



Memorandum

TO: TRANSPORTATION AND
ENVIRONMENT COMMITTEE

FROM: Jim Ortbal
Angel Rios

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

DATE: March 14, 2018

Approved

Date

23 MARCH 2018

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:

- *Green Vision Goal 10 (2007)*: identifies a planned 100 mile off-street trail network with 400 miles of on-street bikeways
- *Bike Plan 2020 (2009)*: identifies a planned 500 mile network, including the 100 miles of off-street trails from *Green Vision Goal 10*
- *Envision San José 2040 General Plan (2011)*: sets a 2040 goal of 15% of trips by bike
- *Trail Program Strategic Plan (2016)*: defines a plan to complete the 100 mile off-street trail network
- *Climate Smart San José (2018)*: calls for updating and implementing the City's Bike Plan and Better BikewaySJ to enable bicycling as a transportation option 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. Trail Network: Implementation Status
- C. Bike Share
- D. Outcomes: Are People Riding?
- E. Bike Plan Update – Strategies to Achieve our Vision and Goals
- F. 2018 Collaborations: Better Bikeways & “Big Three” Trails
- G. Funding
- H. Culture Change (Encouragement and Partnerships)

A. BIKE PLAN 2020: IMPLEMENTATION STATUS

In 2017, DOT continued to make solid progress toward the Bike Plan 2020 goals by:

- Installing 35 miles of new on-street bikeways
- Enhancing 20 miles of existing bikeways
- Installing 522 bicycle parking spaces

As a result, the City currently has approximately 320 miles of on-street bikeways and 3,072 bicycle parking spaces (DOT installed). Combined with 59 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 by providing safe and convenient opportunities for people to bike ride within the City.

On-Street Bikeways Inventory

Table 1 shows the City’s progress toward our *Bike Plan 2020* goal of completing a 400 mile on-street bikeway network by January 1, 2020. As shown, the City installed 35 miles of new bikeways in 2017, and is projected to install approximately 65 miles of bikeways in 2018, of which 17 miles will be completed through our Annual Pavement Maintenance Program, and 48 miles will be completed through a Federal grant that DOT secured. See Appendix A for a map of existing and planned bikeways.

Table 1: On-street Bikeway Miles by Year (as of January 1)	
2015	238
2016	259
2017	285
2018	320
2019	385
2020	400

In planning the 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. Figure 1 shows the variety of design solutions and treatments used.

Figure 1 – Typical Bikeway Treatments in San Jose



Bike Route with Sharrows (Foxworthy Av)



Basic Bike Lane (White Rd)



Buffered Bike Lane (Tully Rd)



Green Bike Lane (Silver Creek Valley Rd)



Parking Protected Bike Lane (4th St)



Off-Street Trail (Guadalupe River Trail)

Table 2 below shows bicycle facilities (including off-street trails) installed as of January 1, 2017 and 2018, and the projected inventory as of January 1, 2019.

Table 2: Actual & Projected Bike Facilities (as of January 1)			
	Actual (Jan 2017)	Actual (Jan 2018)	Projected (Jan 2019)
Bike Routes (Sharrows)	39	50	105**
Basic Bike Lanes*	194	179	165
Enhanced Bike Lanes (buffered, green, and/or protected)	52	91	115
Off-street Trails	57	59	62
Total Bikeway & Trail Miles	342	379	447
Bike Parking Spaces	2,550	3,072	3,672
Bike Share Stations	18	41	83

*Enhancing existing "basic bike lanes" decreases that category miles and increases "enhanced bike lane" miles.

Bicycle Parking

In 2017, 522 public bicycle parking spaces were installed at various locations throughout the City, bringing the total number of public bike parking spaces in San Jose to 3,072. The City has plans to add an additional 600 public bicycle parking spaces annually through 2020 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 provided by the City or other private entities.

B. TRAIL NETWORK: IMPLEMENTATION STATUS

San Jose's Trail Network is one of the nation's largest; with 59.49 miles open to the public as of February 2018. 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. BIKE SHARE PROGRAM

In 2017, the City received 23 new bike share stations from its partner Ford GoBike (owned and operated by Motivate). The City currently hosts 45 bike share stations (four have been added since January 1, 2018).

The Ford GoBike system allows people to rent a bike at an automated public station, ride it for short trips, and return it to any other automated station. During 2018, the City will add 38 more stations to its 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, Willow Glen and the Berryessa BART station area. DOT staff is working with Ford GoBike on public outreach and station siting to promote usage.



During summer 2018, in partnership with the City, Ford GoBike will also pilot a 200 bike “dockless” bike share system in North San José. Dockless systems allow people to check out any available bike using a smartphone application, ride the bike, and park it at any destination.

In the last twelve months, several new bike share operators have entered the market. Many of these operators focus on dockless systems, sometimes using e-bikes or e-scooters (bikes or scooters with an electric assist motor). The City’s existing agreement with Ford GoBike does not prohibit other operators from launching systems that exclusively use e-bikes or e-scooters. State law provides only basic guidance on regulating bike share systems and e-bikes/e-scooters. To fill this regulatory void, DOT is coordinating with Public Works and the City Attorney’s Office to develop a permit and regulatory process for all types of bike share systems (bikes and scooters; station-based and dockless; human-powered and electric assist). After completing outreach, DOT staff will bring recommendations to City Council by fall 2018.

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, the

City's Transportation Options program 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 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. Table 3 below provides samples of these two data types:

Table 3: Bike Mode Shift			
<i>Geographic Area</i>	<i>Data Source</i>	<i>Time Period</i>	<i>Mode Shift</i>
Citywide	U.S. Census	2010-2016	+16%
Lincoln Avenue	CSJ DOT Counts	2015-2016	+183%

Until those new SOP's are developed, DOT continues to rely on Census data and project specific counts.

Safety

In May 2015, San Jose 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. The plan identified major streets in San Jose that have the highest incidence of fatal and severe injury crashes ("Priority Safety Corridors"). The City's Bicycle and Pedestrian Facilities team coordinates its annual bikeways work plan to prioritize safety enhancements on these corridors along with other major roadways in the City.



DOT has 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. BIKE PLAN UPDATE

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 commute 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".

The BLTS model defines four Levels of Traffic Stress to identify the amount of traffic stress different types of bicyclists will tolerate:

Level of Traffic Stress	Characteristics	Suitable for
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.

DOT is applying this concept of Low Stress Bikeways to update our City Bike Plan discussed immediately below, and to the Better BikewaySJ project discussed in the next section.

Bike Plan 2025 Update

The City's current bike plan, *Bike Plan 2020*, was approved by City Council in 2009. DOT recently obtained grant funding to update this plan. On February 15, 2018, DOT released the Request for Proposals to update the City's *Bike Plan 2020*. Proposals have been received and interviews with proposers conducted. A contract award is expected in late April. The Bike Plan Update schedule lasts 18 months and will allow the City to create a new bike plan that:

- Integrates current City planning and policies (e.g., Envision San Jose 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

Bike Plan 2025 will better position the City to achieve its Mode Shift, Vision Zero, and Sustainability goals.

F. 2018 COLLABORATIONS: BETTER BIKEWAYS & TOP TEN TRAILS

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. With about half of San Jose's residents and jobs located within a 4-mile distance (less than a 30-minute bike trip) of City Hall, and with a strong network of public transit, central San José is an ideal setting for bicycling infrastructure as a transportation investment.



Known as "Better BikewaySJ", DOT will build the spine of a better bikeway network in the next two years, using a toolkit already available for streets: separating bikes and traffic using inexpensive, traffic-tested materials, switching the position of parking lanes and bike lanes during paving projects to let parked cars do the work of protecting the bikeway. By coordinating with planned pavement maintenance work, SJDOT has the potential to build more than a dozen miles of protected bike lanes, extended by a network of low-stress neighborhood streets, in less time than a typical capital project for one street would take. This network will extend from the downtown area through and beyond the ring of freeways bordering it (Highways 280, 101, 87, and 880). Better BikewaySJ planning will be coordinated with the development of the City's next bike plan (Bike Plan 2025).

Top Ten Trails

In 2017, Trail Program staff worked with the Public Works Department 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 from Highway 237 Bikeway to Tasman Drive (Construction completed and open to the public)
2. Three Creeks from Coe Avenue to Minnesota Avenue (Commence construction)
3. Guadalupe River Trail Master Plan from Willow Street to Chynoweth Avenue (Master Plan completed)
4. Penitencia Creek Trail from Noble Avenue to Dorel Drive (Construction completed and open to the public)
5. Coyote Creek Trail from Story Road to Tully Road (\$5.3M Grant secured and agreement executed)
6. Trail Signage Guidelines benefit from first major update.
7. Thompson Creek Trail from Tully Road to Quimby Road (Construction underway and open to the public)
8. North San Jose Access and Ramp Study (Completed)
9. Trail Count 2017, 11th annual count and survey (Completed)
10. Bay Area Trails Collaborative information sharing, and attending TrailNation on behalf of Bay Area trail agencies.

G. FUNDING

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

Measure B

The recent passage of the Countywide Measure B Transportation Sales Tax is projected to provide \$250 million in funding toward completion of bicycle and pedestrian projects of countywide significance and \$1.2 billion in Local Streets and Roads projects that would include complete street elements within Santa Clara County over the next 30 years. As the largest City in the County with 54% of the total County population, the City will seek to secure approximately 50% of Measure B Bicycle and Pedestrian Program funding to fund bicycle and pedestrian projects and programs within the City. 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 3, this guaranteed annual grant for bike and pedestrian projects will provide the City with \$843,927 for the upcoming fiscal year. DOT will bring recommended projects to the City's Bicycle & Pedestrian Advisory (BPAC) for input in March 2018 and to City Council for approval in May 2018.

Table 3: 2018/19 Transportation Development Act, Article III, Recommended Projects		
1.	Citywide Bikeway Implementation – <i>Design, conduct outreach, prepare environmental analysis and install bikeways throughout the City.</i>	\$593,851 if max Safety/Education
2.	Citywide ADA Curb Ramps – <i>Install ADA curb ramps on public sidewalks throughout the City.</i>	\$100,000
3.	Citywide Bicycle Safety/Education <i>Support Vision Zero safety program ped and bike efforts.</i>	\$150,076
	Total	\$843,927

H. CULTURE CHANGE (ENCOURAGEMENT & PARTNERSHIPS)

To achieve the City's goal of increasing travel by bike and reducing single auto trips, the City must implement programs and partnerships to change the culture from a default of driving to a culture where biking, walking and taking transit are convenient, safe, and viable options. To this end, the City and its partners have developed initiatives and events to encourage the use of all transportation options.

The City hosts a variety of events and programs to encourage bicycling. These include PRNS' *VivaCalleSJ* event, as well as DOT's *Smart Moves*, *WalknRoll*, *Green Trip Challenge*, and *City Hall Employee Bike Fleet* programs. The City also collaborates with community partners such as Silicon Valley Bicycle Coalition (Bike to Work Day). In 2017, our partners organized and hosted several exciting bike events such as San Jose Bike Party's monthly rides, Ride ESSJ events, the San Jose Public Library's *Gira de Libro* bike tour, and the annual *Silicon Valley Bikes!* Festival. Additionally, Silicon Valley Bicycle Coalition programs complement and support the City's efforts to increase bicycling. These include Bike Safety Classes, Special Event Valet Bike Parking, Route Scout services, Bike Friendly Work Place designations, and a local team of volunteers.

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 2019 with an annual progress report.

TRANSPORTATION AND ENVIRONMENT COMMITTEE

March 14, 2018

Subject: Bike Plan & Trail Annual Report

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COORDINATION

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

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/s/

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Attachment