CHAPTER 8: 2030 INFRASTRUCTURE PLAN

To achieve the Plan's vision and goals, the City and the community of Alameda must commit themselves and their available resources to quickly making changes to the City's transportation infrastructure and facilities to support active transportation. This chapter identifies an ambitious set of capital improvement project priorities for the next eight years (2023-2030), that in tandem with the programs presented in Chapter 7, will do that. Recognizing the key link between active transportation and greenhouse gas emission reductions, the 2030 timeline coincides with the City's 2030 targets for greenhouse gas reductions established by the Climate Action and Resiliency Plan.

2030 INFRASTRUCTURE PLAN

The 2030 Infrastructure Plan is a set of 32 projects designed to achieve the Plan's five goals of: 1) Safety, 2) Equity, 3) Mode Shift, 4) Connectivity and Comfort, and 5) Community. The projects, except for those led by other public agencies, were selected based on a rigorous project evaluation and prioritization process. Each proposed bikeway project and each public street segment (used by pedestrians) were scored on safety, demand, and equity criteria. Almost every project and street segment that ranked "high" through this evaluation has been included in the 2030 Infrastructure Plan. Programmatic projects, such as trail and sidewalk maintenance, were also qualitatively evaluated and included. The prioritization process and results are described in detail in *Appendix G. Active Transportation Project Prioritization*. Table 10 shows the full list of projects, most of which include both bicycle and pedestrian improvements. The table lists the projects roughly in the order in which they will be completed, and the numbering does not infer priority. Projects that will be fully completed by other entities (numbered 28-32) are grouped at the end of the list.

2030 LOW-STRESS BACKBONE NETWORK

The 2030 Infrastructure Plan also includes building a Low-Stress Backbone Network, which is mapped in Figure 10 and made up of the projects with a check mark in the final column of Table 10. This network is a subset of the existing and proposed low-stress facilities in the Low Stress Bikeway Vision Network (Figure 7 in Chapter 5) that will create an essential "backbone" of a complete, connected bicycle network. It is designed to allow people of all ages and abilities to get to key destinations, including schools, parks, transit, bridges, shops, and jobs. Alameda's newly added bicycle (and pedestrian) facility type, the Neighborhood Greenway, is integral to building the network.

Table 10. 2030 Infrastructure Plan

	Project	Phasing (& partners)	Pedestrian Project	Bicycle Project	Trail Project	2030 Low-Stress Backbone Network
1	**Central Avenue Safety Project** (Pacific Ave to Sherman St) *Pedestrian crossing improvements on full corridor, separated bike lanes and bike lanes*	Completed by 2024	✓	✓		✓
2	**Grand Street Safety Project** (Shore Line Dr to Clement Ave) *Pedestrian safety improvements and separated bike lanes*	South of Encinal: Completed by 2024 North of Encinal: Completed by 2030	✓	✓		✓
3	**Clement Avenue: Cross Alameda Trail Gap Closures** (Ohlone to Tilden Way to Miller-Sweeney Bridge) *Pedestrian safety and ADA improvements, separated bike lanes and shared use paths*	Completed by 2025 (City and development partners)	✓	✓	✓	✓
4	**Park Street and/or Oak Street Corridor** (Full extents) *Initial Phase: Develop comprehensive transportation study of the two corridors, with community and business input, to determine pedestrian safety improvements and select Park or Oak for a low-stress bicycle facility. Build improvements using lower-cost, quick-build materials.* *Final Phase: Implement long-term plan, with permanent materials.*	Initial Phase: Completed by 2026 Final Phase: Completed plans by 2030, for future construction post-2030	✓	✓		✓

	Project	Phasing (& partners)	Pedestrian Project	Bicycle Project	Trail Project	2030 Low-Stress Backbone Network
5	**Webster Street** (Atlantic Ave to Central Ave) *Initial Phase: Develop comprehensive transportation study, with community and business input; design and build lower-cost pedestrian safety improvements and bicycle lanes (standard and buffered).* *Final Phase: Implement long term plan, with separated bike lanes and pedestrian safety improvements, with permanent materials.*	Initial Phase: Completed by 2025 Final Phase: Completed plans by 2030, for construction post-2030	✓	✓		✓
6	**Trail maintenance and upgrades** (Main island and Bay Farm trails, including along Island Drive and shoreline trails) *Inventory shared-use trail needs and ownership, prioritize locations for improvements, and maintain and upgrade*	Ongoing			✓	
7	**Sidewalk gaps completion** (Various) *Inventory sidewalk gaps and complete key gaps, as funding allows*	Ongoing	✓			
8	**Oakland-Alameda Bicycle-Pedestrian Bridge** (West Alameda to Oakland)	Completed Project Initiation Document (PID) and identification of Lead Agency for all future phases by 2024 Construction by others post-2030	✓	✓	✓ (Bay Trail)	
9	**Estuary Water Shuttle Operations** (West Alameda to Oakland)	Launch pilot service by 2024 (City, WETA and development partners)	✓	✓		

	Project	Phasing (& partners)	Pedestrian Project	Bicycle Project	Trail Project	2030 Low-Stress Backbone Network
10	**Bay Farm Bike Bridge Access Upgrades** *Identify and construct set of improvements within 1000 feet of both sides of bridge to improve path conditions, crossings, and connections to streets. Prioritize Wooden Bridge surface improvements.*	Completed by 2026	✓	✓	✓ (Bay Trail)	✓
11	**Pacific Avenue (Marshall Way to Park St)** *Neighborhood Greenway, including transition of the Slow Street portion in near term*	Completed by 2024	✓	✓		✓
12	**San Antonio Avenue/San Jose Avenue/Morton St (Ninth to Fernside)** *Neighborhood Greenway, including transition of the Slow Street portion on San Jose/Morton in near term*	Completed by 2024	✓	✓		✓
13	**Versailles (Fernside to Calhoun), Calhoun (Versailles to Mound), Mound (Calhoun to Waterton), Waterton (Mound to Court), Court (Waterton to Bayview)** *Neighborhood Greenway, including transition of the Slow Street portion on Versailles Ave in near term*	Completed by 2024	✓	✓		✓
14	**Third Street** (Central Ave to Ralph Appezzato Memorial Parkway) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓
15	**Eighth Street** (Jean Sweeney Park to Pacific Ave) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓
16	**Ninth Street** (Pacific Ave to San Antonio) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓
17	**Chestnut Street** (Clement Ave to San Jose Ave) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓

	Project	Phasing (& partners)	Pedestrian Project	Bicycle Project	Trail Project	2030 Low-Stress Backbone Network
18	**Lincoln Avenue/Garfield Avenue** (Park to Fernside) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓
19	**Bayview Drive** (Broadway to Otis Dr) *Neighborhood Greenway*	Completed by 2025	✓	✓		✓
20	**Fifth Street** (Ralph Appezzato Memorial Parkway to Stargell Ave) *Separated bike lanes*	Completed by 2026		✓		✓
21	**Lincoln/Marshall/Pacific Corridor Improvements** (Main St to Broadway) *Pedestrian safety and crossing improvements; mix of buffered and standard bike lanes and Neighborhood Greenways*	Completed by 2030	✓	✓		✓ (portion)
22	**Willie Stargell Avenue Safety Improvements** (Main St to Fifth St) *Shared use path, speed reduction treatments, pedestrian crossing improvements*	Completed by 2030	✓	✓	✓	✓
23	**Fernside Boulevard** (Tilden to San Jose) *Separated bike lane and pedestrian safety improvements*	Completed by 2030	✓	✓	✓ (Bay Trail)	✓
24	**Safe Routes to School Access Improvements** (Various) *Complete improvements recommended in School Site Assessments.*	Ongoing/Completed by 2030	✓	✓		
25	**Eighth Street/Westline Drive** (Otis Dr to Central Ave) *Plan bicycle and pedestrian improvements; secure funding.*	Plans completed and funding secured by 2030		✓	✓	
26	**Neptune Park Path** (Webster St to Constitution Way) *Shared use path*	Completed by 2030	✓	✓	✓	

	Project	Phasing (& partners)	Pedestrian Project	Bicycle Project	Trail Project	2030 Low-Stress Backbone Network
27	**Alameda Point Street Rebuilds** (All streets within Site A and West Midway areas, and segments of Pan Am Way, Saratoga St, West Tower Ave, and West Redline to new Veterans Affairs (VA) facility and Northwest Territories) *Sidewalks, pedestrian safety improvements and separated bike lanes*	Completed in phases by 2030 (by City, development partners, and VA)	✓	✓		
28	**Miller-Sweeney Bridge** *Initial Phase: Add bicycle lanes (standard) to bridge* *Final Phase: Collaborate with County to select long-term option for adding shared use path or protected bicycle lanes.*	Initial Phase: Completed by 2023 (by Alameda County) Final Phase: Long term option selected by 2030 for construction post-2030.	✓	✓	✓ (Bay Trail)	
29	**Encinal Avenue Resurfacing and Road Diet** (Sherman St to Broadway) *Pedestrian safety improvements and bike lanes (standard)*	Completed by 2023 (by Caltrans)	✓	✓		
30	**Broadway/Otis Drive/Doolittle Drive Resurfacing and Improvements** (State Route 61) *Pedestrian safety and crossing improvements, bike lanes (standard), and separated bike lanes*	Completed by 2026 (by Caltrans)	✓	✓		
31	**Oakland Alameda Access Project** *Upgrades to existing paths to and within Webster and Posey Tubes*	Completed by 2027 (by Caltrans)	✓	✓	✓	
32	**Northern Waterfront Bay Trail Gap Closures** (At Wind River, Encinal Terminals, Alameda Marina and Boatworks) *Shared use paths*	Completed by 2030 (by property owners)			✓ (Bay Trail)	

2030 Low Stress Backbone Network

Connected network of low-stress facilities (shared use paths, separated bike lanes, and neighborhood greenways) prioritized for construction by 2030. Subset of Low Stress Bikeway Vision Network.

🚆 Amtrak Station

🚲 BART Station

⛴ Ferry Terminal

Schools and Libraries

Parks

Parks (future)

Shopping Centers and Business Districts

Hospital

Municipal and Other

All City of Alameda bikeway projects planned for construction through 2024 are marked as existing.

Bicycle Facilities

Existing	Proposed
Shared-use path or separate walking and biking paths	Shared-use path or separate walking and biking paths
Separated Bike Lane	Separated Bike Lane
Buffered Bike Lane on low speed and volume street	Buffered Bike Lane on low speed and volume street
Neighborhood Greenway	Neighborhood Greenway
	Low Stress Bikeway on Park or Oak – Type TBD

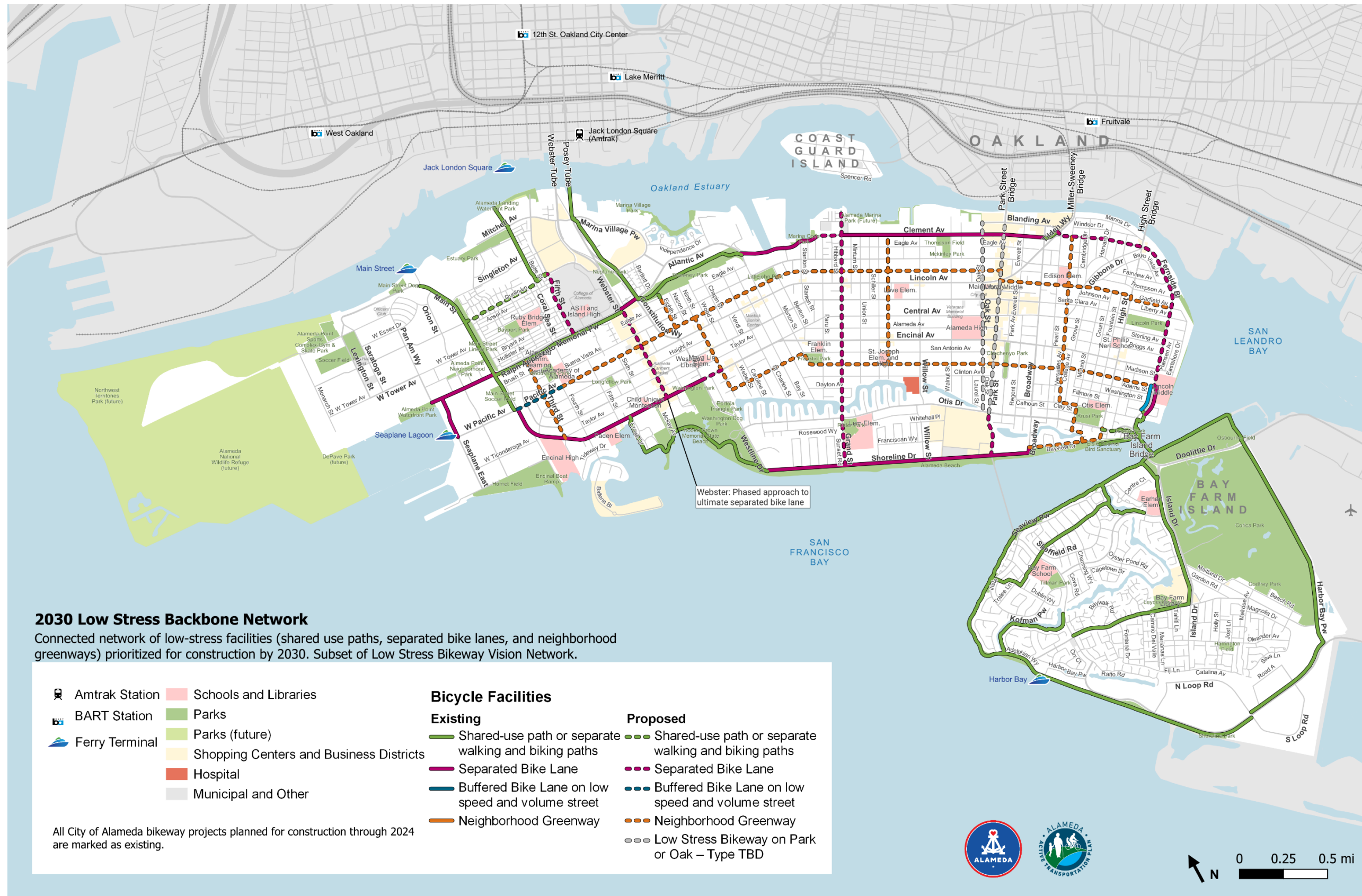Webster: Phased approach to ultimate separated bike lane

Figure 10. 2030 Low Stress Backbone Network

SLOW STREETS TO NEIGHBORHOOD GREENWAYS

In late 2021, the City Council considered the Slow Streets evaluation and staff recommendations and voted to continue the program until the Active Transportation Plan provided direction on the future of the program and these actions were implemented.

Pacific Avenue, San Jose Avenue, and Versailles Avenue, all current Slow Streets, are proposed in this Plan to become Neighborhood Greenways, which are traffic-calmed bicycle- and pedestrian-priority streets where vehicles are allowed but volumes and speeds are kept low. These three streets will be transitioned in the near term (by 2024) from Slow Streets to Neighborhood Greenways, using lower-cost infrastructure that can be built quickly. At that point, the temporary barricades will be removed.

The two remaining Slow Streets are not proposed to be upgraded to Neighborhood Greenways or another bikeway type in the near future, and will therefore be removed shortly after this Plan is adopted:

» *Santa Clara Avenue.* This street will continue to be a bicycle route, marked with "sharrow" stencils, as it was before 2020. It is not recommended as a Neighborhood Greenway since the Slow Streets section closely parallels Central Avenue, which will have separated bike lanes and other safety interventions making it a low stress facility. Also, it is not currently, nor proposed to be, a low stress facility east of Webster Street.
» *Orion Street.* This street segment will have speed humps added, as has been previously planned. The Orion Slow Street is not recommended as a Neighborhood Greenway because it is only one block long, and in the future will be part of a longer corridor of separated bike lanes along Orion Street, as new development occurs.

See Chapter 5 for more details about Neighborhood Greenways.

FUNDING AND CITY RESOURCES

The 2030 Infrastructure Plan represents a major commitment of resources by a variety of agencies and partners, including the City of Alameda. The City currently funds, either fully or partially, many active transportation projects and programs each year with local transportation sales tax funding from Alameda County's Measure BB. Completion of the 2030 Plan will also require partnerships with federal, state, and regional transportation agencies that fund and construct active transportation projects, as well as with local property owners and development partners that construct projects on private property and the adjacent public rights of way. Some projects, such as the Encinal Avenue project (Project #29), will be completely funded and constructed by another public agency (in this case, Caltrans). Other projects, such as the Northern Waterfront Bay Trail Gap Closures (Project #32), will be funded and constructed by a property owner developing the adjacent private lands. Many projects, such as the Central Avenue Safety Project (Project #1), are funded by federal and state sources with a City of Alameda "local match" contribution, and the project is managed and constructed by the City.

Aside from funding, a significant limiting factor on how many projects can be constructed in Alameda in any one year is the capacity of the existing staff and the community to:

» Secure project funding;
» Develop and come to agreement on a project design;

» Develop the necessary construction documents, which can require extensive review by funding agencies; and

» Hire and manage the construction contractors.

Each of these steps is time intensive, especially for larger projects. With the cooperation and support of the Alameda community, the projects in the 2030 Plan can be completed with existing staff resources. However, if over the course of the eight-year period, new active transportation projects are prioritized for implementation, it will likely be necessary to remove a project from the 2030 Infrastructure Plan. In the event that it becomes apparent that staff resources are not adequate, the City Council may consider additional staff resources during the annual budget process.

MONITORING AND EVALUATION

Performance measures will be used to track the effectiveness of the various projects, programs, and investments presented in this Plan in meeting the Plan goals. Quantifiable data, while limited for bicycling and walking, is needed to knowledgably evaluate effectiveness. Staff will report on the performance measures and progress on implementing the 2030 projects and programs annually. This annual review can inform the need for any adjustments to the 2030 Plan during the eight-year period, which can be made when the City adopts and updates its budget. Further, this Plan will be updated in five years, at which time further adjustments may be made in response to the evaluation findings.

The performance measures in Table 11, grouped by the Plan goals, represent measurable data that is reasonably easy to collect and regularly available, to track progress on investments and their benefits. Where there are existing, reliable sources, baseline data is included, targets have been set, and target years noted, based on the established frequency of the data collection. In 2023, the City will assess the baseline data for those performance measures marked "TBD" and determine appropriate targets, as part of a broader effort to develop performance measure for all transportation modes.

Table 11. Active Transportation Plan Performance Measures

Goal	Performance Measures	Baseline	Target	Data Source(s) and Frequency
Safety	**Increase the safety of all people using active transportation**			
	Number of people walking and bicycling involved in crashes that resulted in an injury°	*2021 (3-year average):* » Walking: 36 » Bicycling: 22	*By 2030 (3-year average):* Stable, or decreasing, as the number of people walking and bicycling increases.	Police Department Reports (Annual)

Goal	Performance Measures	Baseline	Target	Data Source(s) and Frequency
Equity	**Prioritize active transportation investments in underserved communities and actively engage underrepresented groups in the planning process**			
	Percent of active transportation improvement projects installed in equity priority communities	TBD	TBD	City data (Annual)
	Percent of programming and education in equity priority communities	TBD	TBD	City data (Annual)
Connectivity and Comfort	**Develop a well-connected network of active transportation facilities that are comfortable and convenient for people of all ages and abilities**			
	Number of intersections with pedestrian crossing improvements or upgrades	TBD	TBD	City data (Annual)
	Miles of all bikeways	*2022: 65*	*By 2030: [coming]*	City data (Annual)
	Miles of low-stress bikeways	*2022: [coming]*	*By 2030: [coming]*	City data (Annual)
Community	**Promote and inspire safe and fun walking, bicycling and rolling to foster a strong culture of walking and bicycling**			
	Number of schools with active Safe Routes to Schools programs	*2022:* » 19 (public) » 2 (private)	*By 2030:* All public and private	City and County data (Annual)
	Number of 5th grade classes that receive bicycle safety education	*2022: 4*	*By 2030: All*	City and County data (Annual)
	Number of new or upgraded bicycle parking facilities	TBD	TBD	City data (Annual)
	Number of encouragement or educational events or campaigns held to support walking and bicycling	TBD	TBD	City and County data (Annual)

Goal	Performance Measures	Baseline	Target	Data Source(s) and Frequency
Mode Shift	**Increase percentage of walking and bicycling trips**			
	Percent of school-aged children who walk or bicycle to school, at least some of the time	*2019:* » Walk: 48% » Bicycle: 31%	*By 2026:* » Walk: 60% » Bicycle: 40%	Alameda City Community Survey (Every 5 years, with Plan update)
	Number of people walking and bicycling at established count sites and at recently completed capital project locations	TBD	TBD	City and County count collection (Every 2 years) Project counts (As implemented)
	Percent of people walking and bicycling to transit	TBD	TBD	AC Transit and WETA surveys (Varies)
	Percent of bicycling and walking trips to work, and percent of drive alone trips to work	*2021 (3-year average)* » Walking = 2.6% » Bicycling = *[coming]* » Driving alone = 54.5%	*By 2030 (3-year average)* » Walking = 4% » Bicycling = *[coming]* » Driving alone = Stable or decreasing	American Community Survey (Annual)
	Percent of frequent utilitarian and recreational bicyclists	*2019:* 56%	*By 2026:* 65%	Alameda City Community Survey (Every 5 years, with Plan update)
	Percent of frequent utilitarian walkers	*2019:* 57%	*By 2026:* 65%	Alameda City Community Survey (Every 5 years, with Plan update)

° Performance measure from *Alameda Vision Zero Action Plan*