City of Palo Alto (ID # 6291)

City Council Staff Report

Report Type: Consent Calendar **Meeting Date: 11/30/2015**

Summary Title: Bryant Street Bicycle Boulevard Extension Concept Plan

Title: Review and Approval of Proposed Bicycle and Pedestrian Improvements along Bryant Street, Redwood Circle, Carlson Court, Ely Place, Duncan Place, Creekside Drive, Nelson Drive, Shasta Drive and MacKay Drive

From: City Manager

Lead Department: Planning and Community Environment

Recommendation:

Staff recommends that the City Council approve the Concept Plan Line for the Bryant Street Bicycle Boulevard Extension project and direct staff to move forward with the Environmental Assessment and Final Design phase.

Executive Summary:

The Bryant Street Bicycle Boulevard Extension is classified as a bicycle boulevard within the City's adopted Bicycle and Pedestrian Transportation Plan. The extension of the existing bicycle boulevard south of East Meadow Drive via Bryant Street, Redwood Circle, Carlson Court, Ely Place, Duncan Place, Creekside Drive, Nelson Drive, Shasta Drive and Mackay Drive will allow complete access from the northernmost City boundary with Menlo Park to the southernmost City boundary with Mountain View. The proposed enhancements will provide continuous, low-stress on-street bikeways with travel time and safety improvements to support healthy transportation.

The proposed improvements incorporate focused bicycle and pedestrian enhancements and traffic calming measures to reduce motor vehicle speeds, as well as STOP sign modifications, repaving, and improvements to arterial crossings to better serve a diversity of ages and abilities. Additionally, the proposed project includes enhanced crosswalks and curb extensions to improve the pedestrian environment along the corridor. The existing tree canopy combined with new landscaping will promote shade and reduce heat island effects for comfortable walking, running, and bicycling opportunities.

This project is currently funded through the Concept Plan Line phase with the intention of identifying preferred treatment options and placements. The approved Concept Plan Line will serve as the basis for the Environmental Assessment and Final Design Phase, helping to

determine the level of effort for a contract to complete this additional work, which is a prerequisite to construction. Detailed cost estimates for the Bryant Street Bicycle Boulevard Extension project will be developed as part of the Environmental Assessment and Final Design phase of work. As part of the approval of the City's Infrastructure Plan, the City Council allocated $20.0 million towards bicycle and pedestrian plan implementation.

Background:

The *Bicycle & Pedestrian Transportation Plan* (hereinafter "Plan") was adopted by the City Council in July 2012. The Plan includes a proposed bikeway network of off-street multi-use paths, bicycle boulevards, bicycle lanes, and enhanced bikeway facilities. The plan has stated goals of increasing bicycle traffic for local and work commute trips by 100% by 2020 by providing improved facilities along the proposed bike network, which facilitates both north-south and east-west connectivity throughout Palo Alto. A copy of the Proposed Bikeway Network is provided in Attachment C.

Implementation of the Plan started in 2013 with City Council authorization of up to $1.2M per year over five years as part of the Capital Improvement Program (CIP). With this commitment of funds, 18 projects are currently being studied and designed for implementation. Since award of consultant contracts in April 2014, bike network implementation has focused primarily on Bicycle Boulevards and Enhanced Bikeways, although transportation staff has also been coordinating with Public Works and Community Services staff to deliver transportation projects through public works and parks contracts for street resurfacing and park improvements. Staff has also been working to implement data-driven spot improvements in response to customer requests, and seeks to ensure provide ongoing rehabilitation and maintenance of the bicycle and pedestrian network and incorporation of green infrastructure and storm water treatment where feasible. City staff recently provided City Council with an update on the bicycle and pedestrian program at a Study Session on October 26, 2015.

The Bryant Street Bicycle Boulevard Extension Project, for which concept planning was initiated in 2014, includes improvements to Bryant Street, Redwood Circle, Carlson Court, Ely Place, Duncan Place, Creekside Drive, Nelson Drive, Shasta Drive and Mackay Drive corridors.

Bicycle Boulevard Purpose and Benefits

The City pioneered the creation of the first "bicycle boulevard" – turning Bryant Street north of Meadow Drive, a residential street, into a street that prioritized bicycle safety and circulation in 1982. The Comprehensive Plan defines a bicycle boulevard as a "low volume through-street where bicycles have priority over automobiles, conflicts between bicycles and automobiles are minimized, and bicycle travel time is reduced by the removal of stop signs and other impediments to bicycle travel. The removal of stop signs is especially important in Palo Alto, due to the large number of stop signs on local and collector streets."

Key characteristics that make bicycle boulevards attractive and safer for people who bicycle are:

- Low traffic volumes
- Low vehicle speeds
- Discouragement of non-local motor vehicle traffic
- Free-flow travel for people on bicycles by assigning the right-of-way to the bicycle boulevard at intersections wherever possible
- Traffic control to help bicycles cross major streets

One important feature of bicycle boulevards that greatly improves cycling efficiency is reduction in the number of stop signs; this measure improves travel time and reduces fatigue. Reducing cyclist fatigue increases the feasible length of a trip by bicycle, and is especially important to people who are hauling trailers, carrying children, groceries, and so forth, thereby encouraging more trips by bicycle.

Bryant Street Bicycle Boulevard Extension

The Plan identified Bryant Street as an existing Bicycle Boulevard north of East Meadow Drive. The extension of this bicycle boulevard via Bryant Street, Redwood Circle, Carlson Court, Ely Place, Duncan Place, Creekside Drive, Nelson Drive, Shasta Drive and Mackay Drive will allow complete access from the northernmost City boundary with Menlo Park to the southernmost City boundary with Mountain View. The proposed enhancements will provide continuous, low-stress on-street bikeways with travel time and safety improvements to support healthy transportation.

The project currently proposes a crossing beacon at Bryant Street and East Meadow Drive, traffic calming devices through the "Circles" neighborhood, including bulb-outs and chicanes on Redwood Circle, along with shared-lane markings (also known as sharrows) and enhanced crosswalks. At Nelson Drive and the rear entrance to Cubberley Center, the current Concept Plan Line includes a raised intersection to calm traffic. In response to community input, staff recommends the extension of bikeway treatments on Nelson Drive to Charleston Road. Staff also recommends the City continue working to advance implementation of the Nita Avenue improvements in Palo Alto, a bikeway project that is being designed and funded by Google as part of a pending development project in the City of Mountain View.

This project is currently funded through the Concept Plan Line stage, which identifies preferred treatments and general locations, with more detail to come during the final design phase. The Concept Plan Line serves as the basis for the environmental assessment and future final design phase, helping to determine the level of effort for a contract to complete this additional work, which is a prerequisite to securing funding for construction. Fehr & Peers is the lead consultant team for this project.

Summary of Key Issues:

Approval of Concept Plan Lines is the first step in the design process for a project. A Concept Plan Line identifies the type and approximate location of improvements but excludes focused design details such as hardscape and landscape measures. The Concept Plan Line identifies the

locations of civil improvements that influence the amount of review required for California Environmental Quality Act (CEQA) compliance.

Development of a Concept Plan Line normally takes three to four community meetings to help shape the location and types of improvements that each plan recommends. Focused traffic data collection is also included as part of the Concept Plan Line development and the results are shared with the community as part of the community outreach process. Following approval of the Concept Plan Line by the City Council, staff will utilize a civil design team to complete the environmental assessment and more detailed design. An implementation plan will be developed as part of the design phase.

Community outreach and participation has been instrumental to concept plan development since the initiation of the Bryant Street Bicycle Boulevard Extension project, including a community bike-along in April 2014, farmers' market outreach on California Avenue in April and May 2014, community meetings in May 2014, November 2014, and May 2015, and presentations to the Palo Alto Pedestrian and Bicycle Advisory Committee (PABAC). Sample outreach materials are enclosed as Attachment A.

Traffic data collection for the Bryant Street Extension Bicycle Boulevard Extension project occurred between May 13 and 27 in 2014, using video cameras to track bicycle and pedestrian demand and mechanical tube counters to collect automobile speed and volume data. Highlights of the traffic counts and speed data are shown in Table 1 below.

Table 1
Bryant Street Average Daily Traffic Volumes and Speed

Segment	Average Daily Traffic			85th Percentile Speed
	Bicycle	Ped	Auto	Auto
Bryant Street between East Meadow Drive and Redwood Circle	219	56	218	25
Nelson Drive between Tioga Court and Diablo Court	283	223	368	30
Meadow Drive between Alma Street and Emerson Street	906	267	3458	33

Source: City of Palo Alto, May 2014

Bryant Street Extension Proposed Bicycle Boulevard Improvements
The following is a summary of the recommended improvements to the Bryant Street Bicycle Boulevard Extension by segment. This narrative is supported by the Bryant Street Extension project Concept Plan Lines, enclosed as Attachment B.

Bryant Street Proposed Improvements by Segment

Meadow Drive to Charleston Road

This section of Bryant Street does not have existing bicycle infrastructure. The street has generous right-of-way, currently used for two-way traffic and on-street parking on both sides of the street. The geometry of the curved streets and large corner radii result in large intersections.

The Bryant Street and East Meadow Drive intersection is currently side-street STOP controlled, with traffic on Bryant Street required to stop for traffic on East Meadow Drive. The Concept Plan Line recommends that a bicyclist- and pedestrian-actuated rectangular rapid flashing beacon (RRFB) be installed at the intersection. This warning device will alert motorists on East Meadow Drive to yield to bicyclists and pedestrians travelling along Bryant Street. Curb extensions with crosswalks are also recommended at the corners of the intersection to reduce motor vehicle turning speeds and shorten crossing distance for bicyclists and pedestrians.

To reduce motor vehicle speeds, the Concept Plan Line recommends restriping the parking lanes to visually narrow the road. Shared-lane markings (also known as sharrows) are shown approximately every 300 feet to both indicate the presence of bicyclists to drivers and provide wayfinding for bicyclists along the bicycle boulevard.

It is recommended that the intersection of Bryant Street and Redwood Circle be narrowed and squared-up, using curb extensions to reduce motor vehicle speeds and make the left-turn from Bryant Street to Redwood Circle easier for bicyclists. An impeller traffic calming device and conversion of STOP signs to YIELD signs is suggested at this intersection. The same treatment is recommended at the Redwood Circle and South Court intersection: removing STOP signs and replacing with YIELD control. Curb extensions, enhanced crosswalks and median islands are also planned at this intersection. These treatments will reduce delay for cyclists.

An impeller traffic calming device functions similar to a traffic circle in that it reduces motor vehicle speeds when entering an intersection, using horizontal deflection, and allows for the removal of STOP signs. Impellers are particularly effective at T intersections, where there is inadequate right-of-way for a roundabout or traffic circle.

The Concept Plan Line shows a new traffic circle with YIELD control at the Redwood Circle and Carlson Court intersection. This treatment will convert the existing STOP control to YIELD control, reducing bicycle delay while still slowing motor vehicles through the intersection.

<u>Charleston Road to Adobe Creek Bridge Path Entrance</u>

To better accommodate bicycles, it is recommended that traffic signal green time be extended on Carlson Court at the Charleston Road intersection. The Concept Plan Line shows new curb extensions and standard crosswalks at this intersection, which will enhance pedestrian safety and slow turning motor vehicles, thereby reducing the risk and severity of right-hook collisions. Similar to the previous segment treatments, the Concept Plan Line recommends that the parking lanes will be striped to help visually narrow the road and that sharrows be installed

approximately every 300 feet.

At the Carlson Court and Ely Place intersection, it is suggested that the existing all-way STOP be replaced with an impeller device and YIELD control. The addition of wayfinding signage and directional sharrows is also recommended at the intersection. This will help bicyclists follow the designated bicycle boulevard southbound via Ely Place and Duncan Place and northbound along Carlson Court. Similar to the intersection of Carlson Court and Ely Place, wayfinding signage and directional sharrows are recommended at the intersection of Ely Place and Duncan Place. Curb extensions, STOP control, a median island and an enhanced crosswalk to control vehicle speeds and enhance pedestrian safety are also shown here. The Concept Plan Line recommends that a STOP sign be added to the eastbound Ely Place approach.

Adobe Creek Bridge

The existing Adobe Creek Bridge provides a connection between Duncan Place and Creekside Drive for bicyclists and pedestrians. The bridge and connecting paths travel between residential lots and have limited visibility between the roadways and the path. The Concept Plan Line identifies curb extensions on Duncan Place and Creekside Drive to increase the visibility of path users as they approach the two roadways at either end. At Duncan Place, a standard crosswalk is recommended to direct northbound bicyclist to the correct side of the street. Additionally, a raised crosswalk is shown at Creekside Drive to slow vehicle traffic and further highlight the path crossing.

Adobe Creek Bridge Exit to Creekside/Nelson Drive

Consistent with the rest of the bicycle boulevard, the Concept Plan Line shows striped parking lanes and directional sharrows on Creekside Drive. Impeller devices with curb extensions and median islands will be are recommended at the Creekside Drive and Nelson Drive intersection and the Parkside Drive and Nelson Drive intersection to reduce vehicle speeds and support the removal of STOP signs along the corridor. The Concept Plan Line shows enhanced crosswalks and curb extensions at this location and also recommends that the STOP sign at this intersection be replaced with a YIELD sign, which will decrease cyclist delay.

Nelson Drive/Shasta Drive/Mackay Drive

The Nelson Drive and Diablo Court intersection includes the entry to the Cubberley Community Center via a well-travelled shared-use path. The pathway and entrance itself is addressed as part of the separate Louis Road-Montrose Avenue-Cubberley Community Center Bicycle Boulevard project. The convergence of pedestrians and cyclists from the path, drop-off traffic for the park and through traffic calls for a unique treatment. The Concept Plan Line recommends a raised intersection at this location, which will slow through traffic, allow pedestrians and cyclists to enter the street visibly, and safely discourage drop-offs within the intersection.

The recommended curb extensions and enhanced crosswalks at the Mackay Drive and Ferne

Avenue intersection will narrow the travelway, reduce pedestrian crossing distance, and reduce turning motor vehicle speeds. The similarity in both intersection and segment treatments will make this route safe and recognizable as a bicycle boulevard.

Nelson Drive from Charleston Road to Creekside Drive

This segment of Nelson Drive was a highly-requested addition to the existing bicycle boulevard as a more direct connection to the Mitchell Park area and adjacent schools. Median islands identified for the curves along Nelson Drive will slow motor vehicles and discourage wide turns (also known as corner cutting), while still maintaining access to residential driveways.

Community Review

Generally, community feedback has been positive; however the following issues have been identified:

- As Alma Street becomes more congested, more motor vehicle traffic will divert to the residential streets along the Bryant Street Bicycle Boulevard Extension.
- Parking loss on Nelson Drive caused by the curb extensions will result in more side street parking on weekends due to the adjacent park's heavy use and high turnover.
- There is a need for additional enforcement along Nelson Drive to discourage double parking and parking on corners during the weekends.
- Removal of STOP signs may lead to increased speeds.
- Extend the Bryant Bicycle Boulevard Extension on Nelson Drive to Charleston Road.
- Bicyclists cutting through Greenmeadow Community Center travel at high speeds that are unsafe for the small children who use the space.

Staff have integrated proposed improvements into the final concept plans to respond to these comments, including: (1) impeller treatment and additional curb extensions to control vehicle speeds; (2) extending bicycle boulevard treatments on Nelson Drive to Charleston Road; (3) proposing bulb-outs at locations where vehicle parking should be restricted to improve visibility at intersections; and (4) additional signing and striping to direct bicyclists onto Creekside Drive and not into the Greenmeadow Community Center.

Palo Alto Pedestrian and Bicycle Advisory Committee Review

Staff has brought the Bryant Street Bicycle Boulevard Extension project to the Palo Alto Pedestrian and Bicycle Advisory Committee (PABAC) several times. The project was most recently discussed at PABAC on June 2, 2015. Previous concept plan line iterations were brought to PABAC just before or after the community meetings. In general, the PABAC members provided their thoughts and comments on the treatments proposed, and provided input on individual preferences of certain treatments. Numerous comments and suggestions from PABAC were provided through the meetings. Some of the more significant comments for this corridor include the following:

- Add wayfinding signage on East Meadow Drive for eastbound East Meadow Drive

- Add high-visibility crosswalks at Bryant Street and East Meadow Drive
- Support bicycle detection at rectangular rapid flashing beacon at Bryant Street and East Meadow Drive
- Question need for bulb-outs at Bryant Street and East Meadow Drive
- Add bicycle left-turn lane on East Meadow Drive for Bryant Street
- Reconsider addition of parking edgelines
- Add wayfinding signage at Bryant Street and Redwood Circle
- Add wayfinding signage at Redwood Circle and South Court
- Reduce parking at intersection of Redwood Circle and Carlson Court
- Add high-visibility crosswalks at Carlson Court and Charleston Road
- Remove high-visibility crosswalks and add wayfinding signage at Carlson Court and Ely Place
- Reconsider speed table and rectangular rapid flashing beacon at Adobe Creek Bridge path exit
- Consider traffic circle at Nelson Drive and Creekside Drive
- Add wayfinding signage to Cubberley Community Center
- Remove high-visibility crosswalks and evaluate removal of STOP signs at MacKay Drive and Ferne Drive
- Add wayfinding signage on Alma Street to Bryant Street Bicycle Boulevard

Staff received these comments and integrated proposed improvements into the final Concept Plan Line for Bryant Street Bicycle Boulevard Extension.

Planning & Transportation Commission Review

The Planning and Transportation Commission will review this project at a special meeting on November 18, 2015 and their recommendation will be transmitted to the City Council thereafter.

Policy Implications:

The Bicycle and Pedestrian Transportation Plan identifies and prioritizes the development of the bicycle boulevard network. The Plan objectives that are addressed by the development of the Bryant Street Bicycle Boulevard Extension project are:

- Objective 1: Double the rate of bicycling for both local and total work commutes by 2020 (to 15% and 5%, respectively).
- Objective 2: Convert discretionary vehicle trips into walking and bicycling trips in order to reduce City transportation-related greenhouse gas (GHG) emissions 15% by 2020.
- Objective 3: Develop a core network of shared paths, bikeways, and traffic-calmed streets that connects business and residential districts, schools, parks, and open spaces to promote healthy, active living.
- Objective 4: Plan, construct, and maintain 'Complete Streets' that are safe and accessible to all modes and people of all ages and abilities.

- Objective 5: Promote efficient, sustainable, and creative use of limited public resources through integrated design and planning.

In addition, the Comprehensive Plan goals, policies, and programs that support the development of the Bryant Street Bicycle Boulevard Extension project include:

- Goal T-1: Less Reliance on Single-Occupant Vehicles

- Goal T-3: Facilities, Services, and Programs the Encourage and Promote Walking and Bicycling

- Program T-19: Develop, periodically update, and implement a bicycle facilities improvement program and a pedestrian facilities improvement program that identify and prioritize critical pedestrian and bicycle links to parks, schools, retail centers, and civic facilities.

- Program T-22: Implement a network of bicycle boulevards.

- Policy T-25: When constructing or modifying roadways, plan for usage of the roadway space by all users, including motor vehicles, transit vehicles, bicyclists, and pedestrians.

- Policy T-34: Implement traffic calming measures to slow traffic on local and collector residential streets and prioritize these measures over congestion management. Include traffic circles and other traffic calming devices among these measures.

While it is difficult to estimate the impacts of individual bicycle boulevard projects, the City of Portland, Oregon has recently completed and assessment of its bicycle boulevard program and recorded counts of between 1,000 and 4,000 cyclists per day on its busiest corridors. Increasing the number of cyclists using the bicycle bouelvard network within Palo Alto to these levels would meet many of the objectives and goals listed above and also help the City increase bicycle traffic for local and work commute trips by 100% by 2020.

Resource Impact:

Detailed cost estimates for the Bryant Street Bicycle Boulevard Extension project will be developed as part of the Environmental Assessment and Final Design phase of work. As part of the approval of the City's Infrastructure Plan, the City Council allocated $20.0 million towards bicycle and pedestrian plan implementation. For Fiscal Year 2014 and 2015, $0.8 million has been expended in the Bicycle & Pedestrian Transportation Plan Implementation Project (PL-04010). Additionally, the CIP set aside $11.6 million in a reserve for the Bicycle and Pedestrian Transportation plan. As part of future CIPs, projects will be identified for use of the reserve. Staff actively seeks regional, state and federal grant funding to offset resources identified for bicycle and pedestrian plan implementation. As grant funds are secured or low-cost project improvements identified, Transportation staff will coordinate with Public Works for implementation as part of the Street Resurfacing Program. Minor elements of the Concept Plan

Line may be implemented opportunistically through the Transportation operating budgets for pavement markings, signs and traffic signals.

Timeline:

The Bryant Street Bicycle Boulevard Extension project is recommended for Environmental Assessment and Final Design in Fiscal Year 2016. Staff anticipates presenting a contract award for Environmental Assessment and Final Design to City Council in December 2015 or January 2016.

Environmental Review:

A Negative Declaration for the Bicycle and Pedestrian Transportation Plan was adopted on September 4, 2012. Each individual capital improvement project is subject to environmental assessment after there is agreement on a conceptual design (i.e. Concept Plan Line) for further study. In this instance, the level of environmental review is expected to be a categorical exemption.

Attachments:

- Attachment A: Community Outreach Sample (PDF)
- Attachment B: Bryant Street Bicycle Boulevard Extension Concept Plan Line (PDF)
- Attachment C: Bicycle and Pedestrian Transportation Plan Proposed Bikeways Map (PDF)

Attachment A

Our Palo Alto
A Community Conversation About Our City's Future

CONVERSATION ENGAGE PEOPLE FUTURE EVENT PARTICIPATE ACTION

Bicycle Boulevard Projects Bike-Along Rides

The City of Palo Alto is hosting four bike-along rides to help introduce and solicit information on proposed Bicycle Boulevard projects. Each of the Saturday rides will include a bicycle tour of proposed project sites with stops at key locations to allow residents an opportunity to provide input on improvements to be presented at future community meetings.

- **Saturday, April 26 at 10 a.m., PALY Lot at Churchill Avenue and Castilleja Avenue**. Tour of the proposed Park Boulevard, Stanford Avenue, and Wilkie Way Bicycle Boulevard Projects. This ride also includes a tour of the Bryant Street Bicycle Boulevard Update project between Palo Alto Avenue and East Meadow Drive.

- **Saturday, May 3 at 10 a.m., Addison School at Addison Street Entry.** Tour of the proposed Homer Avenue/Channing Avenue Enhanced Bikeway Project; and the Greer Road, Ross Road, Moreno Avenue-Amarillo Avenue Bicycle Boulevard projects.

- **Saturday, May 10 at 10 a.m., Barron Park School, 800 Barron Avenue.** Tour of the Barron Park Bicycle Routes project and the Maybell Bicycle Boulevard.

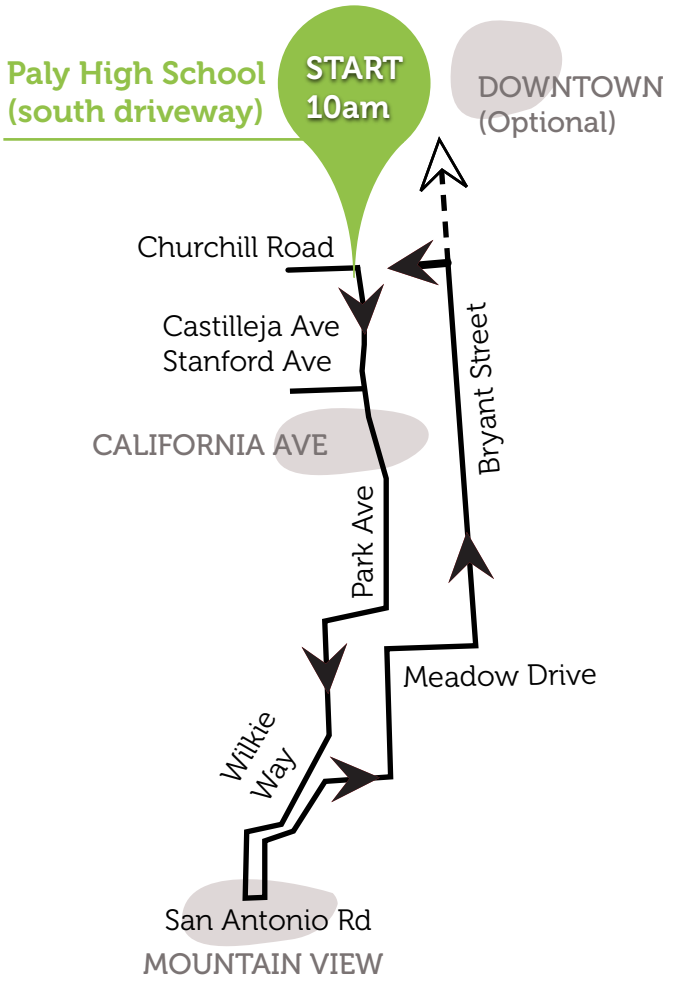
- **Saturday, May 17 at 10 a.m., Piazza's at Middlefield/ Charleston.** Tour of the South Palo Alto Bicycle Program projects, including the Bryant Street Bicycle Boulevard Extension; Alma Street Enhanced Bikeway; and the Montrose Avenue, Cubberley Center Trail Route, and San Antonio Road Bicycle Routes.

For questions on the bike-along,
call the City of Palo Alto at
(650) 329-2442 or email
transportation@cityofpaloalto.org

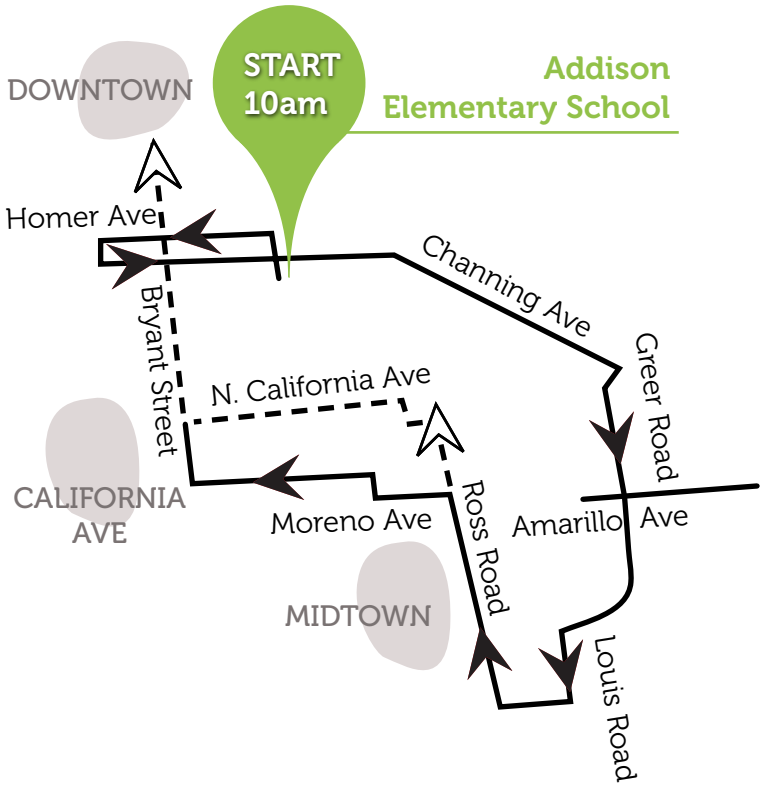
For more information on *Our Palo Alto*, visit
www.cityofpaloalto.org/ourpaloalto

Bring the entire family out for fun bicycle rides and help shape the design of the City's future Bicycle Boulevard program projects. Design consultants Alta Planning + Design and Fehr & Peers Transportation Consultants, and Sandis Engineering will be on hand to guide the tours and answer questions regarding project development.

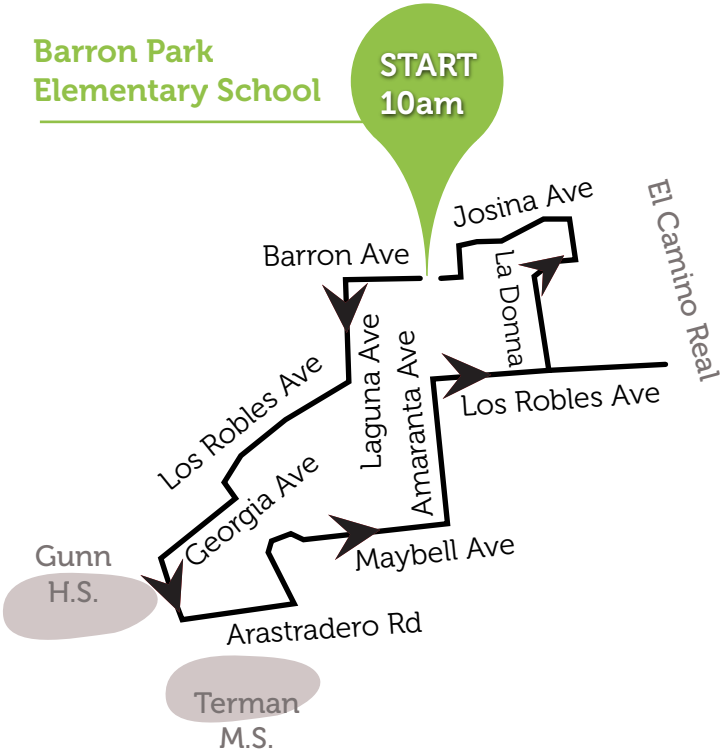
Saturday, April 26th



Saturday, May 3rd



Saturday, May 10th



Saturday, May 17th

CITY OF PALO ALTO

Attachment B

LEGEND

- NEW STOP SIGN (R1-1)
- EXISTING STOP SIGN TO REMAIN
- EXISTING STOP SIGN TO BE REMOVED
- NEW YIELD SIGN (R1-2)
- TRAFFIC CIRCLE WITH LANDSCAPE AREA
- NEW CURB
- SHARROW
- BIKE LANE

SIGN CHART

- R1-1 STOP SIGN
- R1-2 YIELD SIGN

Figure 1

Bryant Street

E. Meadow Dr to E. Charleston Rd

LEGEND

- NEW STOP SIGN (R1-1)
- EXISTING STOP SIGN TO REMAIN
- EXISTING STOP SIGN TO BE REMOVED
- NEW YIELD SIGN (R1-2)
- NEW CURB
- SHARROW
- BIKE LANE

SIGN CHART

R1-1
STOP SIGN

R1-2
YIELD SIGN

Figure 2
Bryant Street
E. Charleston Rd to Nelson Dr

LEGEND

- NEW STOP SIGN (R1-1)
- EXISTING STOP SIGN TO REMAIN
- EXISTING STOP SIGN TO BE REMOVED
- NEW YIELD SIGN (R1-2)
- NEW CURB
- SHARROW
- BIKE LANE

SIGN CHART

- R1-1 STOP SIGN
- R1-2 YIELD SIGN

Figure 3
Bryant St
Nelson Dr to San Antonio Ave

LEGEND

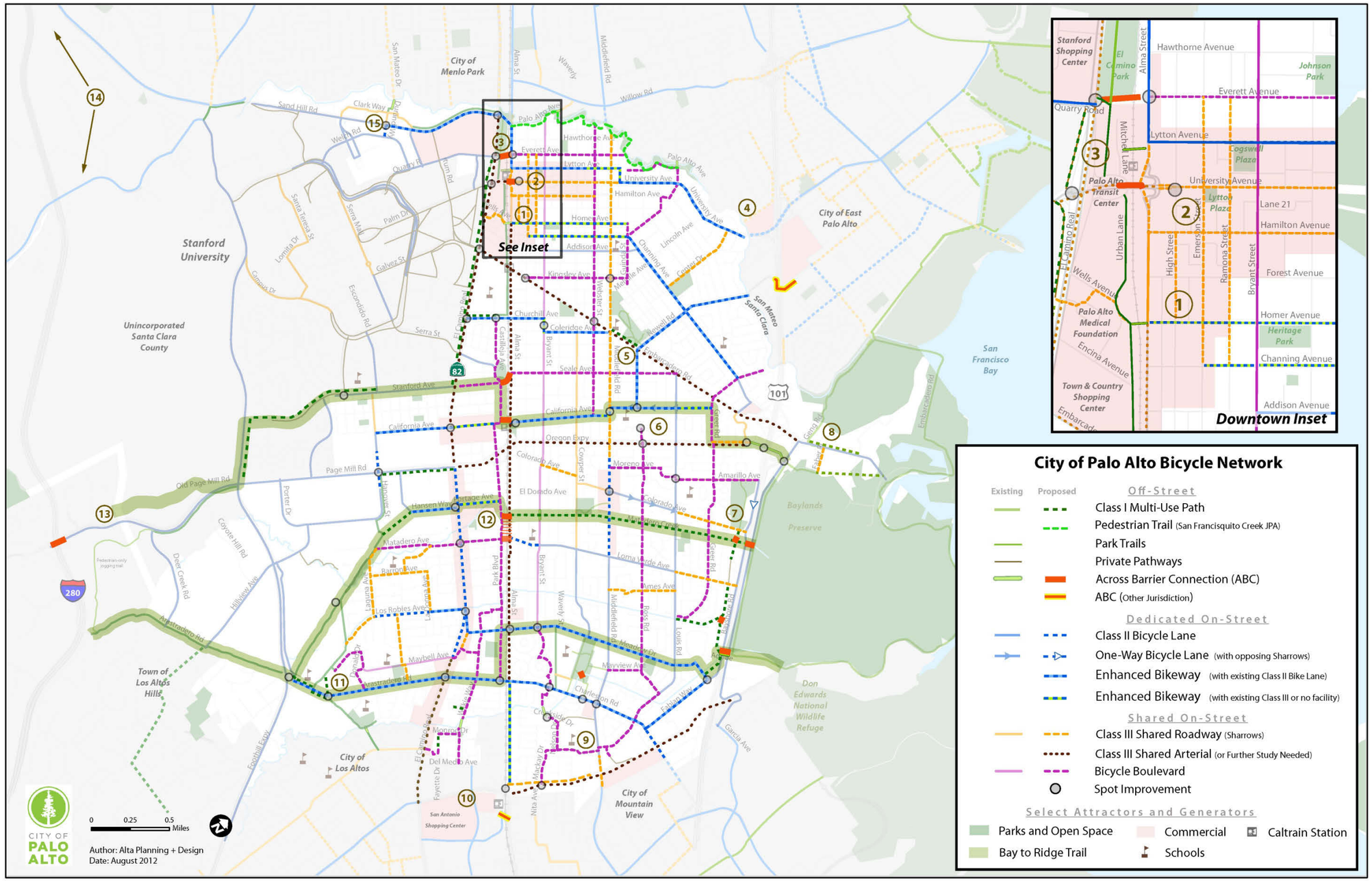
- NEW STOP SIGN (R1-1)
- EXISTING STOP SIGN TO REMAIN
- EXISTING STOP SIGN TO BE REMOVED
- NEW YIELD SIGN (R1-2)
- NEW CURB
- GREEN-BACKED SHARROW
- BIKE LANE

SIGN CHART

- R1-1 STOP SIGN
- R1-2 YIELD SIGN

Figure 4

Nelson Dr
E. Charleston Rd to Adobe Pl



Map 6-1. Proposed Bikeway Network