# Junipero Serra Trail Feasibility Study

January 25, 2019 As Amended and Adopted by City Council on May 21, 2019









# **Table of Contents**

1	Executive Summary	1
2	Introduction	5
	Background & Project Purpose	5
	Local & Regional Policies	6
	Project Goals & Objectives	7
3	Planning Process	9
	Existing Conditions	9
	Stakeholder and Agency Coordination	22
	Trail Criteria and Standards	30
	Community Outreach	34
4	Trail Alignment	39
	Alternatives Evaluation & Preferred Alternative	39
	Segment 1 - Mary Ave to De Anza Boulevard	49
	Segment 2 - De Anza Boulevard to Vallco	57
	Segment 3 - Vallco to Vallco Parkway	75
	Safety, Privacy, and Security	81
5	Summary Recommendations	85
	Acknowledgments	91
6	Appendix	92
U		,

# Figures

2-1	Don Burnett Bike-Pedestrian Bridge	5
2-2	Cupertino Loop Trail	7
3-1	Existing Conditions – Less than 14'	9
3-2	Existing Conditions – 14' or More	9
3-3	PG&E Utility Poles in SCVWD Corridor	10
3-4	Overall Site Map	10
3-5	Bike Lanes on Stelling Road	11
3-6	Don Burnett Bike-Pedestrian Bridge Trailhead	12
3-7	Existing Conditions at Stelling Road	12
3-8	Existing De Anza Boulevard Crossing	13
3-9	Existing Conditions along Lucille Avenue	13
3-10	Existing Conditions below Blaney Avenue	13
3-11	Underpass at Wolfe Road	14
3-12	Site Analysis – Segment 1	15
3-13	Site Analysis – Segment 2	17
3-14	Site Analysis - Segment 3	19
3-15	Vallco Parkway Potential Trailhead	22
3-16	CalWater Facility Fence	23
3-17	De Anza Boulevard On-Ramp	23
3-18	Loc-N-Stor Fence on Right	24
3-19	Hyatt Hotel House Under Construction	24
3-20	Lock It Up Self Storage Fence	24
3-21	PG&E Tower	25
3-22	Public Storage Wall and SCVWD Corridor	25
3-23	Fence Straddling SCVWD Corridor and Residents	26
3-24	Vallco Mall Sign	27
3-25	CalTrans Two-Way Class 1 Bikeway	33

4-1	Pedestrian Trail, Less than 14' Wide	40
4-2	Class 1 Multi-Use Trail, Min. 14' Wide, Covered Channel	40
4-3	Class 1 Multi-Use Trail, Min. 14' Wide, On-Grade	40
4-4	Public Storage Sections	41
4-5	Alternative Alignment Plan – Segment 1	43
4-6	Alternative Alignment Plan – Segment 2	45
4-7	Alternative Alignment Plan – Segment 3	47
4-8	Mary Avenue Enlargement East Option	50
4-9	Mary Avenue Enlargement West Option	51
4-10	Mary Avenue Sections	52
4-11	High Visibility Crosswalk Example	53
4-12	Grade-Separated Under-Crossing under Stelling Road	54
4-13	Existing Conditions under Stelling Road	54
4-14	Stelling Road Intersection Enlargement	55
4-15	Under-Crossing Example	56
4-16	Stevens Creek Trail Tunnel Example 1	57
4-17	Stevens Creek Trail Tunnel Example 2	57
4-18	Tunnel Finishes	57
4-19	Tunnel Visual Simulation 1	58
4-20	Tunnel Visual Simulation 2	58
4-21	De Anza Boulevard Intersection Enlargement – Tunnel Under-Crossing	59
4-22	Bike-Pedestrian Bridge Visual Simulation 1	62
4-23	Bike-Pedestrian Bridge Visual Simulation 2	62
4-24	De Anza Boulevard Intersection Enlargement – Bridge Over-Crossing	63

4-25	High Visibility Crosswalk Example	65
4-26	De Anza Boulevard Intersection Enlargement – At-Grade Crossing	67
	– Alternative #2	
4-27	Pinch Point between Sound Wall and Guard Rail	69
4-28	Lucille Avenue Sections	70
4-29	Blaney Avenue Trail Access Enlargement	71
4-30	North Portal Avenue Trail Access Enlargement	73
4-31	Hyatt House Hotel Enlargement	77
4-32	Apple Campus Sections	79
4-33	Calabazas Creek Sections	80
4-34	Privacy/Security Fence Example	81
4-35	Split Rail Fence Example	81
4-36	Under-Crossing Barrier Example	81
4-37	Guard Rail Example	82
4-38	Fencing Example Rendering – Before	82
4-39	Fencing Example Rendering – After	82
4-40	Trail Patrol	83
4-41	Security Camera	83
4-42	Milestone Marker	83



1

## **Executive Summary**

The purpose of this study is to determine whether the Junipero Serra Trail is a feasible project for the City of Cupertino. The City anticipates the report will serve as a springboard for further detailed study and identification of project funding, if the trail is deemed feasible. The trail was first identified and approved in the City's 2016 Bicycle Transportation Plan and further supplemented in the City's 2018 Pedestrian Transportation Plan. The Junipero Serra Trail is envisioned to be one segment of a larger community wide "Loop" of on and off-street bicycle facilities.

Through an extensive public outreach process, it became clear the community has a variety of opinions on the merits of a trail at this location, with many supporting the trail and others not. In addition, community members indicated preferences for easy trail access, grade separated street crossings, neighbor privacy, and security. These and other factors discussed in this report are important considerations to carry forward in the development of this trail.

The resulting feasibility study provides a narrative and graphic road map to guide further detailed study of the trail's development. Based on community input, City goals for

trail development, and input from key agency stakeholders, trail alignment alternative #2 is the preferred alternative.

Alternative #2 converts the Junipero Serra Channel between the Don Burnett Bicycle-Pedestrian Bridge and Wolfe Road into a box culvert and allows the trail to be located over the top of the culvert. The Santa Clara Valley Water District (SCVWD) preliminarily agreed to alternative #2 under the condition the City accepts all right of way and maintenance of the channel as part of the City storm drain system prior to any construction improvements. Final approval would be subject to approval from SCVWD's Board of Directors.

Other trail development considerations are presented along the alignment and are discussed as to their feasibility and costs of implementation. The study also addresses community concerns surrounding safety and privacy by suggesting various measures including fence options, police patrols, security cameras and increasing the number of access points as much as possible. Detailed cost estimates are provided for each trail alternative, as well as costs for standalone items such as the grade-separated crossings at Stelling Road and De Anza Boulevard.





Top Image: Callander Associate's Staff talking to a community member at a community meeting

Middle Image: Santa Clara Valley Water District corridor existing conditions

Bottom Image: Visual Simulation of a Bridge Over-Crossing for De Anza Boulevard This report summarizes the feasibility study process and contains the following sections:

### Introduction

Provides a brief overview of the project purpose, background, goals and objectives, as well as project alignment with local and regional trail policies.

### **Planning Process**

Provides an overview of the planning process including an assessment of existing site conditions along the alignment, ranging from typical corridor conditions, adjacent land uses, relationship to nearby facilities and existing roadway crossings; trail development opportunities and challenges; and the community outreach process with details from each event and input received.

# **Trail Alignments**

Provides an in-depth evaluation of each alignment alternative; including design considerations, trail access points, roadway crossings, safety and security measures, and other site-specific challenges.

#### **Summary Recommendations**

Provides a summary of the recommended trail alternatives to further pursue.

# Appendix

Includes meeting summaries, technical documents, outreach materials, input results, detailed cost estimates, and other supplemental project information for reference.





# Introduction

#### Background & Project Purpose

This feasibility study evaluates the potential for development of the Junipero Serra Trail identified in the City of Cupertino's 2016 Bicycle Transportation Plan and 2018 Pedestrian Transportation Plan. If implemented, the trail would create an important east west off-street trail across the heart of the City providing recreational opportunities, commuter options, safe routes to school, and an off-street alternative for bicycle trips.

This planning effort was commissioned by the City in the summer of 2017 with the purpose of developing a feasibility study for the trail. As part of the study, a comprehensive public outreach process was initiated to better understand community concerns and desires for the project. The study aims to identify challenges, opportunities, and estimated costs associated with implementation of the 2.91-mile trail.

This trail segment represents the northern reach of the "Cupertino Loop", identified in the 2016 Bicycle Transportation Plan. The Junipero Serra Trail is one of three trail segments being studied as part of the Loop. The proposed alignment falls almost entirely within Santa Clara Valley Water District rightof-way and utilizes the existing maintenance road that follows the Junipero Serra Channel on the south side of Interstate 280 from Mary Avenue at the western extent to the intersection of Calabazas Creek and Vallco Parkway at the eastern extent. See *Figure 2-2*.

A number of street crossings are required within the alignment, including Stelling Road, De Anza Boulevard, and Wolfe Road. If completed, the trail would provide connections to other on-street facilities, the Don Burnett Bicycle-Pedestrian Bridge, residential neighborhoods, schools, retail centers, and employment hubs.



Don Burnett Bike-Pedestrian Bridge

Figure 2-1

### Local & Regional Policies

The Junipero Serra Trail project is consistent with a number of local and regional policies relative to trail development.

#### 2016 Bicycle Transportation Plan, City of Cupertino

"The City of Cupertino envisions an exceptional bicycling environment that supports active living and healthy transportation choices, provides for safer bicycling, and enables people of all ages and abilities to access jobs, school, recreation, shopping, and transit on a bicycle as a part of daily life." - Vision Statement from the 2016 Bicycle Transportation Plan

The 2016 Bicycle Transportation Plan recommends implementation of a loop trail around central Cupertino. The loop would be accomplished by implementing Class I trails along Regnart Creek, along the Interstate 280 Junipero Serra Channel (Junipero Serra Trail) and along the Union Pacific Railroad corridor. These trail segments would be connected to each other by on-street bikeways. See Figure 2-2.

#### 2018 Pedestrian Transportation Plan, City of Cupertino

The 2018 Pedestrian Transportation Plan outlines goals to improve pedestrian safety, access, and connectivity within the City. The Junipero Serra Trail is identified as a Tier 1 project within the 2018 Pedestrian Plan. The trail will supplement the extensive pedestrian network the City is aiming for and supports all of the plan's goals.

#### General Plan – Community Vision 2040, City of Cupertino

The City of Cupertino General Plan – Community Vision 2040 contains twelve guiding principles that encompass a broad range of community aspirations. The following guiding principles are consistent with the trail being considered along Interstate 280: #3 Improve Connectivity: Create a wellconnected and safe system of trails, pedestrian and bicycle paths and create access to interesting routes to different destinations.

#4 Enhance Mobility: Ensure the efficient and safe movement of pedestrians and bicyclists to fully accommodate Cupertino's residents, workers, visitors and students of all ages and abilities. Pedestrian and bike paths should comprise of an integrated system of fully connected and interesting routes to all destinations.

Goal M-3 in the City's General Plan says, "Support a safe pedestrian and bicycle street network for people of all ages and abilities". Further policies within goal M-3 encourage adoption of bicycle and pedestrian master plans along with encouragement of pedestrian and bicycle crossings at physical barriers.

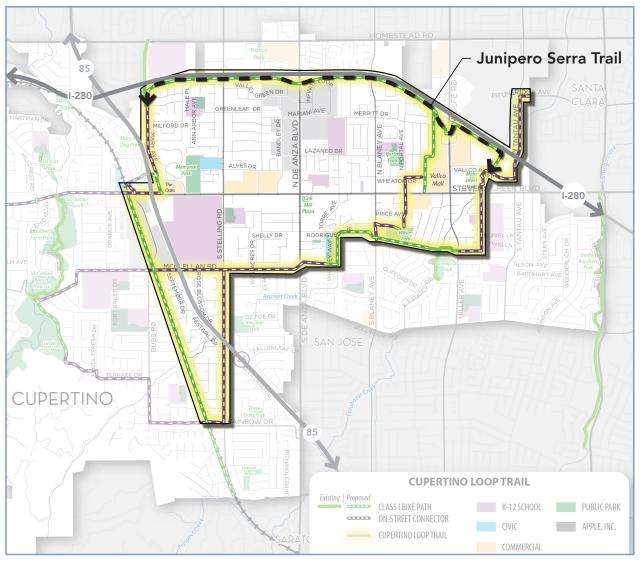
Policy LU-2.1: Gateways identifies the De Anza Boulevard and Interstate 280 on/off ramp intersection as a potential gateway location into the City of Cupertino. Future design for the trail crossing at this intersection may consider incorporating a "gateway" design feature.

#### Countywide Bicycle Plan, Santa Clara Valley Transportation Authority

The Countywide Bicycle Plan identifies the Junipero Serra Trail as a Cross-County Bicycle Corridor (CCBC).

#### District 4 Bike Plan, Caltrans

The District 4 Bike Plan identifies policies, strategies and actions for Caltrans and partner agencies to improve the safety and comfort of pedestrians and bicyclists. The Junipero Serra Trail is identified as a **"Top Tier"** priority project for Santa Clara County.



Cupertino Loop Trail

Figure 2-2

## **Project Goals & Objectives**

- **1.** Form a clear understanding of the project area, including adjoining neighborhoods, businesses, and community services; and align with other City plans that impact the study area.
- 2. Have an inclusive community outreach process and encourage participation and input throughout all phases of the study.
- **3.** Identify if the trail is feasible (in entirety or in segments) and provide reasoning for these findings to support future City of Cupertino trail projects.

