



# Memorandum

**TO:** TRANSPORTATION AND ENVIRONMENT COMMITTEE

**FROM:** John Ristow  
Jon Cicirelli

**SUBJECT: BIKE PLAN 2020 & TRAIL NETWORK ANNUAL UPDATE**

**DATE:** March 20, 2019

Approved

Date

3-29-19

## RECOMMENDATION

Accept the Bike Plan 2020 and Trail Network Annual Update.

## BACKGROUND

The City of San José has adopted several plans that guide development of its planned 500-mile bikeway network:

- *Bike Plan 2020 (2009)*: complete a 400 mile on-street bikeway network by 2020;
- *Envision San José 2040 General Plan (2011)*: achieve 15% of trips by bike by 2040;
- *Trail Program Strategic Plan (2016)*: guidance for sustained and national leading trail development; and
- *Climate Smart San José (2018)*: update and implement the City's Bike Plan and Better BikewaySJ to enable bicycling as transportation for people of all ages and abilities.

Together, these documents identify goals and plans that will increase bicycling trips and safety, as well as reduce automobile use, traffic congestion and greenhouse gas emissions. Implementation of the City's bikeway network is a collaborative effort. The Department of Transportation (DOT) leads on-street bikeway development, and the Department of Parks, Recreation and Neighborhood Services (PRNS) leads development of off-street trails. This report provides an update of DOT and PRNS efforts toward achieving these goals.

## ANALYSIS

The analysis section of the report includes the following subsections:

- A. *Bike Plan 2020*: Implementation Status
- B. San José Trail Network: Implementation Status
- C. Shared Micro Mobility Programs

D. Outcomes: Mode Shift and Safety

E. *Better Bike Plan 2025*: Bike Plan Update, Strategies to Achieve our Vision & Goals

F. 2018 Collaborations: Better Bikeways & Trail Development

G. Funding

### **A. BIKE PLAN 2020: IMPLEMENTATION STATUS**

In 2018, DOT continued to make solid progress toward the *Bike Plan 2020* goals by:

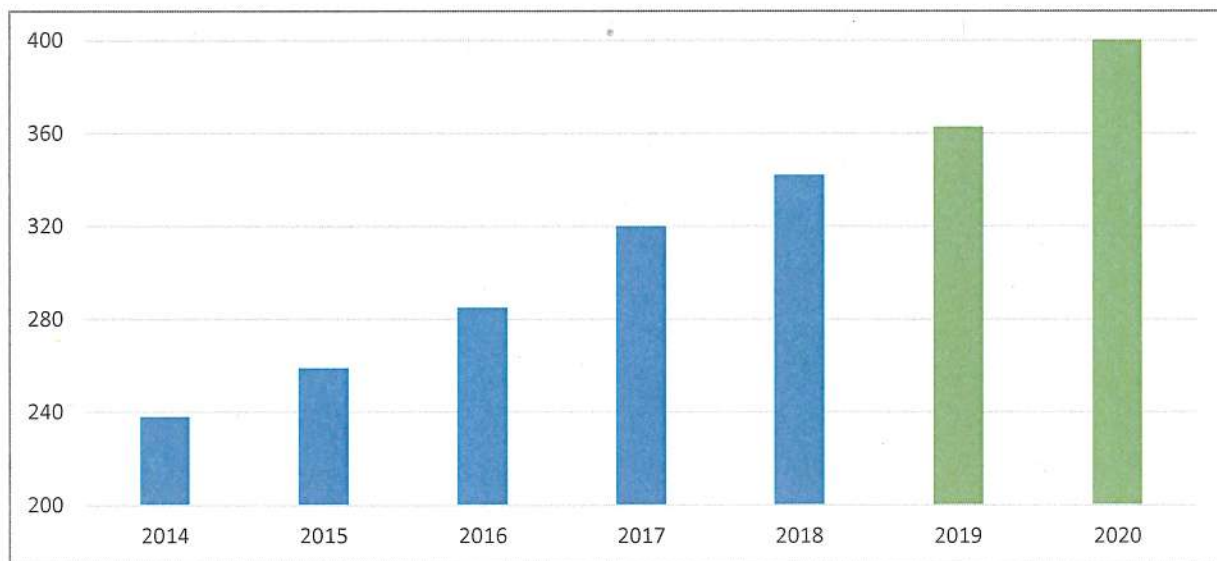
- Installing 25 miles of new on-street bikeways
- Enhancing 10 miles of existing bikeways
- Installing 162 bicycle parking spaces

As a result, the City currently has approximately 345 miles of on-street bikeways and 3,234 bicycle parking spaces (DOT installed). Combined with 61 miles of existing off-street trails, these facilities serve as the backbone of the City's vision to build a transportation system that serves people and promotes a livable community. These facilities accomplish this by providing safe and convenient opportunities for people to bike ride within the City.

#### **On-Street Bikeways Inventory**

The chart below shows the City's progress toward our *Bike Plan 2020* goal of completing a 400 mile on-street bikeway network, including projections for 2019 and 2020.

**Figure 1 - On-street Bikeway Miles (calendar year basis)**



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In 2018, 25 miles of new bikeways were installed and approximately 13 additional miles of new bikeways are planned with the 2019 Pavement Maintenance Program. See Attachment A for a map of existing and planned bikeways.

The table below summarizes the year-to-year changes in completed bike facilities (On-Street Bikeways, Off-street Trails, Bike Parking, and Bike Share), including projections through buildout of *Bike Plan 2020* by the end of calendar 2020.

**Table 1 – Total Bike Facility Miles (calendar year basis)**

	<b>Actual (2015)</b>	<b>Actual (2016)</b>	<b>Actual (2017)</b>	<b>Actual (2018)</b>	<b>Projected (2019)</b>	<b>Bike Plan 2020 Build-Out</b>
Bike Routes (Sharrows)	25	38	50	56	62	80
Basic Bike Lanes	197	185	179	179	175	165
Buffered Bike Lanes	37	61	90	106	116	140
Protected Bike Lanes	--	1	1	4	5	15
Subtotal On-street *	259	285	320	345	358	400
Off-street Trails	57	57	59	61	61	63
<b>Total On-street + Trail</b>	<b>316</b>	<b>342</b>	<b>379</b>	<b>405</b>	<b>419</b>	<b>463</b>
Bike Parking Spaces		2,550	3,072	3,234	3,834	5,000
Bike Share Stations		18	41	46	83	n/a

\* *Enhancing existing On-street bikeways decreases one subcategory miles and increases another. For example, when one mile of existing Basic Bike Lane is enhanced to become a Buffered Bike Lane, the former category loses one mile and the latter gains one mile.*

In planning the on-street bicycle network, City staff evaluate design options and treatments to ensure the final roadway configuration provides safe and convenient travel options for all roadway users. See Attachment B for examples of typical bikeway types in the City of San José.

### **Bicycle Parking**

In 2018, 162 public bicycle parking spaces were installed at various locations throughout the City, bringing the total number of public bike parking spaces in San José to 3,234. The City has plans to add an additional 600 public bicycle parking spaces through 2019 to support meeting the *Bike Plan 2020* goal of having 5,000 bike parking spaces within the City. The Bike Plan goal of 5,000 parking spaces includes publicly available bicycle parking facilities installed by DOT. While this number does not include privately constructed bike parking facilities, it is important to note that the San José Municipal Code requires bike parking facilities with new development.



## **B. SAN JOSE TRAIL NETWORK: IMPLEMENTATION STATUS**

San José's Trail Network is one of the nation's largest, with 61 miles open to the public as of February 2019. The paved trails account for 85% of the network. The remaining 15% of the inventory have a gravel (interim) surface, and may be subject to future pavement per related master plans. The urban Trail Network is composed of Core Trails (major routes) and Edge Trails (most often, neighborhood connector trails). An additional 13 miles are available via Rural Trails; found currently at Alum Rock Park and Guadalupe Oak Grove Park.

## **C. SHARED MICRO-MOBILITY PROGRAMS**

In 2018, the City continued to partner with the private sector to expand transportation options for San José residents and visitors. Efforts included continuing expansion of the Ford GoBike bike share program and creating a new permit program to regulate the use of shared electric scooters.

### **Bike Share**

San José's public bike share system, Ford GoBike, allows people to rent a bike at an automated station, ride it for short trips, and return it to any other automated station. In partnership with the Metropolitan Transportation Commission and local agencies, Ford GoBike provides a regional bike share system for the Bay Area, with major operations in San José, San Francisco, Oakland, Berkeley, and Emeryville. Treating bike share as a regional system allows the program to serve as a first-last mile connector to transit and helps residents make local trips. Ford GoBike was purchased in 2018 by transportation network company Lyft.

In coordination with DOT, Ford GoBike expanded its operations in San José by adding five new stations in 2018 and four new stations in early 2019 for a total of 57 stations.

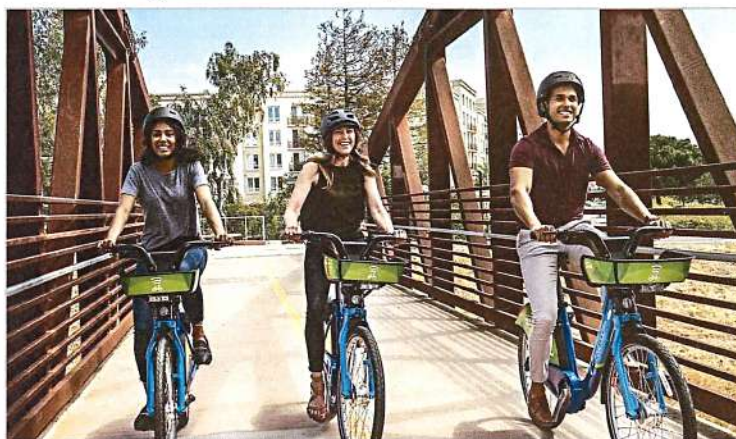
Stations added in 2018:

- Oak Street at 1<sup>st</sup> Street
- Julian Street at 2<sup>nd</sup> Street
- Empire Street at 7<sup>th</sup> Street
- Bestor Avenue at 6<sup>th</sup> Street
- Mission Street at 1<sup>st</sup> Street

Stations added in early 2019:

- Taylor Street at 9<sup>th</sup> Street
- Jackson Street at 13<sup>th</sup> Street
- Empire Street at 10<sup>th</sup> Street
- Gish Road at 1<sup>st</sup> Street

**Figure 2 – Guadalupe River Trail**



In 2018, Ford GoBike also added 120 electric-assist shared bikes (e-bikes) and launched a 200-bike dockless shared bike pilot in North San José. New e-bikes allow users to ride farther with less effort and help with inclines at overcrossings (often found at bridge structures spanning highways)



and undercrossings (often found along the trail network beneath roadways). The dockless bike share pilot in North San José allows users to park bikes on public sidewalks (clear of pedestrian paths of travel), rather than at a fixed bike share station.

During 2019, an additional 26 stations will be added to San José's system for a total of 83 stations. This expansion will broaden the existing system service area from the Downtown core to the Greater Downtown area, Midtown, Willow Glen, the Metro/Technology Airport area, and the Berryessa BART station area.

In 2019, Ford GoBike will also begin deploying "hybrid" e-bikes in San José – shared bikes that can be docked in bike share stations or parked independently away from any station, similar to the North San José dockless pilot. DOT staff is currently working with Ford GoBike on public outreach and logistics surrounding dockless bike parking.

### **Shared Electric Scooters**

In February 2018, the first of many shared electric scooters (e-scooters) were deployed on San José rights-of-way. E-scooters are a type of transportation new to cities in the U.S. and across the world. Similar to dockless shared bikes, users can rent an e-scooter for a short period of time using a mobile app, then park the scooter at their destination without requiring a station or dock.

Since February 2018, four e-scooter companies have operated at various times in San José – Lime, BIRD, Skip, and Wind – with Lime and BIRD still currently in operation. When initially deployed, the City had no existing rules to govern the operations of shared scooter business, only regulations around right-of-way obstructions. Similarly, the State of California had no codes regarding these operations. Therefore, the City concluded that e-scooters were operating in a regulatory void, and DOT initiated efforts to create a regulatory framework and permit system for shared e-scooter businesses.

Working in coordination with several City departments, Council Offices, and the Mayor's Office, along with community partners such as San José State University and VTA, the City spent several months in 2018 developing a regulatory system and permit program and obtaining public input. In December 2018, the City Council adopted a shared-micro-mobility ordinance that provides a regulatory framework for dockless devices within the public rights-of-way. The ordinance requires companies to obtain a permit; carry insurance and indemnify the City; follow regulations regarding parking, customer service, safety, and maintenance; and share data. The ordinance also requires that all shared e-scooters have technology to prevent them from being ridden on sidewalks by July 1, 2019. Council also adopted annual permit fees to enable the City to recover costs related to administering the



micro-mobility program. The program considers equity by requiring companies to offer a discount to low-income individuals.

Additionally, the City Council approved a new position in DOT to manage this program. DOT is actively recruiting for this position and plans to fill it this spring. DOT staff are currently coordinating with e-scooter companies for permitting and ensuring companies comply with permit regulations, including sidewalk prevention technology. DOT anticipates permitting 3-4 companies to operate in San José. The City’s regulatory system does not limit the number of operators, number of e-scooters, nor in which part of the city they may operate.

**D. OUTCOMES: MODE SHIFT AND SAFETY**

Program success will be measured not just in miles of bikeways, but also in usage (“mode shift”) and safety.

**Mode Shift**

Mode shift refers to the change in travel modes over time, for example changing from driving alone to riding a bike. The *Envision San José 2040 General Plan* sets aggressive goals for mode shift by 2040: 15% of trips will be made by bike. Historically, DOT has measured year-to-year mode shift using Census data. However, this data source focuses on large geographic areas and does not provide the finer granularity needed for city-level planning. To address this need, DOT’s Planning, Policy & Sustainability team is currently exploring best practices to measure mode shift for all transportation modes, including bicycling, at a city and neighborhood level. This research will lead to development of standard operating procedures (SOPs) to measure mode share and will be included in the City’s updated Bike Plan and upcoming Access & Mobility Plan. In addition, on larger bikeway projects, DOT has begun conducting counts “Before” and “After” (one-year after completion) project construction. Because these data focus specifically on locations where bike facilities have been added, they are more reflective of potential for future mode shift. The table below provides samples of these two data types:

**Table 2 – Bike Activity**

<b>Geographic Area</b>	<b>Data Source</b>	<b>Time Period</b>	<b>Bike Activity</b>
Citywide	U.S. Census *	2010-2017	+ 13%
Lincoln Avenue	CSJ DOT Counts	2015-2016	+ 183%
Guadalupe River Trail (Coleman Avenue Count Station)	PRNS annual Trail Count	2017-2018	- 10%

\* Based on U.S. Census, American Community Survey, annual 5-year estimates

Until those new SOP’s are developed, DOT will continue to rely on Census data and project specific counts.



**Safety**

In May 2015, San José became the fourth city in the nation to formally adopt a Vision Zero transportation safety initiative, which aims to eliminate fatalities and reduce severe injuries caused by traffic collisions. Of significance is that in 2017, crashes involving bicyclists declined from an average of approximately 300 injury crashes in recent years, to 200 injury crashes in 2017.



The Vision Zero plan identified major streets in San José that have the highest incidence of fatal and severe injury crashes (“Priority Safety Corridors”). DOT coordinates its annual bikeways work plan to prioritize safety enhancements on these corridors along with other major roadways in the City. DOT has also aggressively pursued grant funding to implement safety improvements along Vision Zero corridors. As a result, the City has received funding to implement transportation safety measures along McKee Road, McLaughlin Avenue, Senter Road, Tully Road, and White Road.

**E. BETTER BIKE PLAN 2025: BIKE PLAN UPDATE**

**Bike Plan 2025**

The City’s current bike plan, *Bike Plan 2020*, was approved by City Council in 2009. In 2017, DOT obtained grant and city funding to create a new city bike plan. In June 2018 a consultant agreement was awarded to assist the City with development of the plan, and work began in July 2018. Called *Better Bike Plan 2025*, the 18-month project will create a new city bike plan that:

- Integrates current City planning and policies (e.g., Envision San José 2040 General Plan, Urban Village Planning, Vision Zero San José, Mobility Plan, Climate Smart San José.)
- Addresses changes in our transportation system (e.g., BART, VTA Bus and Light Rail Next Network, High Speed Rail, Shared and/or Autonomous Vehicles, etc.)
- Develops a new low-stress bike network that serves all ages, abilities, and areas
- Reaches and incorporates input from diverse communities

**Table 3 – Bike Plan 2025 Schedule**

Key Milestones	Schedule	Status
Project Kickoff	July 2018	Completed
Community Engagement	Ongoing	In Progress
Existing Conditions & Policies	Aug 2018 – Mar 2019	Completed
Policy Recommendations	Feb – Apr 2019	In Progress
Facility Recommendations	Mar – May 2019	In Progress
Cost Estimates & Implementation Plan	Jun – Aug 2019	Scheduled
Draft Plan	Sep 2019	Scheduled
Final Plan	Jan 2020	Scheduled

To insure input is received from a wide diversity of people in San José, the Community Engagement & Outreach task incorporates a Community Based Organization (CBO) model that partners with local non-profits immersed in local neighborhoods. *Better Bike Plan 2025* partners with three CBO's: LUNA, VIVO and Veggielution – all of which have strong relationships with local groups throughout the City. These partnerships allow DOT staff and consultants to reach local groups where they live and work. While DOT staff will host at least three *Better Bike Plan 2025* public workshops, the majority of outreach will entail going to existing neighborhood, school, and other community meetings to engage more residents. To date, DOT staff have presented at more than a dozen community meetings, with plans for a dozen more.

*Better Bike Plan 2025* also includes a Technical Advisory Committee (TAC) made up of representatives from City departments and related transportation organizations including VTA and Caltrans. The TAC meets multiple times during the project to provide input.

**Low Stress Bikeways**

Since the City approved *Bike Plan 2020* in 2009, new studies focusing on the bike rider's user experience indicate that most people will avoid riding their bike if any part of their trip has challenges that create an uncomfortable level of stress while biking. Called "Bicycle Level of Traffic Stress" (BLTS), this model introduces a paradigm shift suggesting the worst section of a possible bike trip (e.g., a freeway interchange or busy intersection) determines whether someone will make the trip by bike. BLTS reinforces the fact that a continuous, comfortable, connected network of bikeways is critical to increasing trips by bike and achieving the City's vision for bicycling. Focusing on low-stress bikeways also acknowledges that bikeways should accommodate people of "all ages and skill abilities". As highlighted in the table below, the BLTS model defines four Levels of Traffic Stress to identify the amount of traffic stress different types of bicyclists will tolerate:

**Table 4 – Bicycle Level of Stress Model**

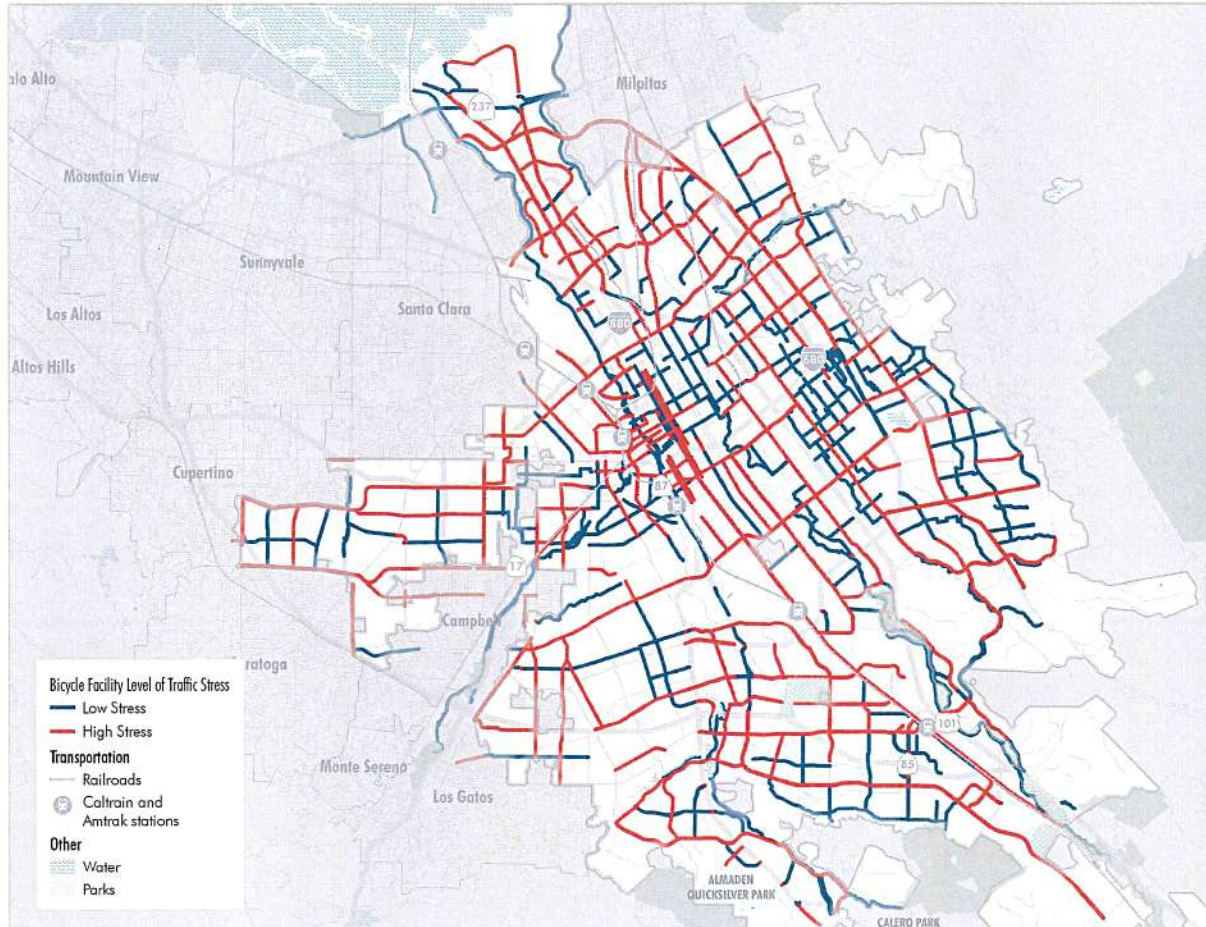
<b>Level of Traffic Stress</b>	<b>Characteristics</b>	<b>Suitable for</b>
1	Lowest stress: trails (off-street) and separated/protected bikeways (on-street)	Everyone including children
2	Lower stress: buffered, green bike lanes, Bike routes with traffic calming	People Interested in cycling but Concerned about safety
3	Medium stress: basic bike lanes	People Enthusiastic & Confident about bicycling
4	High Stress: bike route or no bike facility along roads with high speed or volumes	Strong & Fearless bicyclists

On calmer, neighborhood streets, Low Stress bikeways usually include traffic calming features that slow traffic and prioritize bikes. These streets are often called Neighborhood Bikeways or Bike Boulevards. On busier streets, Low Stress bikeways usually include enhanced facilities such as



physical separation (for example, curbs, delineators, or parked cars) between bikes and motor vehicles. These facilities are generally called Protected Bike Lanes.

**Figure 3 – Existing Bikeways & Level of Traffic Stress**



Source: Better Bike Plan 2025 analysis by Toole Design Group

DOT is applying this concept of Low Stress Bikeways to the downtown Better BikewaySJ project highlighted in the following section, and to create our new City bike plan, *Better Bike Plan 2025*.

## **F. 2018 COLLABORATIONS: BETTER BIKEWAYS & TRAIL DEVELOPMENT**

### **Better BikewaySJ**

During summer and fall 2017, DOT worked with the Knight Foundation and the National Association of City Transportation Officials (NACTO) to develop a two-year plan to increase bicycling in central San José, which roughly includes the area within a two-mile radius of the downtown core. With a strong network of public transit and higher-density, mixed-use



development, central San José is an ideal setting for bicycling infrastructure as a transportation investment.

In 2018, DOT completed design, outreach and construction for a majority of Better BikewaySJ, a two-year project. The project used best practices in bikeway design to build “all-ages-and-abilities” bikeways – mainly protected bike lanes and calmer minor streets - where everyday users feel comfortable riding. Better BikewaySJ leveraged resources by implementing in conjunction with DOT’s annual Pavement Maintenance program.

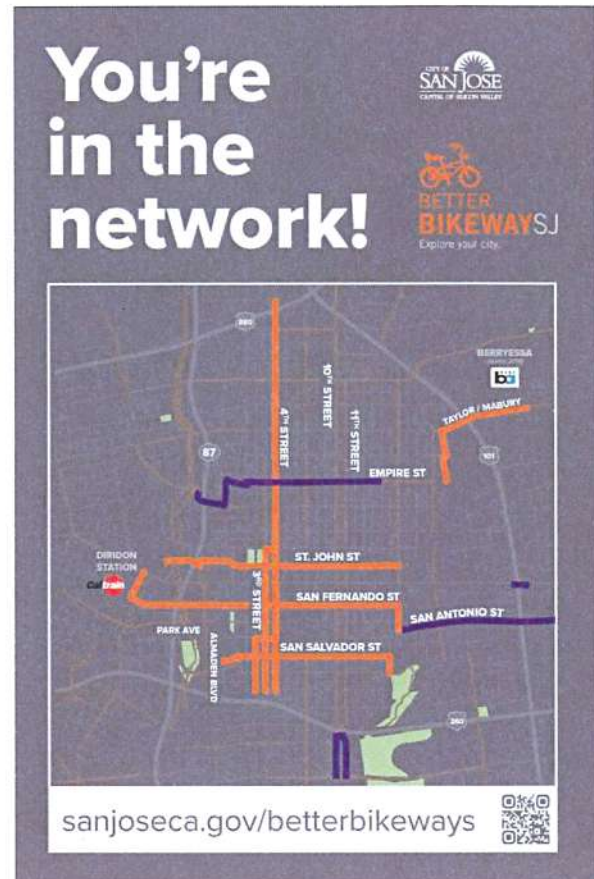
During 2018, nearly 10 miles of bikeways were upgraded (five miles protected bike lanes, three miles bike boulevards, and two miles bike lanes) along five corridors (San Fernando, St. John, San Salvador, Taylor/Mabury, and Third Street). Bike usage counts were collected in April 2018, before the project, and will be repeated in April 2019 to evaluate the immediate results. Figure 3 shows the network with 2018 projects in orange and 2019 projects in purple. Three sections of 2018 projects (San Carlos Street, 4<sup>th</sup> Street, and Bus Islands on San Fernando Street) required additional planning efforts and will be implemented in 2019.

By using quick-build materials like plastic bollards and roadway markings (rather than concrete), DOT was able to fine-tune design based on feedback from residents and downtown stakeholders.

In late 2018, the Better BikewaySJ project was awarded a SPUR Impact Award, and has caught the attention of a statewide and national audience. The California Transportation Commission awarded the project a nearly \$10 million grant to build the portion of the project along San Fernando out of concrete. Our partner on the Better BikewaySJ project, NACTO, is bringing a national audience to San José in May to celebrate the effort.

In 2019, Better BikewaySJ will focus on streets that complete key east-west connections (Empire Street and San Antonio Street) and small segments of streets that connect bikeway gaps (10<sup>th</sup> Street and 11<sup>th</sup> Street south of 280). The City will continue to work with NACTO and other partners to improve bicycling, walking, and other low-carbon transportation choices as part of the American Cities Climate Challenge.

Figure 3 – Better BikewaySJ



2018 Projects (orange), 2019 Projects (purple)

## **Trail Development**

In 2018, Trail Program staff worked with the Public Works Department, other departments, and consultant teams, to deliver several new trails, advance studies and design work for future development, gathering of user data, and building regional alliances. A few examples include:

1. Coyote Creek Trail (Brokaw Road to UPRR): Plans developed to 95% stage, coordinating permits required for construction.
2. Coyote Creek Trail (William Street to Story Road): Plans completed, coordinating with Caltrans to release federal funds for construction.
3. Coyote Creek Trail (Story Road to Phelan Avenue): Preparing plans to 100% stage, securing permits for upcoming bid and construction.
4. Coyote Creek Trail (Phelan Avenue to Tully Road): Commence development of plans.
5. Coyote Creek Trail – Singleton Road Crossing: Prepare plans to 35% stage.
6. Three Creeks (Coe Avenue to Minnesota Avenue): Open August 2018
7. Highway 237 Bikeway Trail Study: Commence study for dual trail development
8. Los Gatos Creek Trail – Reach 5BC: Prepare plans to the 90% stage.
9. Yerba Buena Creek Pedestrian Bridge Study (Completed)
10. Trail Count 2018, 12<sup>th</sup> annual count and survey (Completed)

## **G. FUNDING**

To maximize City's ability to deliver projects, DOT and PRNS will continue to leverage City investments with local, state and federal funding sources.

### **Measure B**

The recent resolution of litigation regarding Measure B opens access to funding available annually for bike and pedestrian projects and programs. DOT and PRNS staff have been actively engaged in refining the list of City projects eligible for Measure B, as well as insuring scoring criteria for these funds are well-defined. DOT and PRNS are in the final stages of developing the list of prioritized projects for potential funding during the first ten years of the measure.

As the largest City in the County with 54% of the total County population, the City will seek to secure the maximum amount of Measure B Bicycle and Pedestrian Program funding (capped at 50%) to improve bicycling and pedestrian walking within the City; which would amount to a maximum of approximately \$3.5 million in capital funding annually. Measure B prioritizes projects that provide connections to transit, employment, and schools; close existing gaps in the bicycle and pedestrian networks; and improve the safety and convenience of bicyclist and pedestrians.



**Transportation Development Act, Article III**

As shown in Table 5, the guaranteed annual grant for bike and pedestrian projects will provide the City with \$1,183,758 for FY 2019-20. DOT will bring recommended projects to the City’s Bicycle & Pedestrian Advisory Committee in April 2019 and to City Council for approval in May 2019.

**Table 5 – 2019/20 Transportation Development Act, Article III**

	<b>Recommended Projects</b>	<b>Amount</b>
1.	Citywide Bikeway Implementation <i>Design, conduct outreach, prepare environmental analysis, and install bikeways throughout the City.</i>	\$883,758
2.	Pedestrian Safety Improvements <i>Construct sidewalk gap closures and safety improvements citywide</i>	\$100,000
3.	Pedestrian Master Plan <i>Develop Citywide Pedestrian Master Plan</i>	\$100,000
4.	Citywide Bicycle Safety/Education <i>Support Vision Zero safety program pedestrian and bike efforts.</i>	\$100,000
	Total	\$1,183,758

**EVALUATION AND FOLLOW-UP**

DOT’s Transportation Options Program will continue implementation of its work plan, pursue additional funding opportunities, and report back in spring 2020 with an annual progress report.

**COORDINATION**

This report has been coordinated with the City Attorney’s Office.

/s/  
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/s/  
JON CICIRELLI  
Acting Director of Parks, Recreation  
and Neighborhood Services

For questions, please contact John Brazil, DOT Active Transportation Program, at 408-975-3206, and Yves Zsutty, PRNS CIP Division, at 408-793-5561.

Attachment