El Camino Real

CORRIDOR PLAN

CAG Meeting #3
CONCEPTS AND OPTIONS
January 18, 2017
Agenda

- Update on the Planning Process
- Presentation on Concepts and Options
- Discussion
- Public Comment
- Next Steps
Update on the Planning Process

- Stakeholder Interviews conducted
- Existing Conditions Reports published
- Community Workshop held and workshop report published (November 2016)
- Online transit survey was conducted (over 3 weeks in November 2016)
- Today, we’ll be reviewing Concepts and Options for the Corridor
  - Incorporate the feedback we’ve received so far
  - Present various options for discussion
Common Themes and Priorities

• Use the right of way as efficiently as possible
• Remove or mitigate bottlenecks
• Focus on *movement* of people, cars, bikes, transit; parking should be secondary
• Emphasize safety for all users
• Upgrade the overall experience of the Corridor—from aesthetics and comfort to safety and operations—to positively impact local businesses and Redwood City as a whole
Concept: Provide bicycle lanes on El Camino Real for its entire extent through Redwood City.

- **Option 1** – Fully-protected Cycle Track (Class IV bike facility)

- **Option 2** – Continuous Painted Bike Lane (Class II bike facility)
Bicycling: Bike Facilities on El Camino

- **Advantages**
  - Straightforward path for cyclists
  - Potential to increase business at local shops
  - Redwood City would be a leader on the Peninsula
  - Consistent with General Plan and Grand Boulevard Initiative

- **Disadvantages**
  - Safety is a primary design concern for painted lanes
  - Some cyclists may never feel comfortable biking along El Camino
  - In most instances, on-street parking will need to be removed
Bicycling: Cycle Track on El Camino

Class IV Cycle Track
Bicycling: Cycle Track on El Camino

Class II Painted Bike Lane

Class IV Cycle Track

1. Class II Bike Lane with Buffer (4 lanes North of Whipple Road)
   CTC Width: +/- 75' (4.5'/1.5'/11'/11'/12'/12'/12'/11'/15'/4.5')

2. Cycle Track with Planting Buffer, No Parking (4 lanes from Whipple to Woodside)
   CTC Width: +/- 85'
   (7'/4.5'/12'/11'/10'/16'/12'/11'/4.5'/7')

1. Class II Bike Lane with Striped Buffer (4 lanes)

2. Cycle Track with Planting Buffer, No Parking (4 lanes)
Bicycling: Cycle Track on El Camino

Class IV Cycle Track

Cycle Track with Planting Buffer, No Parking
4 lanes North of Woodside Road
CTC Width: +/- 85'
77'/4.5'/12'/11'/10'/6'/12'/11'/4.5'/7'

Cycle Track with Planting Buffer, No Parking
6 lanes South of Woodside Road
CTC Width: +/- 83'
4.5'/3'/11'/11'/12'/11'/11'/11'/3'/4.5'

Cycle Track with Planting Buffer, No Parking
3. Cycle Track with Planting Buffer, No Parking (6 lanes)

SEGMENT LANE WIDTH KEY:
1. Bike lane/buffer/lane/lane/median/lane/buffer/bike lane
2. Cycle track/buffer/lane/lane/median/lane/buffer/cycle track
3. Cycle track/buffer/lane/lane/median/lane/buffer/cycle track
Bicycling: Cycle Track on El Camino

Class II Painted Bike Lane
Option for typical condition north of Whipple
75’ curb to curb, 4 lanes

Class II Bike Lane with Striped Buffer (4 lanes) at 75’ curb to curb
**Bicycling: Cycle Track on El Camino**

**Class IV Cycle Track**
Option for typical condition from Whipple to Woodside
85’ curb to curb, 4 lanes
Bicycling: Cycle Track on El Camino

Class IV Cycle Track
Option for typical condition south of Woodside
83’ curb to curb, 6 lanes

Cycle Track with Planting Buffer, No Parking (6 lanes) at 83’ curb to curb
Bicycling: Cycle Track on El Camino

Potential intersection treatments

Bike lane through bulb-out
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class II Painted Bike Lane
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class II Painted Bike Lane

Class III Sharrow with On-Street Parking

1. Class II Bike Lane with Striped Buffer (4 lanes North of Whipple Ave) See Concept 1 for illustration. CTC Width +/- 75’ (4.5’/1,3’/11’/11’/12’/6’/12’/11’/1.5‘/4.5’)

2. Class II Bike Lane with Striped Buffer, No Parking (4 lanes from Whipple Ave to Brewster Ave) CTC Width: +/- 85’ (4.5’/11’/11’/12’/11’/16’/11’/12’/2.5’/5’/4’)

3. Curb Parking & Sharrow at Storefront Areas (4 lanes from Brewster Ave to Broadway) CTC Width: +/- 85’ (6’/15’/11’/10’/8’/11’/12’/15’/6’)

2. Class II Bike Lane with Striped Buffer, No Parking (4 lanes)

3. Curb Parking with Sharrow (4 lanes)
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class III Sharrow with On-Street Parking

Class II Painted Bike Lane

4. Class II Bike Lane with Striped Buffer, No Parking (6 lanes)
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class II Painted Bike Lane
Option for typical condition north of Whipple
75’ curb to curb, 4 lanes

Class II Bike Lane with Striped Buffer, No Parking (4 lanes) at 75’ curb to curb
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class III Sharrow with On-Street Parking
Option for typical condition from Whipple to Woodside
85’ curb to curb, 4 lanes

Curb Parking and Sharrow at 85’ curb to curb
Bicycling: Painted Bike Lanes on El Camino with Some Parking

Class II Painted Bike Lane
Option for typical condition south of Woodside
83’ curb to curb, 6 lanes

Class II Bike Lane with Striped Buffer, No Parking (6 lanes) at 83’ curb to curb
“Mixing zones” and potential conflicts with vehicles at intersections
Bicycling: Parallel Routes
Bicycling: Hybrid Routes

Figure 6: CONCEPT 3
Bike Lanes on El Camino Real where Reasonable Alternatives do not Exist
Discussion

Bicycling:

– Where and what type of bike facilities should be provided in the Corridor?

– In your opinion, should bicyclists be routed away from El Camino in order to retain on-street parking?

– Is it preferable to remove on-street parking to provide a bike lane or cycle track on all or part of El Camino?

– Are you willing to trade other uses of the right of way (e.g. medians, sidewalk width, landscaping) in order to fit a protected cycle track for the entire length of El Camino?
Concept: Remove on-street parking in order to most efficiently use the right-of-way

- Parking would be removed to make space to accomplish other objectives (e.g., bike lanes)
- Locations for replacement parking would be identified
- Signs would direct drivers to nearby parking sites
Parking: Remove On-Street Parking

- **Advantages**
  - Identifies locations for consolidated, shared parking
  - Improves traffic flow, as drivers will not slow down on El Camino to look for parking
  - Reduces potential conflicts between cars and bikes
  - Improves the visibility of business frontages

- **Disadvantages**
  - Removes a parking resource that many see as convenient and necessary for small businesses
Parking: Remove On-Street Parking

Off-street parking would be accommodated throughout the Corridor in “five minute walk” distances.
Concept: Retain on-street parking on El Camino Real as much as feasible

- Parking would be selectively removed where:
  - Right-of-way is most constrained and could reasonably be put to another need;
  - Ample off-street parking on adjacent lots is present; and/or
  - On-street parking is not well-utilized.
Advantages

- Keeps on-street parking where it is most needed
- Frees up the right-of-way for other uses

Disadvantages

- Does not free up as much of the right-of-way for other modes, limiting design options to meet other objectives
- Could result in discontinuous bike lanes
- Maintains problems associated with on-street parallel parking on a busy roadway
Parking: Selectively Retain On-Street Parking

Class II Painted Bike Lane

Class III Sharrow with On-Street Parking
Discussion

Parking:

– Do you support removing all on-street parking on El Camino Real, assuming alternate locations for shared parking in the Corridor are identified?

– Do you support retaining on-street parking as much as feasible? What tradeoffs are you willing to make to retain parking? (sidewalk width, bike facilities, median width, landscaping, etc.)
Concept: Install bus bulb-outs.

- An extension of the curb at the bus stop. Buses stop directly in the travel lane for passenger boarding, without pulling in or out of traffic.

- Advantages:
  - Reduce bus merge times
  - Create more space for bus shelters, street furniture

- Disadvantages:
  - May negatively impact traffic flow
  - May interrupt other uses
  - Accommodating a curb-running bike lane may be challenging
Transit

**Concept:** Create queue-jump opportunities at select locations.

- Buses can jump ahead of the rest of traffic in dedicated segments of the roadway, at signal-controlled intersections.

- **Advantages:**
  - Improves transit travel time
  - Can take advantage of existing extra right-of-way at intersections

- **Disadvantages:**
  - Available space may not be present at all intersections
  - Potential to create conflicts with bikes and right-turning cars
  - Could create delays for cars
Concept: Enhance bus stops along El Camino.

- Improve bus stops on El Camino so, at minimum, they include benches and schedule information.

- Additional enhancements should include shelters, real-time bus arrival information, and lighting.
Discussion

Transit

– Which interventions to support transit use do you find most compelling?

– What tradeoffs are you willing to make regarding transit infrastructure and location, and other modes of travel and priorities?
Pedestrian Safety and Comfort

**Concept:** Reduce distances between pedestrian crosswalks

- Introduce new crosswalks where distances between crossings are greatest
- New crosswalks would likely be high-visibility
- New signalized crossings might be possible in some locations

**Examples of High-Visibility Crossings**
Concept: Widen sidewalks

- Sidewalks on El Camino should be wide enough to comfortably fit:
  - Pedestrian amenities
  - High quality transit stops

- Priority areas for wider sidewalks include:
  - Where sidewalks are narrowest
  - Where new development occurs within an “activity node,” and/or
  - Where excess right-of-way exists.

- Preferred sidewalk width:
  - 8 feet minimum.
  - 12 feet is preferred; minimum required under existing regulations.
  - 18 feet provides space for outdoor seating and small plazas.
**Concept:** Create shorter crossing distances with pedestrian “refuges” and curb bulb-outs.

- Pedestrian “refuges” in medians should be added wherever feasible.
  - Particularly important to add them at crosswalks with a high volume of pedestrian traffic or where street is unusually wide.
- Curb bulb-outs may also be used to shorten crossing distances.
  - As they can create traffic bottlenecks, it will be important to balance their use with the other uses.
Pedestrian Safety and Comfort

- Widen sidewalks
- New Crosswalk
- Pedestrian “Refuge”

Recommended Improvements:
- City Limits
- Frontage Improvements
- Sidewalk expansion
- Infill canopy trees
- Pedestrian oriented street lighting

- New Crosswalk with Pedestrian Signal to provide 600’ maximum between crossings
- Median Refuge
- Corner Bulb-out

- Bus Shelter
- Add Median Canopy Trees and replace existing conifers and/or small trees
- Remove Slip-lanes

Figure 7: Pedestrian Comfort and Safety Improvements (1 of 2)

EL CAMINO REAL CORRIDOR PLAN
CITY OF REDWOOD CITY
Pedestrian Safety and Comfort

Widen sidewalks

Pedestrian “Refuge”

Recommended Improvements
- City Limits
- Frontage Improvements
  - Sidewalk expansion
  - Infill canopy trees
  - Pedestrian oriented street lighting
- New Crosswalk with Pedestrian Signal to provide 600’ maximum between crossings
- Median Refuge
- Corner Bulb-out
- Bus Shelter
- Add Median Canopy Trees and replace existing canopies and/or small trees
- Remove Slip lanes

Figure 7: Pedestrian Comfort and Safety Improvements (2 of 2)

EL CAMINO REAL CORRIDOR PLAN
CITY OF REDWOOD CITY
Pedestrian Safety and Comfort

Concept: Woodside Road
  - Option 1: Woodside Road underpass would be made safer and more comfortable with:
    - Brighter lighting and bright painting
    - A protected, wider area for bicycles and pedestrians
    - Higher quality fencing to replace the chain link fence (south of underpass)
    - A crosswalk across Manzanita Street

East Campbell Ave., before

East Campbell Ave., after
Concept: Woodside Road

- Option 2: Remove Woodside Road overpass.
  - General Plan policy.
  - Long-term, major project.

- Option 3: Remove slip lanes and traffic islands. Replace with more standard intersection configurations.
Discussion

Pedestrian Safety and Comfort:

– What interventions are most compelling (wide sidewalks, pedestrian “refuges,” curb bulb-outs)? What should be avoided?

– Where are the highest priorities for pedestrian improvements?

– What if some interventions slow vehicle traffic?
Discussion

Bicycling:

– Where and what type of bike facilities should be provided in the Corridor?

– In your opinion, should bicyclists be routed away from El Camino in order to retain on-street parking?

– Is it preferable to remove on-street parking to provide a bike lane or cycle track on all or part of El Camino?

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– Do you support removing all on-street parking on El Camino Real, assuming alternate locations for shared parking in the Corridor are identified?

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Discussion

Transit:

– Which interventions to support transit use do you find most compelling?

– What tradeoffs are you willing to make regarding transit infrastructure and location, and other modes of travel and priorities?
Discussion

Pedestrian Safety and Comfort:

- What interventions are most compelling (wide sidewalks, pedestrian “refuges,” curb bulb-outs)? What should be avoided?

- Where are the highest priorities for pedestrian improvements?

- What if some interventions slow vehicle traffic?
Public Comment
Next Steps

• Continue to refine options:
  – Community workshops
  – Planning Commission Check-in

• CAG Meeting #4 will focus on a “preferred concept” for the Corridor, which the full Corridor Plan will be crafted around

• Visit [www.redwoodcity.org/elcaminoplan](http://www.redwoodcity.org/elcaminoplan) for information and updates