at Hembree, Edinburgh Court, Judith Lane @ Desiree Place, Judith Lane cul-de-sac indicates future street extension. Private property encroachment on Judith Lane east of Desiree Place. No clear access from Old Redwood Hwy. East end of trail could diverge from creek and follow backyard fences along Deanna Place, may provide easier access to Old Redwood Hwy. Integrate trail development as a component of planned residential developments, Creekwalk and Victoria Oaks .



Old Redwood Hwy Entrance to Trail 61, Looking West



Trail 61 Connection Entrance from Desiree Pl and Judith Ct Intersection, Looking South



On Trail 61, South of Connection Entrance from Desiree Pl and Judith Ct Intersection, Looking South



On Trail 61, Between Desiree Pl and Edinburgh Ct, Looking West

Southeast Quadrant
62 Faught Creek (Old Redwood Hwy - Victory Lane)

Description / Existing Use: The creek corridor is Town of Windsor ROW/property. A compacted dirt/gravel maintenance road extends west from Old Redwood Highway between the creek and backyard fences to Gabrielle Drive. At Gabrielle Drive the ROW widens and a foot trail follows the creek through open space between Gabrielle Drive and the creek and then along Amie Drive for approximately 320-feet until the creek crosses under Amie Drive at a perpendicular intersection. A dirt footpath then extends along the south side of the creek from Amie Drive through private property/open space to Victory Lane. follows the c surface, existing foot path. Existing steel entry gates and bollards. Connects across Amie Drive to Victory Lane behind Walmart. Driveway ramp and pipe gate provide maintenance vehicle access from Gabrielle Drive. Mature oaks line the top of the creek's bank.

Adjacent Streets / Intersections / Traffic: Old Redwood Highway is a two-lane arterial street with bike lanes and an ADT of 9,700 vehicles in the vicinity of the project. Short segments of intermittent sidewalk, curb, and gutter are provided on Old Redwood Highway in the vicinity of the project. An approximately 450-foot segment of sidewalk is provided along the west side of Old Redwood Highway between the trail entry and Deanna Place to the north.

Nearby Destinations: Single family residential development is located along both sides of the creek. The Shiloh Shopping Center which includes Walmart, Home Depot, and a variety of retailers, services, and restaurants is located at the western end of the trail off of Victory Lane and Hembree Lane. Transit stops are located on Old Redwood Highway and Hembree Lane.

EXISTING CONDITIONS

Length (feet)	1,900	**Flooding / Hydrology/Geotech Issues**	Area of Minimal Flood Hazard
Width ROW / Private Lands	SCWA creek	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Backyard fences	**Distance to Creek / Tree Canopy**	adjacent to creek channel, riparian trees
Fencing / Guard Rails / Walls	Backyard fences	**Structures**	N/A

Recommendations: Comments: Existing compacted 8 foot trail extending from Old Redwood Highway to Gabrielle Drive on north side of creek. Wide open space along creek following Gabrielle Drive to Amie Drive existing foot path and sidewalk. Creek goes underground from Amie Drive west under Walmart. Integrate trail development as a component of planned Victoria Oaks residential development project located at 6808, 6816, and 6842 Hembree Lane. Consider "greenway" landscape improvements in the open space that extends along Gabrielle Drive and Amie Drive. Install pedestrian crossing on Amie Drive and evaluate crossing location on Old Redwood Highway at trail entrance.



Entrance to Trail 62 from Old Redwood Hwy, Looking South



Entrance to Trail 62 from Victory Ln and MacFarlane Wy, Looking Northeast

Southeast Quadrant
63 Shiloh Vision Trail - Pruitt Creek (Edmund Avenue - Shiloh Road)

Description / Existing Use: Southeast Quadrant, Local Trail. The Pruitt Creek Trail is a component of the Shiloh Vision Plan. T

Adjacent Streets / Intersections / Traffic: Shiloh Road is a two-lane rural arterial with shoulders/bike lanes and an ADT of 10,800 vehicles in the vicinity of the project. Traffic signals and turn lanes are provided on Shiloh Road at the US 101 interchange ramps, Hembree Lane, and Old Redwood Highway.

Nearby Destinations: High density mixed-use residential and commercial development are proposed in the Shiloh Road Village Plan between Shiloh Road and Pruitt Creek. The Shiloh Shopping Center is located north of the site at the intersection of Shiloh Road/Hembree Lane, and includes Walmart, Home Depot, and a variety of retailers, services, and restaurants . Transit stops are located on Shiloh Road, Old Redwood Highway, and Hembree Lane. Esposti Community Park is located on the northeast corner of Shiloh Road/Old Redwood Highway. Shiloh Ranch Regional Park is located approximately 1-mile east of the project site at the intersection of Shiloh Road/Faught Road.

EXISTING CONDITIONS

Length (feet)	4,500	**Flooding / Hydrology/Geotech Issues**	Paritally within FEMA floodway and fully within the FEMA 100-year floodplain.
Width ROW / Private Lands	Private lands	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Undeveloped	**Distance to Creek / Tree Canopy**	Can be setback from creek, limited riparian vegeation

Recommendations: Currently private property, Shiloh Road Vision Plan calls for a multi-use trail and linear park along Pruitt Creek. The Shiloh Road Village Vision Plan calls for a linear park and multi-use pathway system that works with the site's open space, floodplain and wetlands, and meanders along Pruitt Creek. The Plan identifies the linear park and trail as an important community amenity, a buffer to US 101, an opportunity for passive recreation and interpretive elements, as well as a trailhead facility for the regional park system.



Vicinity of Trail 63 Entrance from Shiloh Rd, Looking South

Southeast Quadrant
64 Robbins Park Connector

Adjacent Streets / Intersections / Traffic: Hembree Lane, Cornell Drive

Nearby Destinations: Robbins Park

EXISTING CONDITIONS

Length (feet)	1,500	**Flooding / Hydrology/Geotech Issues**	Partially within FEMA floodway and fully within the FEMA 100-year floodplain.
Width ROW / Private Lands	Portions of the alignment are within private lands proposed for	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	N/A	**Distance to Creek / Tree Canopy**	Trail within oak vegetated floodplain.
Fencing / Guard Rails / Walls	Backyard fences	**Structures**	N/A

Recommendations: Implement trail connection as part of proposed development project. Provides nonmotorized neighborhood connectivity between Hembree Lane and Old Redwood Highway.



Vicinity of Trail 64 Midpoint from Cornell St, Looking East

Southeast Quadrant
65 East Pool Creek (Old Redwood Highway - Jensen Lane Connector

Description / Existing Use: The East Pool Creek trail would connect to the proposed Jensen Trail, providing an eastside continuopuis connection to Foothill Regional Park, part of a Ring Trail.

Adjacent Streets / Intersections / Traffic: Old Redwood Highway, Pleasant Avenue

Nearby Destinations: Shamrock Mobile Home Park, downtown Windsor

EXISTING CONDITIONS

Length (feet)	5,000	**Flooding / Hydrology/Geotech Issues**	Paritally within FEMA floodway and fully within the FEMA 100-year floodplain.
Width ROW / Private Lands	Private lands	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Unknown	**Distance to Creek / Tree Canopy**	Adjacent to creek, significant riparian vegetation.
Fencing / Guard Rails / Walls	Unkown	**Structures**	Unknown

Recommendations: Currently private property, incorporate trail improvements as part of future development project.



Old Redwood Hwy Entrance to Trail 65, Looking East



Trail 65 on Pleasant Ave, Looking South

Southeast Quadrant
66 East Faught Creek (Old Redwod Highway - Pool Creek)

Description / Existing Use: The East Faught Creek trail would connect to the proposed Jensen Trail, providing an eastside continuopuis connection to Foothill Regional Park, part of a Ring Trail.

Adjacent Streets / Intersections / Traffic: Old Redwood Highway, Pleasant Avenue.

Nearby Destinations: Downtown Windsor, Shiloh area shopping.

EXISTING CONDITIONS

Length (feet)	1,500	**Flooding / Hydrology/Geotech Issues**	Paritally within FEMA floodway and fully within the FEMA 100-year floodplain.
Width ROW / Private Lands	Private	**Longitudinal/Cross Slope**	Less than 2%.
Encroachment (Type, Location)	Unknown	**Distance to Creek / Tree Canopy**	Adjacent to creek, significant riparian vegetation.
Fencing / Guard Rails / Walls	Unkown	**Structures**	Unknown

Recommendations: Currently private property, incorporate trail improvements as part of future development project.



Entrance to Trail 66 from Old Redwood Hwy, Looking North

Southeast Quadrant
67 Old Redwood Highway Greenway

Description / Existing Use: The Old Redwood Greenway, identified in the Windsor SDAT Report (2008, AIA), would provide separate Class I faciliites on Old Redwood Highway as it transitions from the urban Downtown core to more rural residential area. The separated bicycle and pedestrian facilities would be created along undeveloped parcels as they become urbanized, and/or would be created from widened shoulders or excess right of way along ORH. Two pedestrian bridges are needed to cross Pool and Faught Creeks.

Adjacent Streets / Intersections / Traffic: Old Redwood Highway from Pleasant Avenue south to Town of Windsor Sphere of Influence limits.

Nearby Destinations: Downtown Windsor, Shiloh area shopping, neighbohood trail connections.

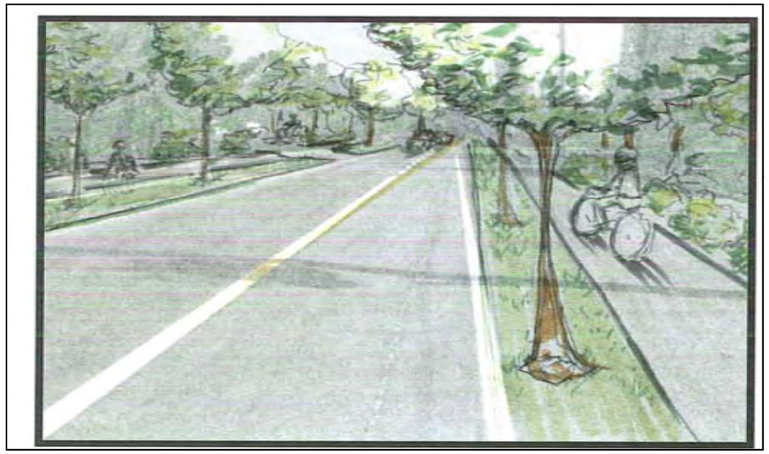
EXISTING CONDITIONS

Length (feet)	9,000	**Flooding / Hydrology/Geotech Issues**	Bridges over the two creeks will need to be outside floodway; no geotechnical issues identified
Width ROW / Private Lands	Combination of private lands and ORH	**Longitudinal/Cross Slope**	2%-5%
Encroachment (Type, Location)	Varies	**Distance to Creek / Tree Canopy**	Bridges needed across creeks; riparian trees may be affected.
Fencing / Guard Rails / Walls	Limited pedestrian/bicycle availablity at creek bridges, need separate	**Structures**	Limited encroachment along highway

Recommendations: Reserve right of way for future Class I facilities as each parcel is developed. Consider transitions to Class II where street improvements were recently completed. Provide trail connection to planned trails within Shiloh Vision Plan area.



Potential Greenway along Old Redwood Hwy, Looking North



Greenway Concept from Design Assessment Team

APPENDIX C: SMART TRAIL ISSUES AND OPPORTUNITIES

QUESTA ENGINEERING CORP.

-MEMORANDUM-

July 24, 2018

To: Mona Ibrahim, Engineer II

From: Margaret Henderson

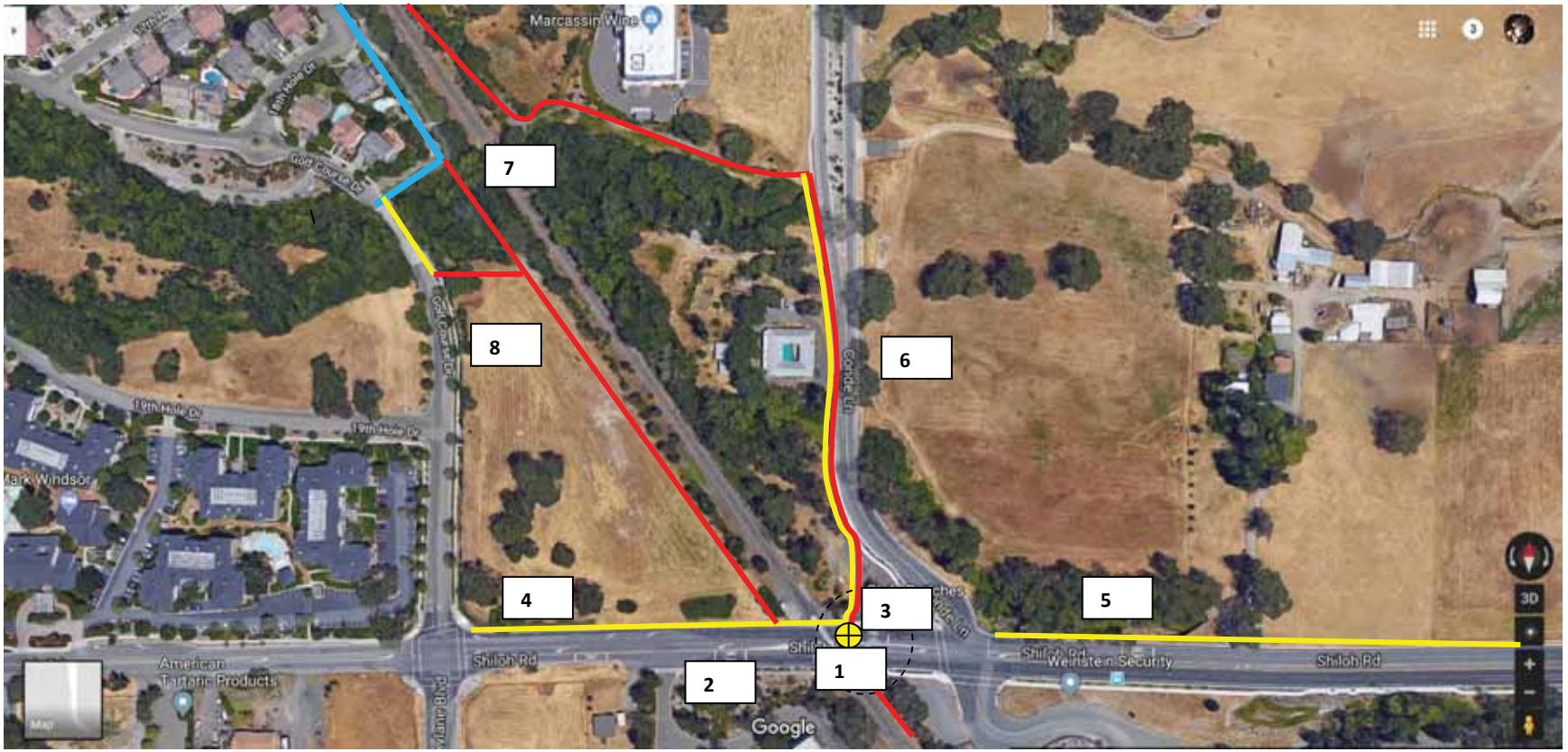
Subject: **SMART Path Alignment, Windsor, June 18, 2018 Meeting with SMART**

Attached is a review of the issues and alignments discussed at the June 18 meeting with SMART. This memo includes options that utilize Town right of way for portions of the trail, which should be explored further to determine the best alignment. Questa will incorporate your recommended revisions into the trails study, or limit/generalize what is shown and indicate that it will be determined when the SMART rail/trail is implemented.

Here are some of the issues and opportunities to consider (**Figures 1-16**):

- At Shiloh Road, consider a potential pedestrian refuge and reconfiguration of the Conde crosswalk east of the tracks. Consider future sidewalk on north side, west to Golf Course Drive.
- The Town owns the creek and maintenance access road parcel east of SMART at Pool Creek, as well as a strip parallel to the tracks on the west side. If the trail is on the west side, this would require a separate bike/ped bridge next to Golf Course Drive, or routing the trail to cross the creek at the existing sidewalk, but it could then connect with the existing path.
- North of Mitchell, there is potential to improve the path on west side of soccer fields instead of a separate parallel SMART path.
- Portions of W/S Bell Road don't have sidewalk. Is there an opportunity to eliminate parking on the west side for a trail, which would facilitate SMART? The existing bridge at E. Windsor Creek is a problem for sidewalk, expansion, and may need separate cantilevered structure or bridge to complete the trail.
- Consider increasing the length/alignment of Bell Road extension bridge and SMART rail bridge so as to provide for future seasonal undercrossing of each structure.
- Consider potential connections to Windsor Road, with associated grade separated bike/ped crossing at one of these locations:
    - Town lands
    - Private lands (acquisition)
    - Duncan Drive
    - Bell Road/Trione Circle
- Consider east-west connector through (Mill Creek) development to connect potential Duncan undercrossing with bike/ped bridge to serve Windsor Creek Elementary School.
- Discuss whether the potential cost savings using Town facilities, can be re-allocated to other bike-ped facilities (undercrossing, Windsor River Road improvements).

Please let me know if you would like to have a conference call to discuss.



1. Provide ped crossing on E/S SMART tracks
2. Consider pedestrian refuge in portion of left turn lane
3. Consider eliminating pork chop intersection crossing, re-route to ped crossing
4. Extend sidewalk to Golf Course Drive
5. Consider extending SW east of Conde Lane
6. Wide Conde SW as needed for path
7. Connect to SMART path via Town-owned maintenance road, connect to Conde SW
8. Town also owns strip parallel to tracks on west side, could connect to existing trail via Golf Course Drive.

FIGURE 1: SHILOH ROAD TO 18TH HOLE DRIVE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



9. Consider pedestrian refuge in portion of left turn lane
10. Consider eliminating pork chop intersection crossing, re-route to ped crossing

FIGURE 2: SHILOH ROAD AT CONDE LANE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS



11. Path on east side of tracks, connect to Town maintenance road
12. Alternate, use Town trail on west side

FIGURE 3: 18TH HOLE DRIVE TO 12TH HOLE DRIVE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

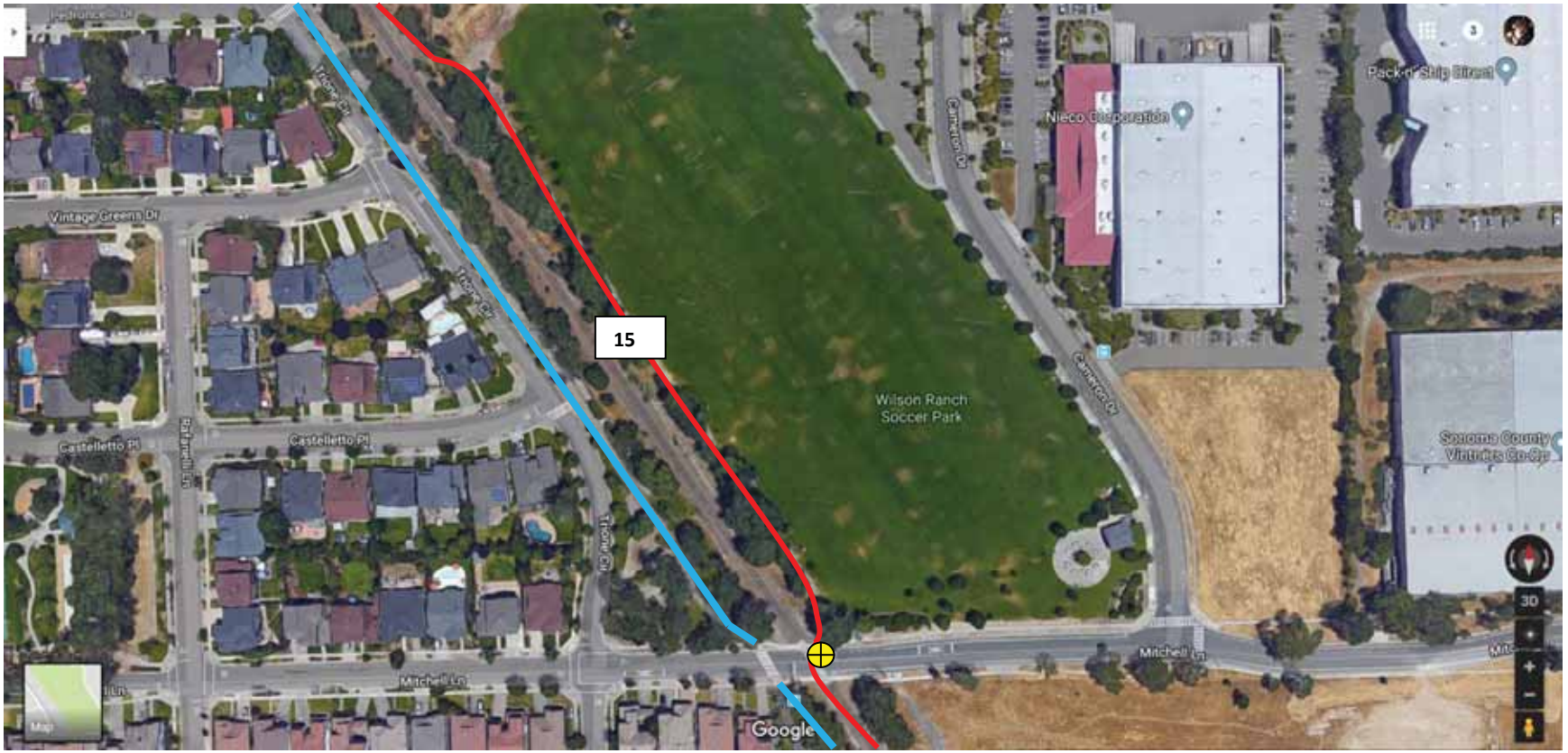
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13. Consider shifting path east of ROW to avoid trees (private lands)
14. New ped crossing at Mitchell

FIGURE 4: 12TH HOLE DRIVE TO MITCHELL LANE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

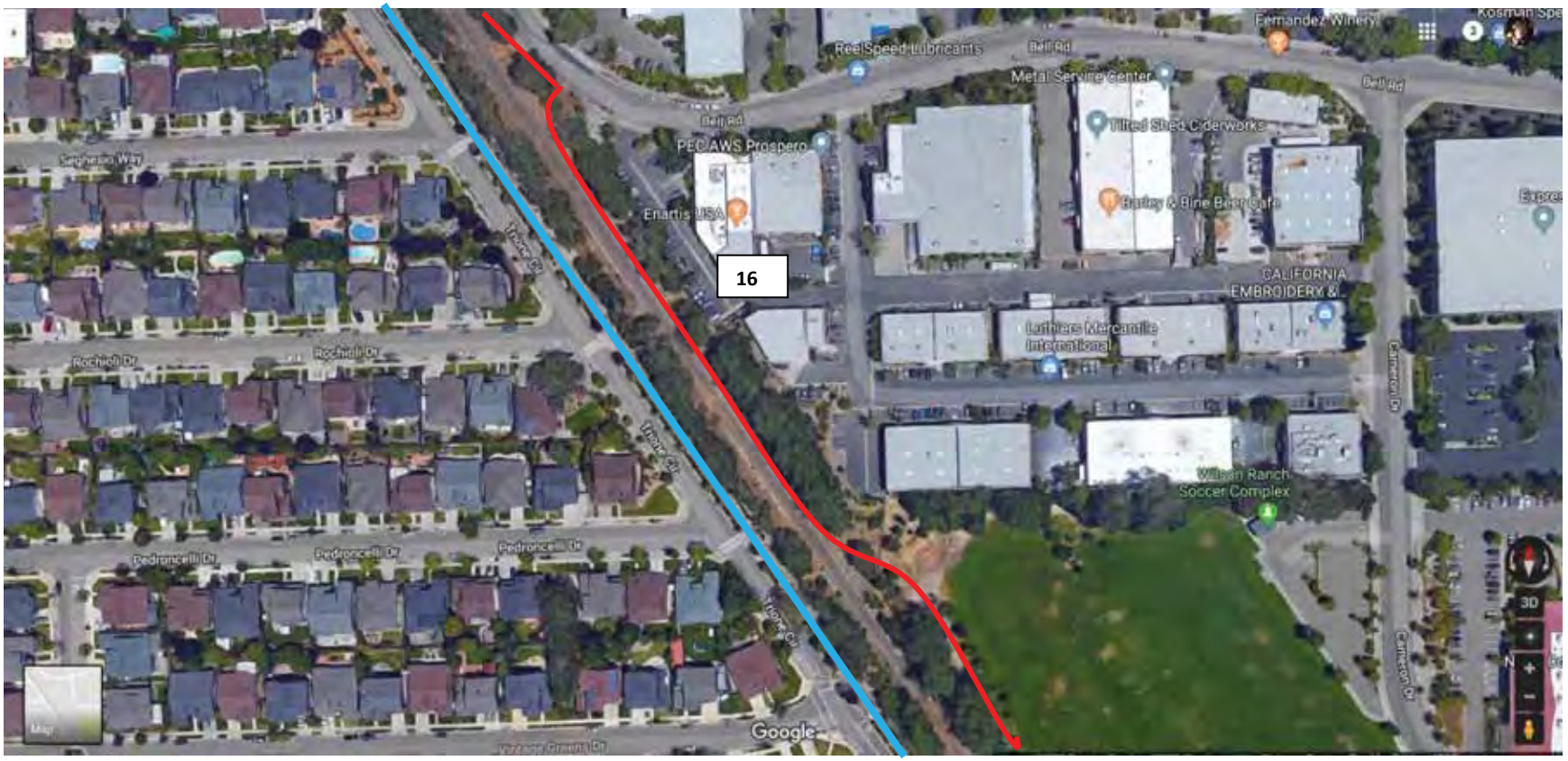
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15. Improve path on west side of soccer field for SMART path

FIGURE 5: WILSON RANCH PARK	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
2	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



16. Consider shifting path eastward to avoid trees, facilitate access to industrial park

FIGURE 6: WILSON RANCH PARK TO BELL ROAD	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
16	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS



17. Provide widened sidewalk/path along west side of Bell Road
18. Consider re-allocating street pavement (eliminate parking lane) for new sidewalk to avoid trees
19. Potential Class IV segment along Bell Road
20. Consider undercrossing to connect Bell Road with West side, alternate to go around WWTP

FIGURE 7: BELL ROAD	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



21. Sidewalk or separate pedestrian facilities needed on west side of Bell Road at Windsor Creek Bridge
22. Potential Class IV segment?

FIGURE 8: BELL ROAD AT WINDSOR CREEK	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

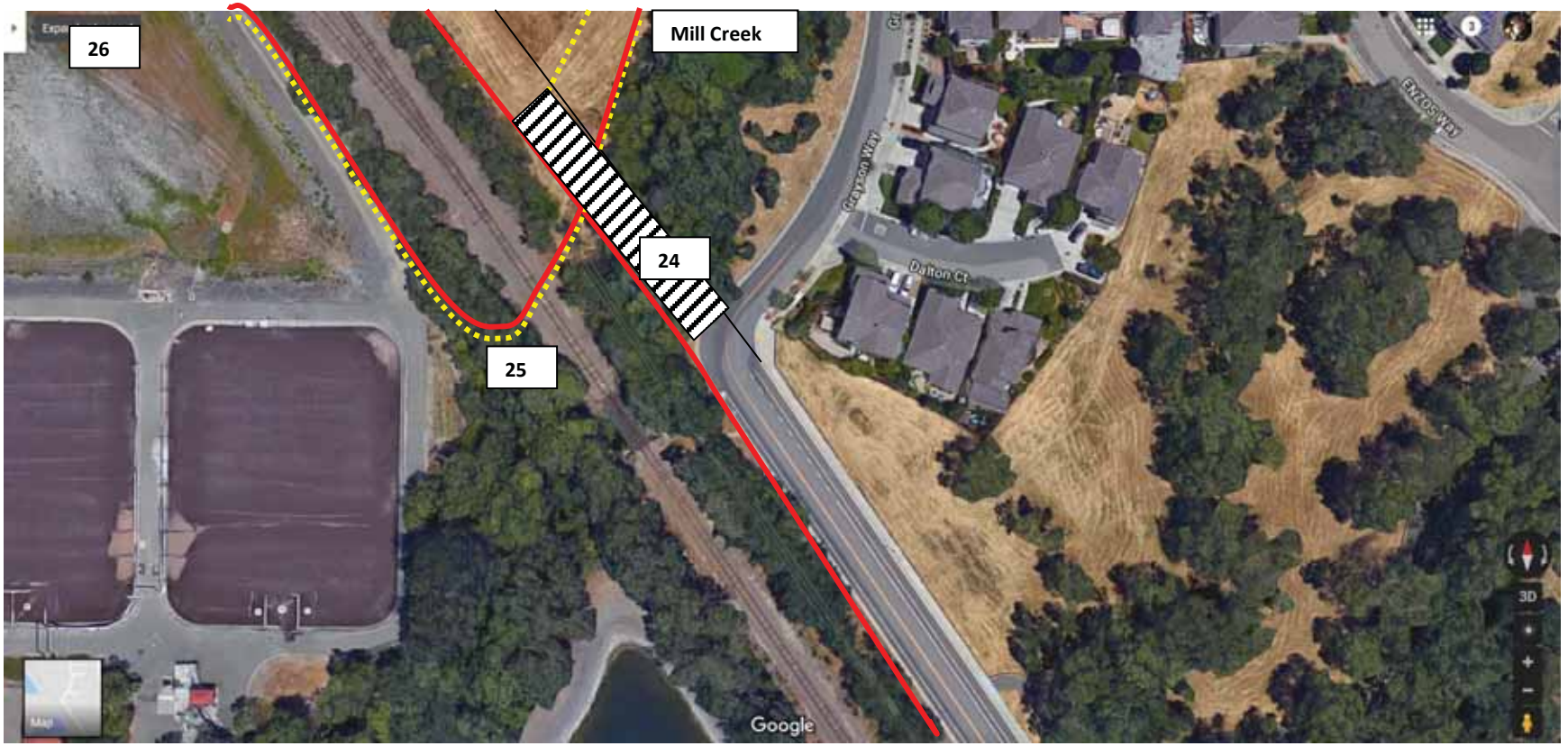
QUESTA ENGINEERING CORP.



23. Bike /ped facilities needed on west side of Bell Road at Windsor Creek Bridge

FIGURE 9: WINDSOR CREEK BRIDGE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



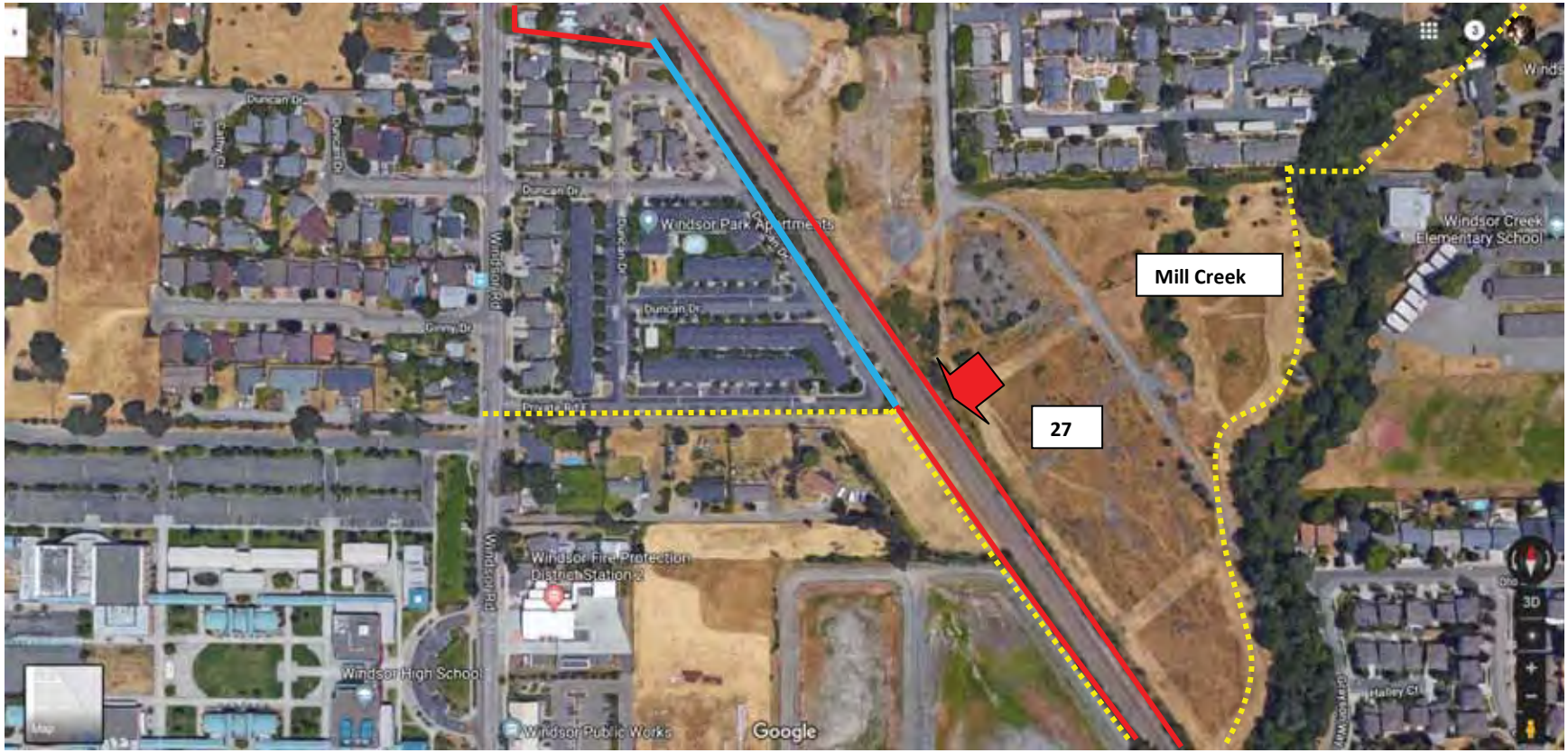
24. Bell Road extension to include trail crossing (Potential Class IV)?

25. Dashed lines show potential long-term considerations for seasonal creekside trail (lengthen rail bridge)

26. Dashed lines show potential long-term considerations for connection to Windsor Road

FIGURE 10: MILL CREEK AT BELL ROAD EXTENSION	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



27. Alternate potential crossing, cut and cover culvert with ramp (acquire vacant parcel west of tracks?)

FIGURE 11: WINDSOR CREEK TO DUNCAN DRIVE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
2	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS



28. Station platform south of Windsor River Road
29. Is there a potential undercrossing?
30. Alignment shifts to west side at Windsor River Road

FIGURE 12: DUNCAN DRIVE TO WINDSOR RIVER ROAD	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



31. Alignment on west side
32. Is there a potential undercrossing?
33. Neighborhood connection along creek

FIGURE 13: WINDSOR RIVER ROAD TO PARK GLEN DRIVE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



34. Connector to Cali Calimecac School, and future facilities along Starr View Road; encroachment issues on public lands

FIGURE 14: PARK GLEN DRIVE TO COLLEEN DRIVE	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



35. Future bike/ped facilities along Starr View, and future Gumview N/S Class I trail
36. Crossing enhancements needed at Starr View/SMART intersection

FIGURE 15: COLLEEN DRIVE TO STARR ROAD	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
?	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

QUESTA ENGINEERING CORP.



37. Potential undercrossing location to connect future development/trail facilities near Herb Road with Arata Lane/ORH

FIGURE 16: STARR ROAD TO TOWN LIMITS	
LEGEND:	
	EXISTING TRAIL
	POTENTIAL SMART TRAIL ALIGNMENT
	TRAIL STUDY SEGMENTS (CONNECT TO SMART TRAIL)
	NEW OR WIDENED SIDEWALK
	OPPORTUNITY/CONSTRAINT
	POTENTIAL UNDERCROSSING
	INTERSECTION IMPROVEMENTS

APPENDIX D: FUNDING STRATEGIES

TRAIL FUNDING STRATEGIES

The transportation funding opportunities listed below are active, unless otherwise noted, and are accepting applications through 2018. The following section presents a general description of funding programs that can be used to implement the projects contained in this study.

FEDERAL PROGRAMS

Moving Ahead for Progress in the 21st Century Act (MAP-21) [1]

In July 2012, P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law, funding surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014. MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 provides needed funds, and it transformed policy and the programmatic framework that guides the growth and development of the country's transportation infrastructure. MAP-21 creates a streamlined, performance-based, and multimodal program to address the challenges facing the nation's transportation system. These challenges include improving safety, maintaining infrastructure, reducing traffic congestion, improving efficiency, protecting the environment, and reducing delays in project delivery. MAP-21 builds on and refines many of the highway, transit, bike, and pedestrian programs and policies established in the 1990's.

MAP-21 replaced SAFETEA-LU with a similar amount of total funding, but significantly changed the overall number and scope of programs. For example, the number of programs has been consolidated by two-thirds. The Transportation Enhancements (TE) program has been eliminated and replaced with the Transportation Alternatives Program (TAP). The new TAP encompasses most of the previous bike, trail, pedestrian, and school safety funding mechanisms from SAFETEA-LU. Under MAP-21, states allocate 50 percent of their TAP funds to larger MPOs to run grant programs and administer funds for local projects. States can use the remaining 50 percent for TAP projects or can spend these funds on other transportation priorities. Some of the SCTA planning area does not have an urbanized area population of 200,000 or more; if so, it does not receive direct TAP sub-allocation.
Web Link: https://www.fhwa.dot.gov/map21/

Transportation Alternatives Program [2]

The Transportation Alternatives Program (TAP) authorized under Section 1122 of MAP-21 provides funding through Caltrans for programs and projects in California defined as transportation alternatives, including on- road and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.
Under TAP, Caltrans, Metropolitan Planning Organizations (MPOs), and nonprofits are not eligible as direct grant recipients of the funds. Caltrans, MPOs, and nonprofits are eligible to partner with any

[1] Currently Active Program
[2] Not Active At This Time

eligible entity on an eligible TAP project, which has now been incorporated into the Statewide ATP Program.
Web Link: http://www.dot.ca.gov/hq/transprog/map21.htm

National Recreational Trails Program [3]

The Recreational Trails Program (RTP) provides funds for recreational trails and trails-related projects. The RTP is administered at the federal level by the Federal Highway Administration (FHWA). It is administered at the state level by the California Department of Parks and Recreation (DPR). Non-motorized projects are administered by the Department's Office of Grants and Local Services (OGLS). Motorized projects are administered by the Department's Off-Highway Motor Vehicle Recreation Division. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized uses, as well as motorized uses, such as off-road vehicle (ORV) trails.

RTP funds may be used for:

- Maintenance and restoration of existing trails;
- Development and rehabilitation of trailside and trailhead facilities and trail linkages;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails (with restrictions for new trails on federal lands);
- Acquisition of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

Eligible applicants include cities and counties, parks districts, state agencies, Federal agencies, and non-profit organizations with management responsibilities of public lands. There is no maximum or minimum limit on grant request amounts. The maximum amount of RTP funds allowed for each project is 88% of the total project cost. The applicant is responsible for obtaining a match amount that is at least 12% of the total project cost. Eligible match sources include: State funds, including State Grant funds; Local funds, including general funds and bond funds; Private funds; Donated materials and services; Value of donated land (for Acquisition projects only); and other federal funds.

The RTP non-motorized funding program will provide approximately $1.47 million per year. The current federal RTP funding source, MAP-21, was set to expire on September 30, 2014, but continued utilizing short-term extensions. The RTP Program has subsequently been integrated into the ATP.
Web Link: http://www.parks.ca.gov/?page_id=24324

Highway Safety Improvement Program [4]

The Highway Safety Improvement Program (HSIP), which is administered by Caltrans, remains as one of the core federal-aid programs. HSIP funds are intended to help achieve a significant reduction in traffic fatalities and serious injuries on public roads. The Federal Program requires states to develop and implement a Strategic Highway Safety Plan (SHSP) that identifies improvement strategies to address

[3] Currently Active Program
[4] Currently Active Program

traffic safety. Funds can be used for safety improvement projects on any public road or publicly owned bicycle or pedestrian pathway or trail.

A safety improvement project corrects or improves a hazardous roadway condition, or proactively addresses highway safety problems that may include: intersection improvements; installation of rumble strips and other warning devices; elimination of roadside obstacles; railway-highway grade crossing safety; pedestrian or bicycle safety; traffic calming; improving highway signage and pavement marking; installing traffic control devices at high crash locations or priority control systems for emergency vehicles at signalized intersections, safety conscious planning and improving crash data collection and analysis, etc.

Caltrans sets aside funds for construction and operational improvements on high-risk rural roads and may use the remainder of funds for bicycle and pedestrian pathways or trails and education and enforcement. Caltrans' call for projects and application deadlines vary from year to year. HSIP funds could potentially be used to improve key intersections. It should be noted that some HSIP funds are incorporated into the State ATP Program.
Web Link: http://www.dot.ca.gov/hq/LocalPrograms/hsip.html

Transportation Investment Generating Economic Recovery (TIGER) [5]

Initiated by the American Recovery and Reinvestment Act (ARRA) in 2009, and continued by Congress since then, the highly-competitive Transportation Investment Generating Economic Recovery (TIGER) program is not formula-based, as are many other federal funding sources.

Project sponsors apply directly to USDOT to fund major capital improvements, and the applications are evaluated using criteria relating to benefit-cost ratio, economic development, sustainability, and other performance measures. TIGER is mode-neutral: the most competitive applications for highway, transit, bicycle and pedestrian, or port improvements are funded. Several bike-ped focused applications have been awarded (including both planning and design/construction phases). Typically, TIGER calls-for-projects have both a high minimum grant amount and matching requirements that render smaller projects ineligible or financially infeasible. However, they also have made exceptions to those thresholds for projects in rural areas.

Land and Water Conservation Fund [6]

The Land and Water Conservation Fund (LWCF) program provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. LWCF is administered by the National Parks Service and the California Department of Parks and Recreation and has been reauthorized. Cities, counties, tribes, and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply.

Applicants must fund the entire project and will be reimbursed for fifty percent of costs. $2,000,000.00 is the maximum request amount for any individual project. Eligible project must meet two specific criteria. The first is that projects acquired or developed under the program must be primarily for

[5] Currently Active Program
[6] Currently Active Program

recreational use and not transportation purposes, and the second is that the lead agency must guarantee to maintain the facility in perpetuity for public recreation.

Applications are considered using criteria such as priority status within the State Comprehensive Outdoor Recreation Plan (SCORP). The State Department of Park and Recreation will select which projects to submit to the National Park Service (NPS) for approval. Final approval is based on the amount of funds available that year, which is determined by a population-based formula, with a 40/60 split for northern and southern California respectively.
Web Link: http://www.parks.ca.gov/?page_id=21360

Rivers, Trails and Conservation Assistance Program[7]

The National Park Service Rivers, Trails, and Conservation Assistance (RTCA) program supports community-led natural resource conservation and outdoor recreation projects across the nation. This program provides technical assistance via direct staff involvement to establish and restore greenways, rivers, trails, watersheds, and open space areas. The RTCA program provides planning assistance only. Projects are prioritized for assistance based upon criteria that include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting accomplishments. Federal agencies may be the lead partner only in collaboration with a non-federal partner.
Web Link: http://www.nps.gov/orgs/rtca/index.htm

STATE FUNDING PROGRAMS

Caltrans [8]

Funding for new projects for non-motorized transportation facilities along a State highway or within its right-of-way generally falls into one of the following categories:

- Replacement of an existing major route for non-motorized traffic that is being severed or destroyed by freeway construction (S&H Code -- Section 888)
- Provision of a non-motorized facility along a new freeway corridor where non-motorized facilities do not exist (S&H Code -- Section 888.2)
- Provision of a non-motorized facility along a State highway under a Cooperative Agreement at the request of a local agency (S&H Code -- Section 887.6)
- Provision of a non-motorized facility along a State highway based upon a finding that the traffic safety or capacity of the highway will be increased (S&H Code -- Section 887.8). The finding is made in consultation with appropriate law enforcement agencies.
- Part 3 – Specific Project Development Procedures (31-4 07/01/1999L Project Development Procedures Manual).

[7] Currently Active Program
[8] Currently Active Program

Senate Bill 1: The Road Repair and Accountability Act of 2017

SB1, adopted in July 2017, is a funding program to provide funding for transportation infrastructure, expand existing programs, and created new transportation funding programs for implementation that is funded by a gas tax. Although other funds have been allocated to bicycle and pedestrian projects in Sonoma County, there are no current projects in Windsor.

Active Transportation Program[9]

In September 2013, the California legislature created the Active Transportation Program (ATP) to be administered by the California Department of Transportation (Caltrans). The ATP consolidates existing federal and state transportation programs, including the **Transportation Alternatives Program (TAP)**, **Bicycle Transportation Account (BTA)**, and **State Safe Routes to School (SR2S)**, into a single program with a focus to make California a national leader in active transportation. The ATP is administered by the Division of Local Assistance, Office of Active Transportation and Special Programs. The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

Increase the proportion of trips accomplished by biking and walking,
Increase safety and mobility for non-motorized users,
Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
Enhance public health,
Ensure that disadvantaged communities fully share in the benefits of the program, and
Provide a broad spectrum of projects to benefit many types of active transportation users.

Web Link: http://www.dot.ca.gov/hq/LocalPrograms/atp/

Statewide Transportation Improvement Program[10]

The Statewide Transportation Improvement Program (STIP) is a list of major transportation projects to be funded across the state over the next five years. The STIP is updated biennially by the CTC. MPOs adopt Regional Transportation Improvement Programs (RTIPs), which are then incorporated as subsets of the STIP. The Interregional Transportation Improvement Program (ITIP), which includes improvements to long-distance highway and rail corridors, is also a subset. While STIP refers to a document, it also is commonly used to refer to a funding source (also known as Regional Improvement Program funding) mostly devoted to major highway capacity expansion projects. To the extent that future STIP funds are available, they could be used to fund trail improvement projects.

State Highway Operations Protection Program[11]

The State Highway Operations Protection Program (SHOPP) is a multi-year program of capital projects whose purpose is to preserve and protect the State Highway System. Funding is comprised of state and

[9] Currently Active Program
[10] Currently Active Program
[11] Currently Active Program

federal gas taxes. SHOPP funds capital improvements relative to maintenance, safety, and rehabilitation of state highways and bridges that do not add a new traffic lane to the system. Just over $1 billion is allocated to SHOPP annually. Funding is based on need, so there are no set distributions by county or Caltrans district. There are no matching requirements for this program. Projects include rehabilitation, landscaping, traffic management systems, rest areas, auxiliary lanes, and safety. Caltrans Projects are "applied" for by each Caltrans District. Each project must have a completed Project Study Report (PSR) to be considered for funding. Projects are developed in fall every odd numbered year. Caltrans emphasizes that consideration should be given for each SHOPP project to also accomplish associated bicycle-pedestrian facilities.

Web Link: http://www.dot.ca.gov/hq/transprog/shopp.htm

Caltrans Sustainable Communities Planning Grants[12]

Caltrans Sustainable Communities Planning Grants are intended to promote strong and healthy communities, economic growth, and protection of our environment. These planning grants (divided into two subcategories: Strategic Partnerships and Sustainable Communities) support closer placement of jobs and housing, efficient movement of goods, community involvement in planning, safe and convenient pedestrian and bicycle mobility and access, smart or strategic land use, and commute alternatives. This program should be further explored as a potential source of funding for preparation of special focus plans that include trail segments, plans which could build on the information in this study. However, environmental documentation and preliminary engineering are not eligible for these grants.
Web Link: http://www.dot.ca.gov/hq/tpp/grants.html

Office of Traffic Safety[13]

The California Office of Traffic Safety (OTS) has the mission to obtain and effectively administer traffic safety grant funds to reduce deaths, injuries and economic losses resulting from traffic related collisions in California. OTS distributes federal funding apportioned to California under the National Highway Safety Act and MAP-21. Grants are used to mitigate traffic safety program deficiencies, expand ongoing activity, or develop a new program. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction.

OTS grants address several traffic safety priority areas including Pedestrian and Bicycle Safety. Eligible activities include programs to increase safety awareness and skills among pedestrians and bicyclists. Concepts may encompass activities such as safety programs, education, enforcement, traffic safety and bicycle rodeos, safety helmet distribution, and court diversion programs for safety helmet violators.
Web Link: http://www.ots.ca.gov/

Environmental Enhancement and Mitigation Program[14]

Environmental Enhancement and Mitigation Program (EEMP) funds are allocated to projects that offset environmental impacts of modified or new public transportation facilities including streets, mass transit guideways, park-n-ride facilities, transit stations, tree planting to equalize the effects of vehicular emissions, and the acquisition or development of roadside recreational facilities, such as trails. State

[12] Currently Active Program
[13] Currently Active Program
[14] Currently Active Program

gasoline tax monies fund the EEMP. The EEMP program represents an opportunity to fund improvements as mitigation to highway work, as well as other highway facilities in Sonoma County.
Web Link: http://resources.ca.gov/eem/

California State Coastal Conservancy[15]

The California State Coastal Conservancy manages several programs that provide grant funds for trails, access, and habitat restoration projects. The funding cycle for these programs is open and on-going throughout the year. Funds are available to local government as well as non-profits. The Conservancy may be a funding source for bicycle facilities that improve access to Sonoma County's beaches, rivers, and creeks.
Web Link: http://scc.ca.gov/category/grants/

Habitat Conservation Fund[16]

The Habitat Conservation Fund (HCF) provides $2 million dollars annually in grants for the conservation of habitat including wildlife corridors and urban trails statewide. Eligible activities include property acquisition, design, and construction. The HCF is 50% dollar for dollar matching program. California Environmental Quality Act (CEQA) compliance is required. Urban projects should demonstrate how the project would increase the public's awareness and use of park, recreation, or wildlife areas.
Web Link: http://www.parks.ca.gov/?page_id=21361

WILDLIFE AND HABITAT RESTORATION FUNDING OPPORTUNITIES

Wildlife Conservation Board Public Access Program[17]

This program funds land acquisitions that preserves wildlife habitat or provides recreational access for hunting, fishing or other wildlife-oriented activities. Up to $250,000 is available per project with applications accepted quarterly. Eligible projects include interpretive trails, river access and trailhead parking areas. The state must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases.
Web Link: https://www.wcb.ca.gov/FundingSources.aspx

State River Parkways Program[18]

This goal of this program is to provide recreational, wildlife, flood management, water quality and urban waterfront revitalization benefits to communities along river corridors. Trail-related projects are a strong component of the program, by achieving recreation, interpretation and potentially conversion of abandoned industrial lands goals. Public access is a fundamental requirement of the program.
Web Link: http://resources.ca.gov/bonds_prop50riverparkway.html

STATE WATER RESOURCES CONTROL BOARD GRANTS

[15] Currently Active Program
[16] Currently Active Program
[17] Currently Active Program
[18] Not an Active Program

Federal CWA 319(h) Program[19]

This program is an annual federally funded nonpoint source pollution control program that is focused on controlling activities that impair beneficial uses and on limiting pollutant effects caused by those activities. States must establish priority rankings for waters on lists of impaired waters and develop action plans, known as Total Maximum Daily Loads (TMDLs), to improve water quality. Project proposals that address TMDL implementation and those that address problems in impaired waters are favored in the selection process. There is also a focus on implementing management activities that lead to reduction and/or prevention of pollutants that threaten or impair surface and ground waters.
Web Link: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/319h/

The California Fish Passage Forum[20]

The California Fish Passage Forum funds project proposals for fish passage projects in California that advance the Forum's mission to protect and revitalize anadromous fish populations by restoring connectivity of freshwater habitats throughout their historic range. The program funds projects at various levels depending upon need and annual revenues. This and other sources of fish passage funding could potentially be used to mitigate for trail project impacts crossing streams with steelhead.
Web Link: http://www.cafishpassageforum.org/index.cfm?content.display&pageID=112

CALIFORNIA STRATEGIC GROWTH COUNCIL[21]

Affordable Housing and Sustainable Communities (AHSC)

The Strategic Growth Council's Affordable Housing and Sustainable Communities Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduces greenhouse gas ("GHG") emissions. These projects facilitate the reduction of the emissions of GHGs by improving mobility options and increasing infill development, which decrease vehicle miles traveled and associated greenhouse gas and other emissions, and by reducing land conversion, which would result in emissions of greenhouse gases.

Projects are also to support related and coordinated public policy objectives, including:

- Reducing air pollution
- Improving conditions in disadvantaged communities
- Supporting or improving public health
- Improving connectivity and accessibility to jobs, housing and services
- Increasing options for mobility, including active transportation

Protecting agricultural lands to support infill development
Web Link: https://www.sgc.ca.gov/s_ahscprogram.php

REGIONAL FUNDING PROGRAMS

[19] Currently Active Program
[20] Currently Active Program
[21] Currently Active Program

TDA Article 3 [22]

Transportation Development Act (TDA) Article 3 funds are generated from State gasoline sales taxes and are returned to the source counties from which they originate to fund transportation projects. Article 3 funds provide a 2 percent set aside of the County TDA funds for bicycle and pedestrian projects. Eligible projects include right-of-way acquisition; planning, design and engineering; support programs; and construction of bicycle and pedestrian infrastructure, including retrofitting to meet ADA requirements, and related facilities. Each year the Sonoma County Board of Supervisors approves a Program of Projects for the County and requests allocation from the Metropolitan Transportation Commission (MTC).
Web Link: http://www.mtc.ca.gov/funding/

One Bay Area Grant Program[23]

The five-year, $327 million OneBayArea Grant (OBAG) Program is a funding approach administered by MTC that integrates the region's federal transportation program with California's climate law (Senate Bill 375, Steinberg, 2008) and the Sustainable Communities Strategy. Funding is targeted toward achieving local land-use and housing policies by:

- Rewarding jurisdictions that accept housing allocations through the Regional Housing Need Allocation (RHNA) process.
- Supporting the Sustainable Communities Strategy for the Bay Area by promoting transportation investments in Priority Development Areas (PDAs)
- Initiating a pilot program that will support open space preservation in Priority Conservation Areas (PCA).
- The OBAG program allows flexibility to invest in transportation categories such as Transportation for Livable Communities, bicycle and pedestrian improvements, local streets and roads preservation, and planning activities, while also providing specific funding opportunities for Safe Routes to School (SR2S) and Priority Conservation Areas.

Web link: http://www.mtc.ca.gov/funding/onebayarea/

LOCAL FUNDING PROGRAMS

Direct Local Jurisdiction Funding

Local jurisdictions can fund bicycle and pedestrian projects using a variety of sources. Town general funds are often earmarked for non-motorized transportation projects, especially sidewalk and ADA improvements.

Future road widening and construction projects are one means of providing bike lanes and sidewalks. To ensure that roadway construction projects provide these facilities where needed, appropriate, and feasible, it is important that an effective review process is in place so that new roads meet the standards and guidelines presented in this Study.

[22] Currently Active Program
[23] Currently Active Program

Sonoma County Transportation Authority / Measure M[24]

The Sonoma County Transportation Authority / Regional Climate Protection Authority (SCTA/RCPA) is the countywide planning and programming agency for transportation and coordinates climate protection activities countywide.

The SCTA, was formed as a result of legislation is the coordinating and advocacy agency for transportation funding for Sonoma County, and administers Measure M funds generated within Sonoma County through a local sales tax for specific transportation projects in the County. The SCTA partners with other agencies to improve transportation in the County, including Highway 101, local streets, transit, bicycle and pedestrian facilities.

The Regional Climate Protection Authority, RCPA, was formed through legislation in 2009 to coordinate countywide climate protection efforts among Sonoma County's nine cities and multiple county agencies. The RCPA is engaged in securing grant funding for a variety of GHG reducing efforts including energy efficiency, building retrofit and alternative transportation programs. Data collection, public information and education are significant elements of the climate protection effort.

Web Link: http://www.sctainfo.org/

Impact Fees and Development Implementation

Where nexus exists, private or public development projects should plan, design, and construct bicycle and pedestrian facilities to integrate with the existing and planned bicycle and pedestrian network. This would also be appropriate for any projects that generate tourism or trip generation that could be served by complementary bicycle and pedestrian facilities, including winery events, hotels, restaurants, residential projects and others. This Study can serve as a guide for the provision of facilities, and individual projects should integrate these facilities into project development documents.

Another potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- and off-site pedestrian and bikeway improvements, which will encourage residents to walk and bicycle rather than drive. In-lieu parking fees may be used to help construct new or improved bicycle parking. A clear connection between the impact fee and the mitigation project must be established.

Special Taxing Districts

Special taxing districts, such as redevelopment districts, can be good instruments to finance new infrastructure – including shared use trails and sidewalks – within specified areas. New facilities are funded by assessments placed on those that are directly benefited by the improvements rather than the general public. In a "tax increment financing (TIF) district, taxes are collected on property value increases above the base year assessed property value. This money can then be utilized for capital improvements within the district. TIFs are especially beneficial in downtown redevelopment districts. These districts are established by a petition from landowners to a local government. The districts can operate independently from the local government and some are established for single purposes, such as roadway construction.

[24] Currently Active Program

Other

Local sales taxes, fees, and permits may be implemented, requiring a local election. Parking meter revenues may be used according to local ordinance. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corps, which offers low-cost assistance will be effective at reducing project costs, and is encouraged in the State ATP guidelines.

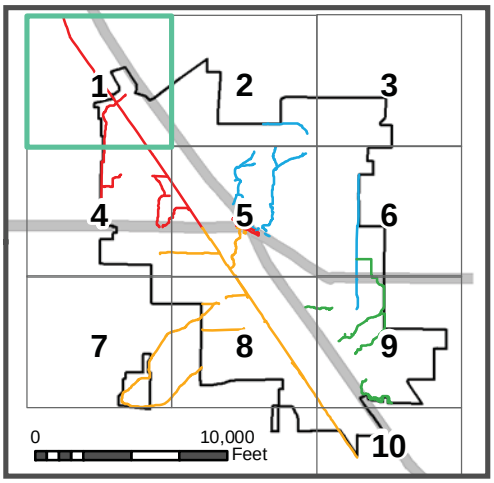
Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right-of-way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations "adopt" a bikeway and help construct and maintain the facility.

In addition, local non-profits or other groups can enter into public-private partnerships to purchase private lands to facilitate trail corridor implementation. In Sonoma County, partnerships have occurred between local nonprofit groups have partnered with conservation funding organizations such as the Sonoma Land Trust, Gordon and Betty Moore Foundation, Trust for Public Land, or others, and have resulted in the acquisition and management of trails and open space lands for use by the public.

APPENDIX E: RIGHT OF WAY MAPS

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





0 1,000 2,000 3,000 4,000 Feet

- PROPOSED CROSSINGS
- EXISTING TRAILS/ PARK TRAILS/ PRIVATE TRAILS
- PROPOSED TRAILS: NORTHWEST QUADRANT
- PROPOSED TRAILS: NORTHEAST QUADRANT
- PROPOSED TRAILS: SOUTHWEST QUADRANT
- PROPOSED TRAILS: SOUTHEAST QUADRANT
- PRIVATE PARCELS
- NON-TAXABLE PARCELS (CITIES)
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- NON-TAXABLE PARCELS (STATE OF CALIF)
- NON-TAXABLE PARCELS (FEDERAL)
- RIGHT OF WAY PARCELS

TOWN OF WINDSOR: RIGHT OF WAY

PROPOSED AND EXISTING BICYCLE AND PEDESTRIAN FACILITIES, SONOMA COUNTY, CA

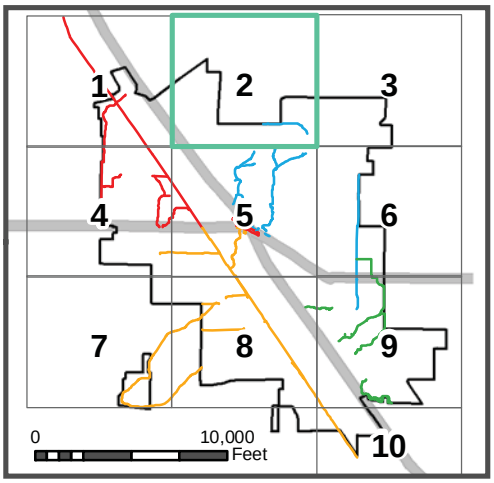
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 1

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





0 1,000 2,000 3,000 4,000 Feet

- PROPOSED CROSSINGS
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TOWN OF WINDSOR: RIGHT OF WAY

PROPOSED AND EXISTING BICYCLE AND PEDESTRIAN FACILITIES, SONOMA COUNTY, CA

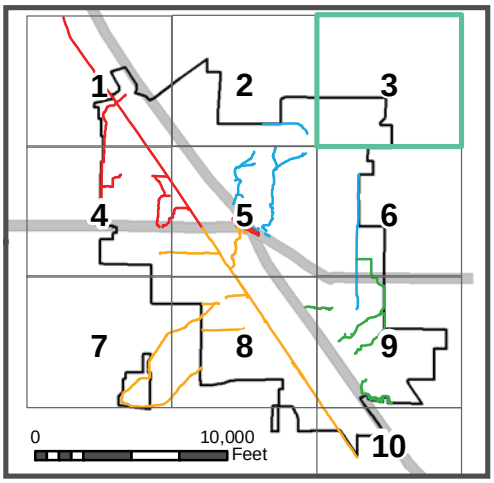
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 2

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
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TOWN OF WINDSOR: RIGHT OF WAY

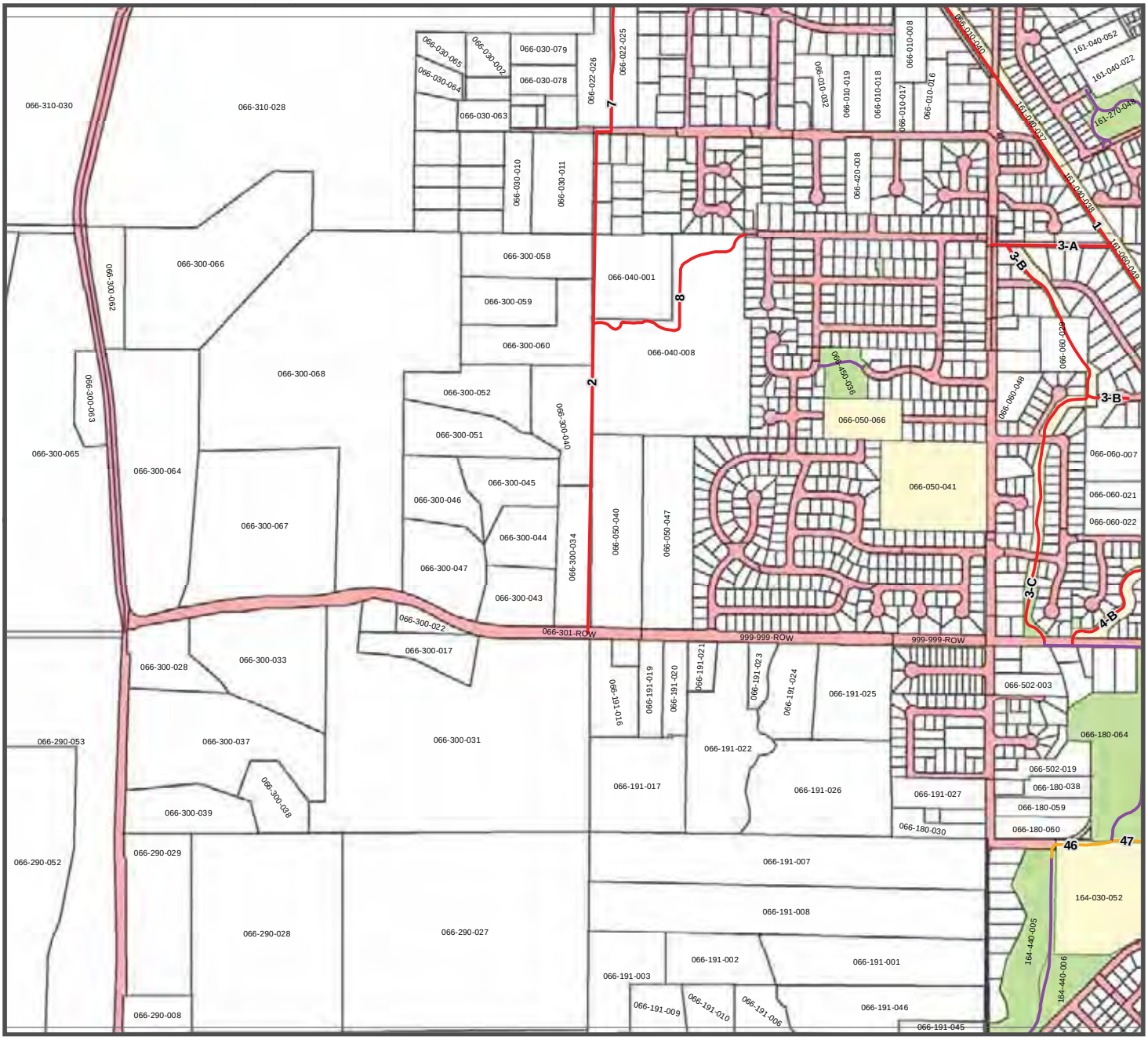
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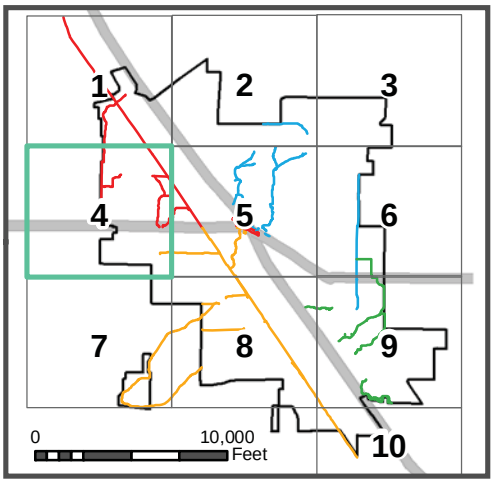
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 3

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
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TOWN OF WINDSOR: RIGHT OF WAY

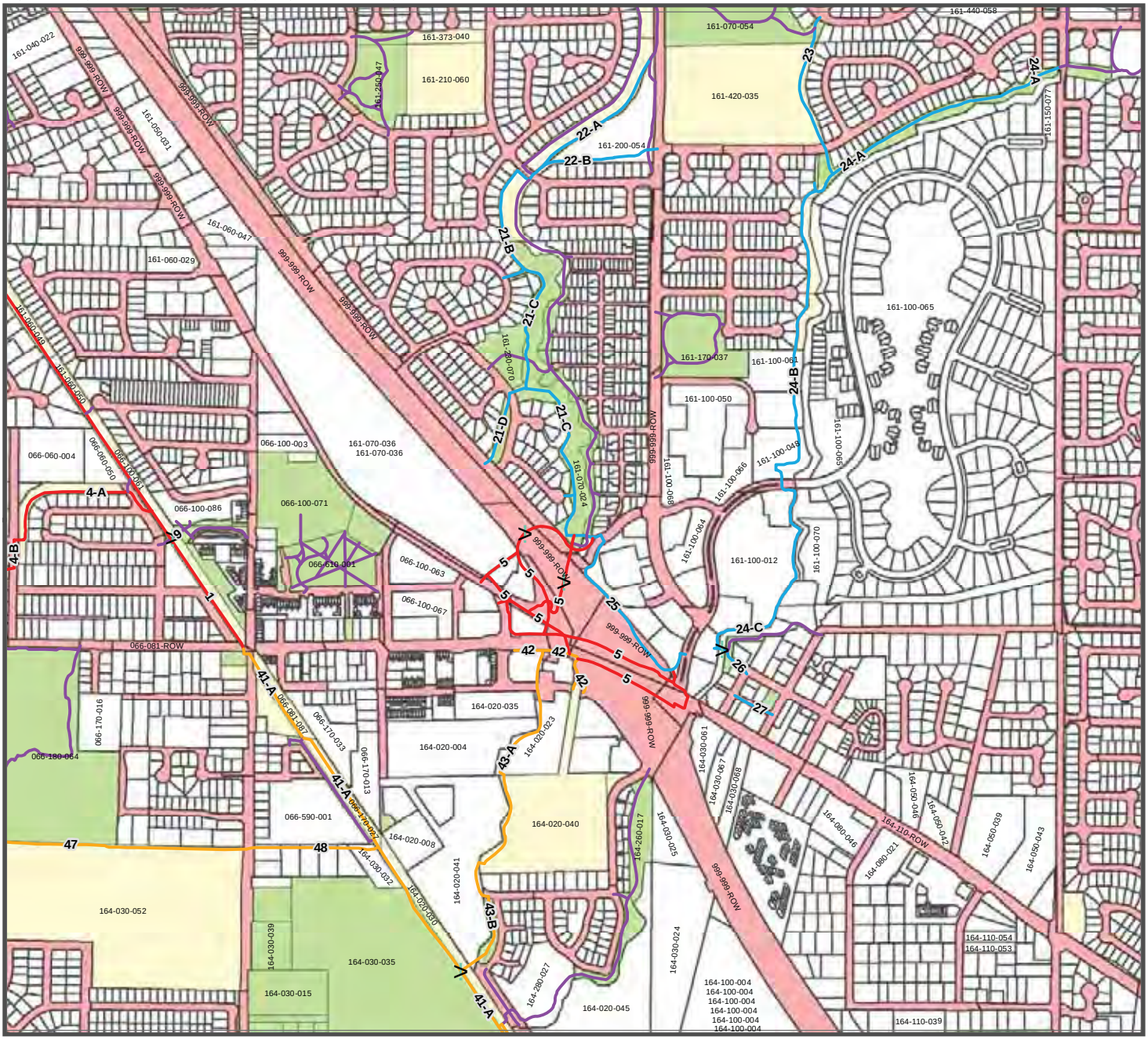
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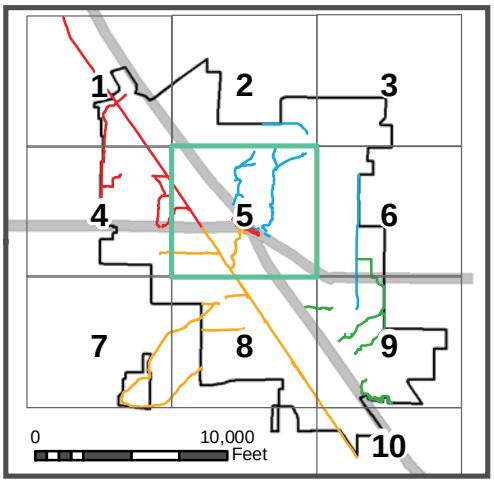
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 4

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
- EXISTING TRAILS/ PARK TRAILS/ PRIVATE TRAILS
- PROPOSED TRAILS: NORTHWEST QUADRANT
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TOWN OF WINDSOR: RIGHT OF WAY

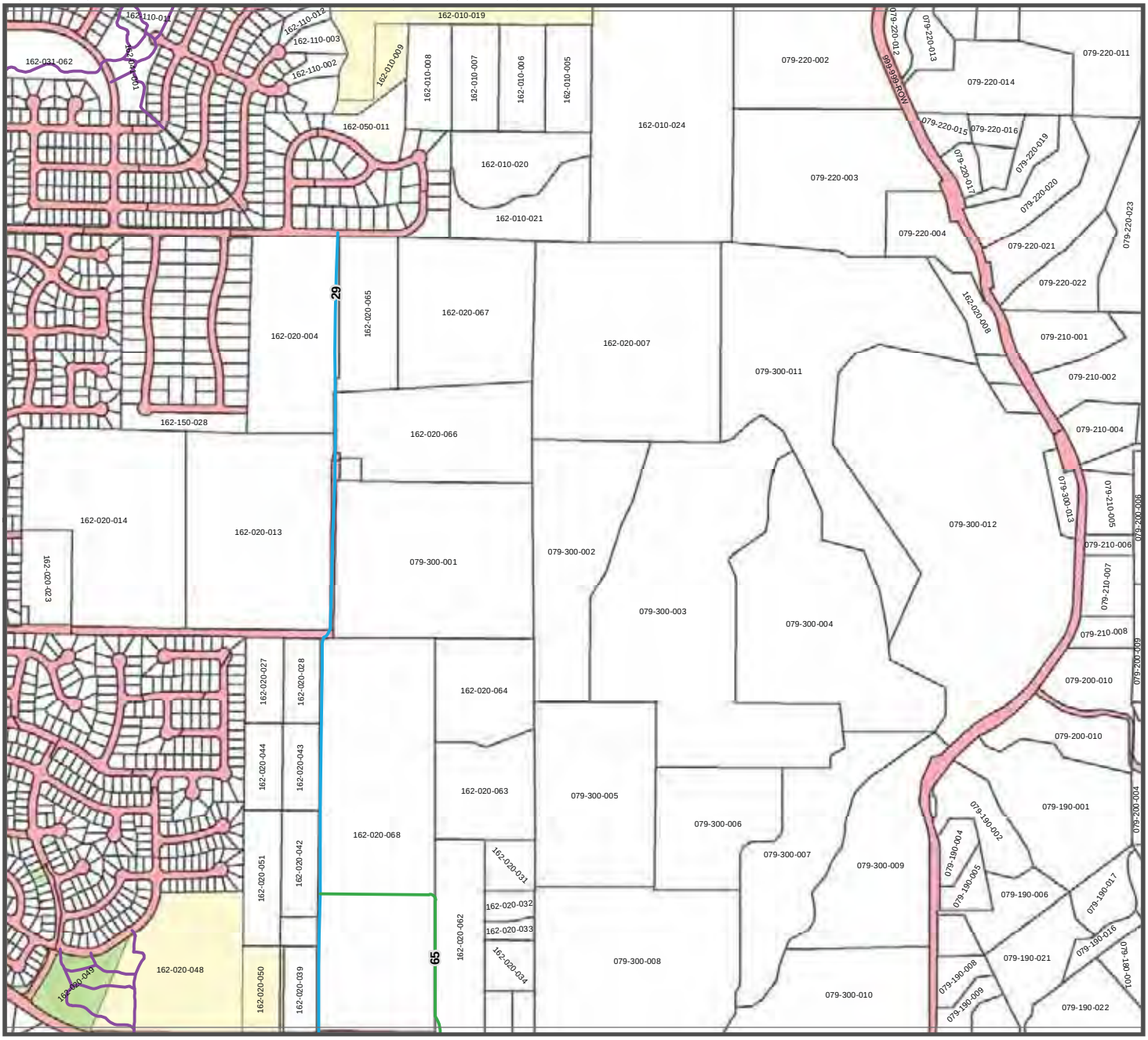
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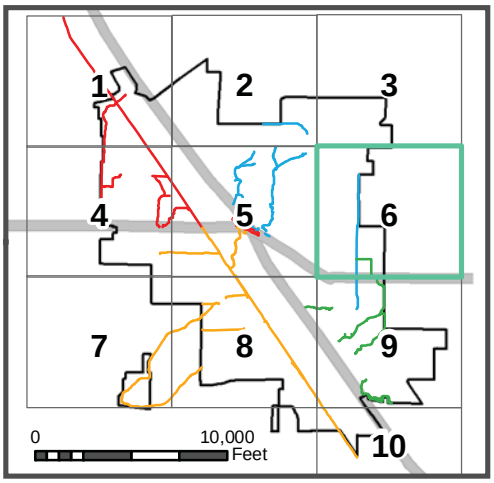
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 5

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
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- PROPOSED TRAILS: NORTHWEST QUADRANT
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TOWN OF WINDSOR: RIGHT OF WAY

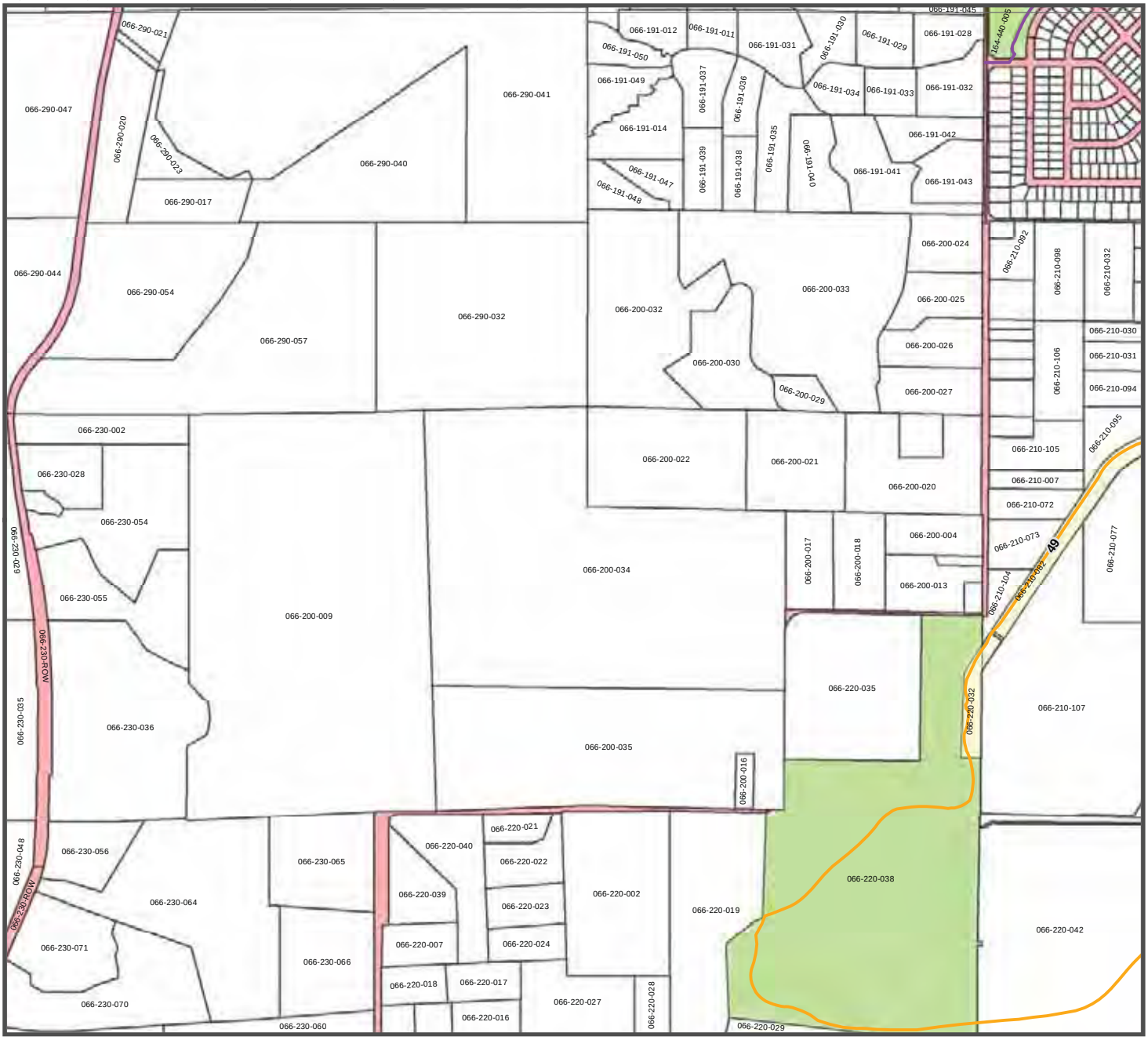
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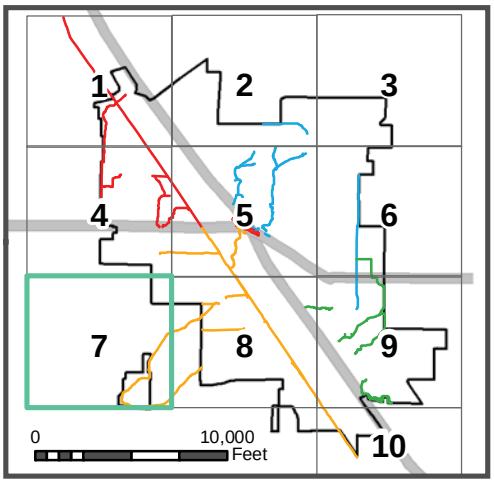
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 6

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
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- PROPOSED TRAILS: NORTHWEST QUADRANT
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TOWN OF WINDSOR: RIGHT OF WAY

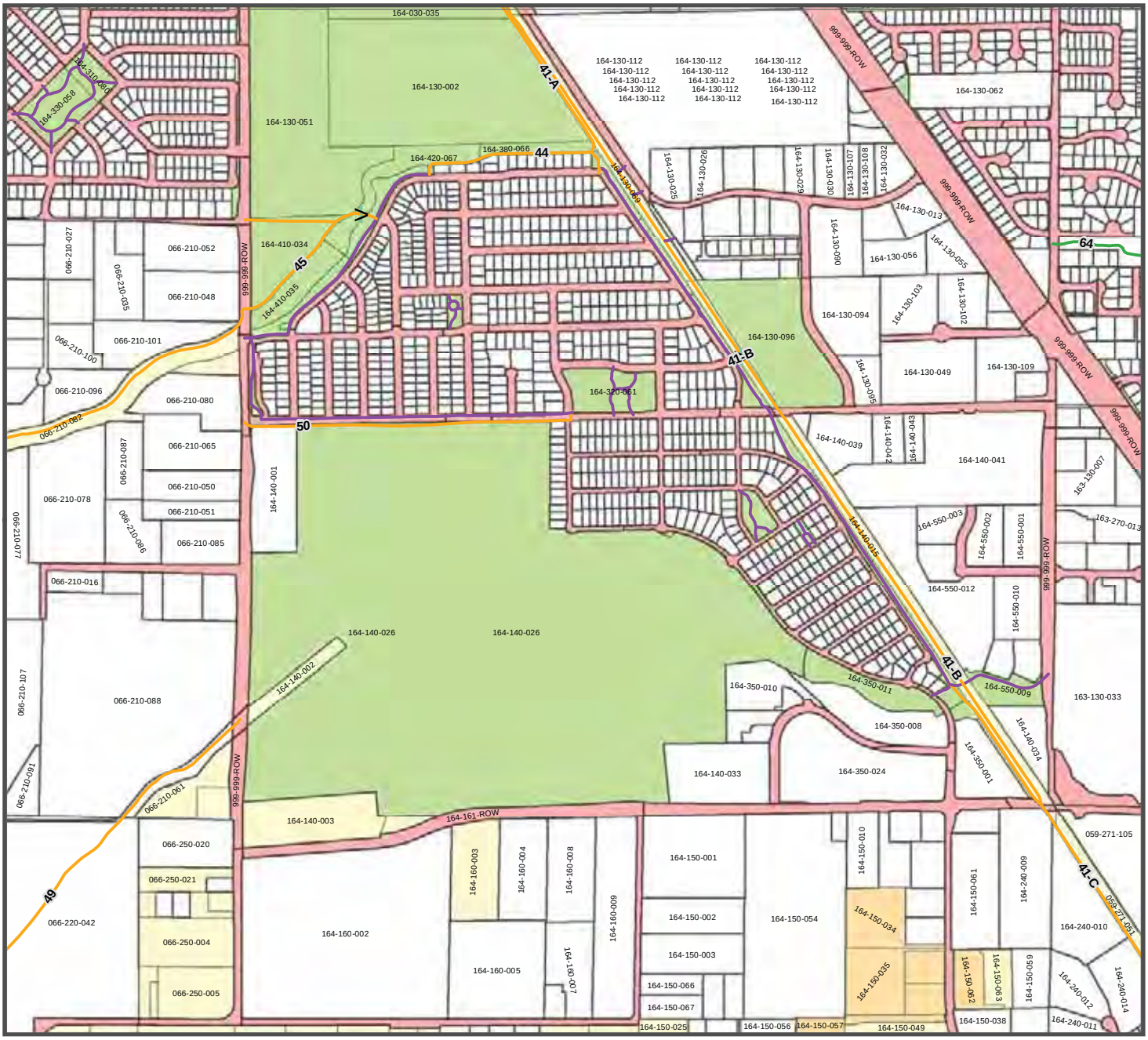
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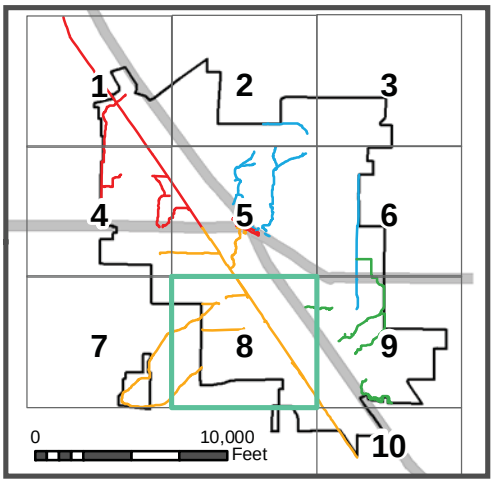
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 7

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





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- PROPOSED CROSSINGS
- EXISTING TRAILS/ PARK TRAILS/ PRIVATE TRAILS
- PROPOSED TRAILS: NORTHWEST QUADRANT
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TOWN OF WINDSOR: RIGHT OF WAY

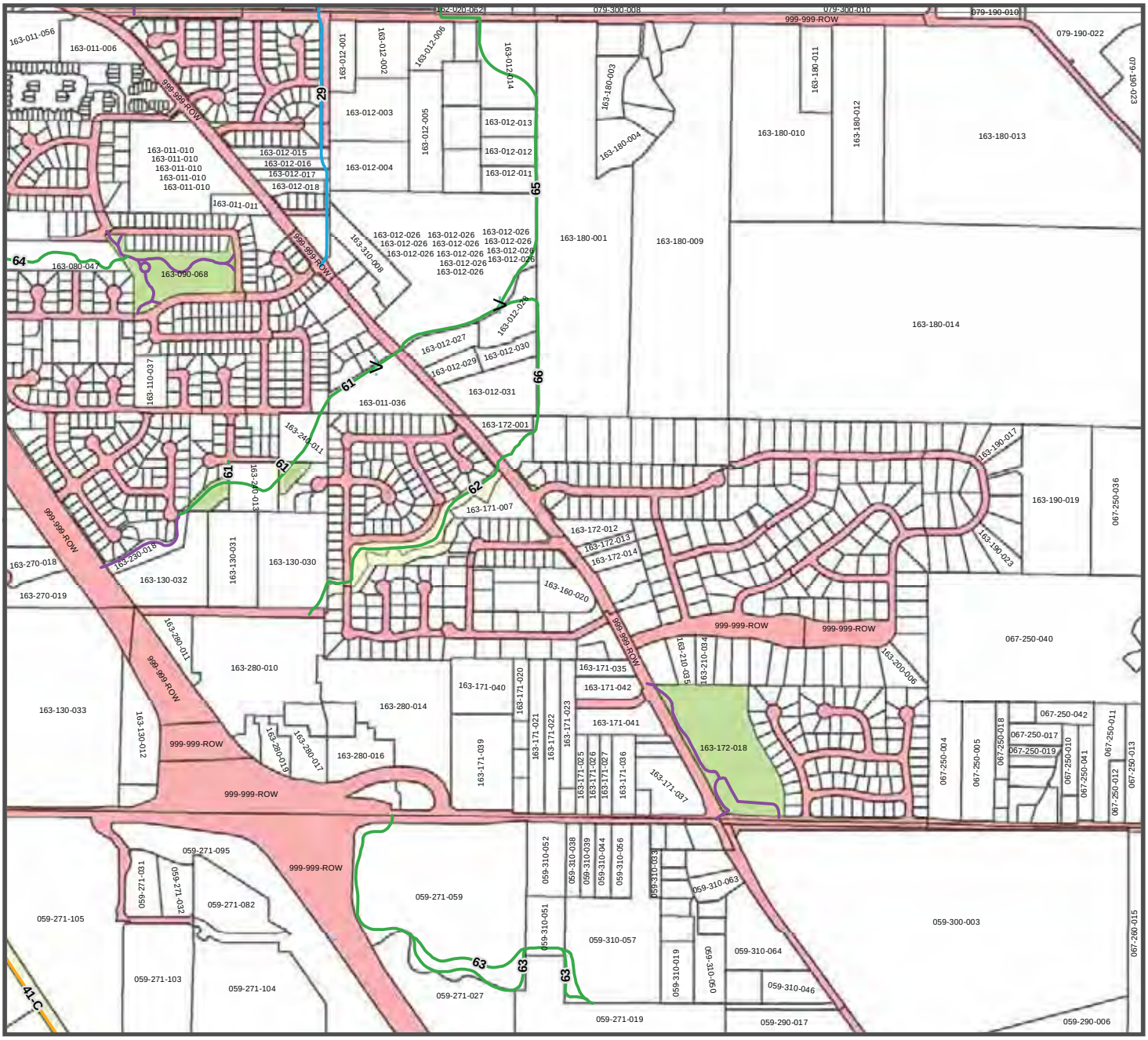
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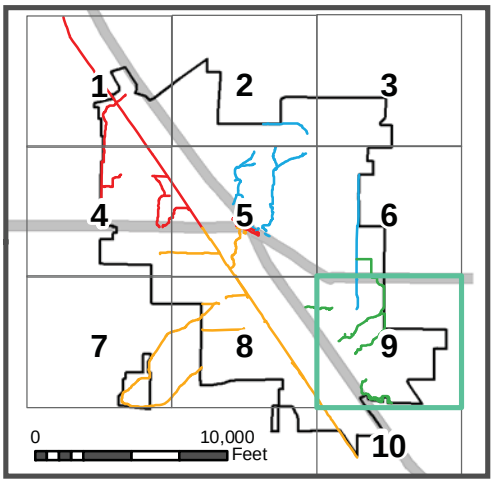
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 8

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





0 1,000 2,000 3,000 4,000 Feet

- PROPOSED CROSSINGS
- EXISTING TRAILS/ PARK TRAILS/ PRIVATE TRAILS
- PROPOSED TRAILS: NORTHWEST QUADRANT
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TOWN OF WINDSOR: RIGHT OF WAY

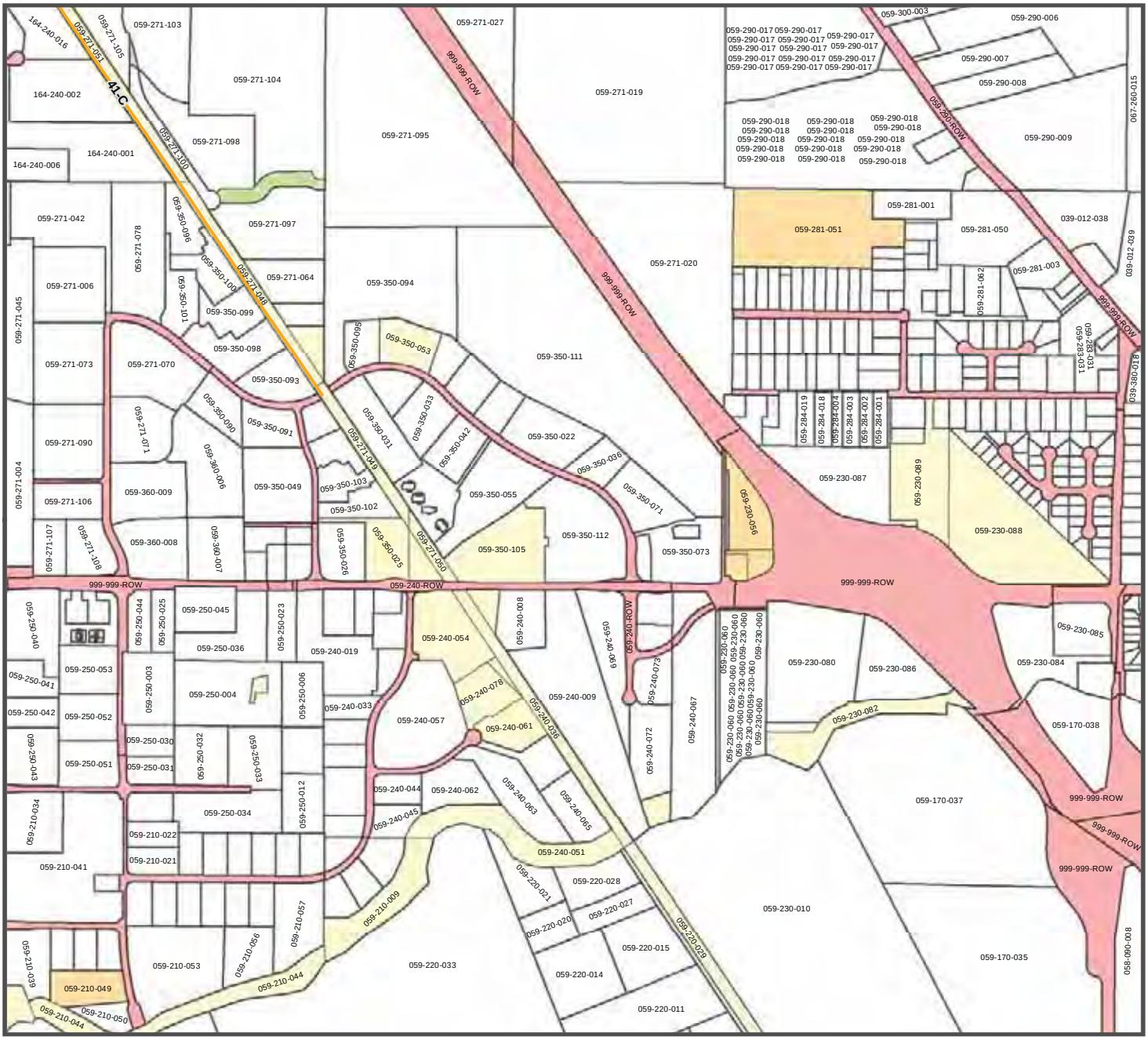
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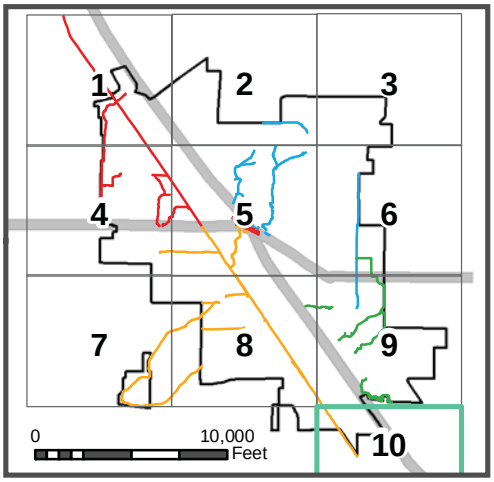
TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 9

Adapted from data acquired from the Town of Windsor, SCTA Countywide Bicycle and Pedestrian Advisory Committee, and Sonoma County GIS





0 1,000 2,000 3,000 4,000 Feet

- PROPOSED CROSSINGS
- EXISTING TRAILS/ PARK TRAILS/ PRIVATE TRAILS
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TOWN OF WINDSOR: RIGHT OF WAY

PROPOSED AND EXISTING BICYCLE AND PEDESTRIAN FACILITIES, SONOMA COUNTY, CA

TOWN OF WINDSOR

QUESTA ENGINEERING CORP

FIGURE 10

APPENDIX F: WINDSOR TOWN COUNCIL MINUTES NOVEMBER 7, 2018

MINUTES

JOINT WINDSOR TOWN COUNCIL, WINDSOR REDEVELOPMENT SUCCESSOR AGENCY AND WINDSOR WATER DISTRICT MEETING

Wednesday, November 7, 2018
Regular Session - 6:00 p.m.

Civic Center Council Chambers
9291 Old Redwood Highway, Building 400
Windsor, CA 95492

1. CALL TO ORDER

Mayor Okrepkie called to order a meeting of the Town Council (Council), the Windsor Redevelopment Successor Agency and the Board of Directors of the Town of Windsor Water District (District) at 6:04 p.m.

2. COUNCIL ROLL CALL

Present at roll call were Councilmembers Fudge, Millan, Salmon, Vice Mayor Foppoli and Mayor Okrepkie.

3. PLEDGE OF ALLEGIANCE

Scott Huberts led the Pledge of Allegiance.

4. CHANGES TO THE AGENDA

Councilmember Fudge asked that the agenda be reorganized to consider Item 6.5 (Presentation by Bruce Goldstein regarding Sonoma County Secure Families Fund) at the same time as Item 12.4 (Consideration of Funding Request from Sonoma County Community Foundation for the Sonoma County Secure Families Fund).

Councilmember Salmon explained that after the agenda was posted for this meeting, an emergency need arose to inform the public of a letter received by the Town regarding District Elections. Therefore, he requested that Council consider adding this matter on an emergency basis.

Town Attorney Donoghue explained that there is a two-step process to add an "emergency" item to the agenda. The Council must first take a vote that they were not aware of the item prior to the posting of tonight's Council agenda and that there is no time to defer the matter. If Council agrees by a special majority (2/3 vote), then the agenda item can be added.

Councilmember Salmon moved to declare that there is a need for immediate action and to consider the addition of an "emergency" agenda item related to the disclosure of a letter from the Town Attorney received by Council regarding District Elections as the letter was received last Thursday after the posting of the November 7, 2018 agenda. Councilmember Millan seconded the motion. Following a roll call vote, the motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

Town Attorney Donoghue clarified that the motion to take immediate action would be to publish materials related to District Elections within the next week for the members of the public.

Councilmember Salmon moved to direct Town staff to make public the letter received from the Town Attorney requesting the Town consider District Elections and directed the Town Attorney to provide similar information to the public regarding the meaning of District Elections. Councilmember Millan seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

At this time, Council concurred to reorganizing the agenda to have Item 12.4 considered at the same time as (or as part of) Item 6.5 at the beginning of the agenda.

5. REPORT OUT OF CLOSED SESSION

Mayor Okrepkie reported that the Town Council held a Closed Session on Wednesday, October 17, 2018 for the purpose of:

PUBLIC EMPLOYMENT
Title: Town Manager's Performance Evaluation
Consideration of Town Manager's Performance Evaluation pursuant to Government Code Section 54957(b).

Following the Closed Session, there were no announcements made and the meeting adjourned at approximately 9:55 p.m.

6. PRESENTATIONS/PROCLAMATIONS

6.1 A Presentation of a Town Council Certificate of Appreciation Acknowledging the Contributions of Aaron Schultz, Boy Scout Troop #220, for Planning and Installing New Garden Boxes at the Windsor Senior Center

Mayor Okrepkie read and presented a Town Council Certificate of Appreciation to Aaron Schultz, Boy Scout Troop #220, acknowledging his contributions for planning and installing new garden boxes at the Windsor Senior Center.

6.2 A Presentation of a Plaque Acknowledging and Honoring the Holiday Inn Windsor Wine Country for Their Contributions and Efforts During the October 2017 Fires

Mayor Okrepkie presented a plaque to Kevin Desai and Mohammad Rana honoring the Holiday Inn Windsor Wine Country for their contributions and efforts during the October 2017 fires.

Mr. Rana thanked Council for the acknowledgement.

6.3 A Proclamation Honoring Tony Troia for Fifteen Years of Service and Congratulating Him Upon His Retirement

Mayor Okrepkie read and presented a proclamation to Tony Troia honoring him for his fifteen years of service and congratulating him upon his retirement.

6.4 A Presentation of a Town Council Certificate of Appreciation to the Parks and Recreation Department for the 2018 Best Music Series Award from the Press Democrat

Mayor Okrepkie read and presented a Town Council Certificate of Appreciation to the Parks and Recreation Department for the 2018 Best Music Series Award from the Press Democrat.

RECESS TO BRIEF RECEPTION TO CONGRATULATE THE PARKS AND RECREATION DEPARTMENT

The meeting recessed at 6:25 p.m. for a brief reception.

The meeting reconvened at 6:35 p.m. with all Councilmembers present.

(Clerk's Note: Item Nos. 6.5 and 12.4 were heard simultaneously.)

6.5 A Presentation by Bruce Goldstein regarding Sonoma County Secure Families Fund

12.4 Consideration of Funding Request from Sonoma County Community Foundation for the Sonoma County Secure Families Fund

Town Manager Jansons reported on the item.

The following members of the Sonoma County Community Foundation reported on the purpose of the program, the components and how the program benefits the immigrant community:

Bruce Goldstein, County Counsel for the Sonoma County Counsel's Office

Alegria De La Cruz, member of the Advisory Committee for the Secure Families Fund, Chief Deputy County Counsel and Board Member of Los Cien

Margaret McCabe, Executive Director of VIDAS

Mayor Okrepkie opened the public comment period.

The following members of the public addressed Council in support of the program:

Stephanie Ahmad, newly elected to Windsor Unified School District Board

Scott Huberts, Windsor resident

Maureen McSorley, Immigration Attorney

Rosa Reynoza, Windsor resident, explained that although she supports the purpose of the program and its benefits, she raised budgetary concerns regarding the funding request.

Mark Weinberger, Workers Compensation Attorney

Yolanda Solano, Board Director, VIDAS/Pro-bono Attorney

Mayor Okrepkie closed the public comment period.

Councilmember Millan moved to direct Town staff to process a grant award for the remainder of this year in a set amount and also directed Town staff to bring forward a consideration of either the grant program or the regular budget cycle in an amount of $10,000 beginning in Fiscal Year 2019-20. Vice Mayor Foppoli seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

6.6 A Presentation by Sonoma County Tourism regarding Fire Recovery and their new "Life Opens Up" Brand Launch

Claudia Vecchio, Sonoma County Tourism President/CEO, and Todd O'Leary, Sonoma County Tourism Vice President, Marketing and Communications, discussed the fire recovery efforts and how their new "life opens up" brand launch is being integrated.

Mayor Okrepkie opened the public comment period. No comments were forthcoming.

7. ANNOUNCEMENTS

a. Upcoming Town Events

Councilmembers announced various upcoming Town events.

Rosa Reynoza, Windsor resident, announced that Our Lady of Guadalupe Church will be hosting a free Health and Wellness Fair on Sunday, November 11, 2018 in the Mary Agatha Furth Center from 1:00 p.m. to 4:00 p.m. She also announced a Habitat for Humanity workshop that will be held on Saturday, November 10, 2018 at the Shiloh Neighborhood Church for information regarding a housing project.

Councilmember Millan stated that since the 2018 election is over, this will be his last meeting. He thanked Council and members of the public noting that it had been an honor to serve on the Council.

b. Status of Lytton Rancheria Development

None.

8. CONFLICT OF INTEREST DECLARATION

Town Attorney Donoghue explained that four Councilmembers will be required to declare several conflict of interests in connection with Item 12.1 (Presentation on Class I Bicycle and Pedestrian Trails Study). She also explained the nature of the conflicts noting that as per the FPPC, any official that has real property within 500 feet of a location that will be under discussion must recuse and leave the dais unless they have obtained permission from the FPPC to participate.

9. PUBLIC COMMENT

Julian Cohen, Silk Road, asked Council that presentations be kept to 10 minutes.

10. CONSENT CALENDAR

Councilmember Millan moved to adopt the following Consent Calendar items as indicated below. Councilmember Salmon seconded the motion. The motion to adopt all items passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

10.1 Approval of Minutes

Approved the regular Town Council meeting minutes of August 15, 2018, the regular Town Council meeting minutes of September 5, 2018, the regular Town Council meeting minutes of September 19, 2018, and the regular Town Council meeting minutes of October 3, 2018.

10.2 Zoning Ordinance Amendments for Housing Measures for Post-Fire Recovery Efforts

Held a second reading, by title only, and adopted Ordinance No. 2018-329 amending the Town of Windsor Zoning Ordinance Chapter 27.38 titled "Temporary Housing Measures for Recovery from the Nuns and Tubbs Fires" to extend the expiration date of Ordinance No. 2018-322 to December 31, 2023, allow fire-related temporary housing on certain vacant light industrial properties, and establish maximum density for fire-related temporary housing on certain vacant commercial properties.

10.3 Biennial Review/Revision of the Town of Windsor, Windsor Redevelopment Successor Agency, Windsor Joint Powers Financing Authority and Windsor Water District Conflict of Interest Codes

a. Acting jointly as the Town Council, Windsor Redevelopment Successor Agency and the Windsor Joint Powers Financing Authority, adopted Resolution No. 3485-18 superseding Resolution No. 3325-16 amending the Conflict of Interest Codes.
b. Acting as the Windsor Water District Board, adopted Windsor Water District Resolution No. 1870-18 superseding Resolution No. 1863-16 and amending the Windsor Water District's Conflict of Interest Code.

10.4 Treasurer's Quarterly Investment Report

Received the Treasurer's Quarterly Investment Report for the quarter ended June 30, 2018.

10.5 Letter of Support for Bell's Ambulance Service

Considered a letter of support for Bell's Ambulance Service.

11. PUBLIC HEARING

11.1 Land Use Designations for "Non-Contiguous" Incorporated Properties Outside of the Urban Growth Boundary

Planner III Jordan reported on the item.

Community Development Director MacNab responded to Council questions.

A recommendation was made by Council to explore economic uses of Town owned properties.

Councilmember Fudge requested that in future consultations with LAFCO, staff discuss the possibility of economic use of subject properties. Staff will also discuss with LAFCO creative options that Vice Mayor Foppoli has brought up.

Mayor Okrepkie opened the public hearing.

There being no public testimony, Mayor Okrepkie closed the public hearing.

Councilmember Millan moved to adopt Resolution No. 3486-18 amending the 2040 General Plan Land Use Diagram to designate 11 incorporated, non-contiguous parcels as Public/Quasi-Public and amending the 2040 General Plan text to add Figure LU-1b. Councilmember Salmon seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

Councilmember Millan move to introduce and hold first reading, by title only, of an ordinance amending the Zoning Map to zone 11 non-contiguous parcels as Public/Institutional. Councilmember Fudge seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

Councilmember Millan moved to adopt Resolution No. 3487-18 amending the 2040 General Plan Land Use Diagram to designate APN 066-310-029 as Public/Quasi-Public. Councilmember Salmon seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

Councilmember Millan moved to introduce and hold first reading, by title only, of an ordinance amending the Town of Windsor Zoning Ordinance Zoning Map to pre-zone the Town-owned parcel identified as APN 066-310-029 as Public/Institutional. Councilmember Salmon seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

Councilmember Millan moved to adopt Resolution No. 3488-18 initiating proceedings with the Local Agency Formation Commission of Sonoma County for amendment of the Sphere of Influence and reorganization of territory consisting of assessor's parcel number 066-310-029. Vice Mayor Foppoli seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

12. REGULAR CALENDAR

12.1 Presentation on Class I Bicycle and Pedestrian Trails Study

Senior Civil Engineer Perez reported on the item. He introduced Jeff Peters and Margaret Henderson with Questa Engineering.

Ms. Henderson discussed the study goals and the methods of outreach conducted to the Windsor community.

Mayor Okrepkie opened the public comment period regarding the Class I Bicycle and Pedestrian Trails Study.

Julian Cohen, Silk Road, read comments on behalf of Michael Freedman regarding the trails study.

Mayor Okrepkie closed the public comment period.

(Clerk's Note: The following Councilmember recusals are based on ownership of property within 500 feet of the Trails being discussed.)

Northwest Trails – Trail Segment 1 (SMART Northwest):

Vice Mayor Foppoli recused himself for the discussion regarding this trail and left the dais at 9:12 p.m. He resumed participation in the meeting at 9:15 p.m.

There was no public comment.

Northwest Trails – Trail Segment Nos. 2 (Gumview Trail), 3A (North Starr Creek Trail), 3B (North Starr Creek Trail), 3C (North Starr Creek Trail), 4A (East Starr Creek Trail), 4B (East Starr Creek Trail), 5 (101 Crossing Complex 9), 6 (Park and Ride Connector), 7 (SMART-Gumview Connector), 8 (Gumview Creek Trail):

There were no conflicts disclosed and no public comment.

Northeast Trails – Trail Segments 23 (Windsor Middle School), 24A (East Windsor Creek Trail), 24B (East Windsor Creek Trail), 24C (East Windsor Creek Trail):

Councilmember Salmon recused himself for this discussion and left the dais at 9:19 p.m.

He resumed participation in the meeting at 9:21 p.m.

There was no public comment.

Northeast Trails – Trail Segment 28 (Arata Lane Connector):

Vice Mayor Foppoli recused himself for this discussion and left the dais at 9:21 p.m. He resumed participation in the meeting at 9:22 p.m.

There was no public comment.

Northeast Trails – Trail Segment 29 (Jensen Lane East Connector):

Councilmember Millan recused himself for this discussion and left the dais at 9:22 p.m. He returned to the dais and resumed participation in the meeting at 9:24 p.m.

There was no public comment.

Northeast Trails – Trail Segment 30 (Jensen Lane Trail):

Councilmember Fudge recused herself for this discussion and left the dais at 9:24 p.m. She returned to the dais and resumed participation in the meeting at 9:27 p.m.

There was no public comment.

Northeast Trails – Trail 21A (West Windsor Creek Trail), 21B (West Windsor Creek Trail), 21C (West Windsor Creek Trail), 21D (Foxwood Connector) and 22 (Windsor Creek Connector):

There were no disclosed conflicts and no public comment.

Southeast Trails – 61 (Pool Creek Trail), 62 (Faught Creek Trail), 63 (Shiloh Vision 64), 64 (Robbins Park Connector 6), 65 (Pool Creek-Jensen Connector), 66 (Faught-Pool Creek Connector 66), 67 (Old Redwood Highway Greenway):

There were no disclosed conflicts and no public comment.

Southwest Trails – Trail Segment 41A (SMART Southwest):

Vice Mayor Foppoli recused himself from the discussion and left the dais at 9:33 p.m. He returned to the dais and resumed participation in the meeting at 9:36 p.m.

There was no public comment.

Southwest Trails – Trails 41B (SMART Southeast), 41C (SMART South), 42 (Conde Lane Connector), 43A (South Windsor Creek Trail), 43B (South Windsor Creek Trail), 44 (Trione Connector), 45 (WWTP Connector), 46 (South Starr Creek), 47 (Jaguar Way Connector), 48 (SMART-Windsor Road Connector), 49 (Windsor-Pool Creek Loop), 50 (Mitchell Lane Connector):

There were no conflicts and no public comment.

At this time, Senior Engineer Perez referenced emails that had been received by Windsor resident Michael Freedman dated November 5, 2018 (part 1) and November 6, 2018 (part II) regarding the Class I Bicycle and Pedestrian Trail Study.

(Clerk's Note: Copies of Mr. Freedman's emails were provided to Council. Copies of the emails are available for review in the Town Clerk's Office and Public Works Department – Engineering Division.)

Vice Mayor Foppoli moved to accept the Town of Windsor Class I Bicycle and Pedestrian Trails Study, prepared by Questa Engineering Corporation, dated October 2018. Councilmember Millan seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

12.2 Heritage Park Affordable Housing Project

Community Development Director MacNab reported on the item and introduced Matt Kowta with BAE Urban Economics.

Mayor Okrepkie opened the public comment period.

Michael Weyrick, applicant, provided Council with an update of the project and its accomplishments to date.

Mr. Kowta responded to Council questions related to the types of protections built into the agreement.

Rosa Reynoza, Windsor resident, spoke in support of awarding the funding request.

Mayor Okrepkie closed the public comment period.

Vice Mayor Foppoli moved to authorize a predevelopment expenditure of $565,000 for acquisition of the project site and allow payment of the Town's Development Impact Fees to be deferred until issuance of Certificate of Occupancy. Councilmember Fudge seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, SALMON, AND VICE MAYOR FOPPOLI**
NOES:	**COUNCILMEMBER MILLAN AND MAYOR OKREPKIE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

12.3 Public Art Policy

Management Analyst Lemen reported on the item.

Mayor Okrepkie opened the public comment period. No comments were forthcoming.

Councilmember Millan moved to adopt Resolution No. 3489-18 adopting the Town of Windsor Public Art Policy. Vice Mayor Foppoli seconded the motion. The motion passed by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, MILLAN, SALMON, VICE MAYOR FOPPOLI AND MAYOR OKREPKIE**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

12.4 Consideration of Funding Request from Sonoma County Community Foundation for the Sonoma County Secure Families Fund

(Clerk's Note: This item was considered under Item 6.2.)

13. MAYOR'S & COUNCILMEMBERS' REPORTS

13.1 Individual Councilmember Reports and Comments, including Reports on Meetings/Conferences and Activities of Miscellaneous Agencies

Councilmembers reported on recent and upcoming activities, including reports from meetings attended.

13.2 Councilmember Requests for Future Council Agenda Items

Councilmember Fudge requested that a discussion regarding Michael Freedman's comments regarding enhancing and encouraging bicycling as an alternative means of transportation within Windsor be agendized at a future meeting and then follow with a workshop. Mayor Okrepkie supported her request.

Vice Mayor Foppoli requested that Town staff explore the economic uses for rural Town owned land and that a report be agendized on a future meeting. Councilmember Fudge supported the request.

14. TOWN MANAGER'S REPORT (ORAL REPORT)

Town Manager Jansons reported on items that are of interest to Council.

15. ANNOUNCEMENT OF CLOSED SESSION TOPICS/ ADJOURNMENT TO CLOSED SESSION

Mayor Okrepkie announced the following closed session items at 10:56 p.m.

15.1 COUNCIL ROLL CALL

Present at roll call were Councilmembers Fudge, Millan, Salmon, Vice Mayor Foppoli and Mayor Okrepkie.

15.2 PUBLIC COMMENT

No comments were made.

15.3 CONFERENCE WITH LEGAL COUNSEL – REAL PROPERTY NEGOTIATOR

Government Code Section 54956.8

Property: APN: 164-080-046
Town Negotiator: John Jansons
Negotiating Party: Brandon Philpott
Under negotiation: Purchase price and terms of payment

15.4 PUBLIC EMPLOYMENT

Title: Town Manager's Performance Evaluation

Consideration of Town Manager's Performance Evaluation pursuant to Government Code Section 54957(b).

16. REPORT OUT OF CLOSED SESSION

The Closed Session adjourned at 11:20 p.m. there was no action taken during the Closed Session.

17. ADJOURNMENT

The meeting adjourned at 11:20 p.m.

The regular meeting of the Town Council scheduled for November 21, 2018 is cancelled. There is a special study session meeting for the Town Council scheduled for November 21, 2018 instead.

The next regular meeting of the Town Council is scheduled for December 5, 2018, at 6:00 p.m., located in the Civic Center Council Chambers located at 9291 Old Redwood Highway, Building 400 in Windsor.

Maria De La O

Maria De La O, CMC
Town Clerk