

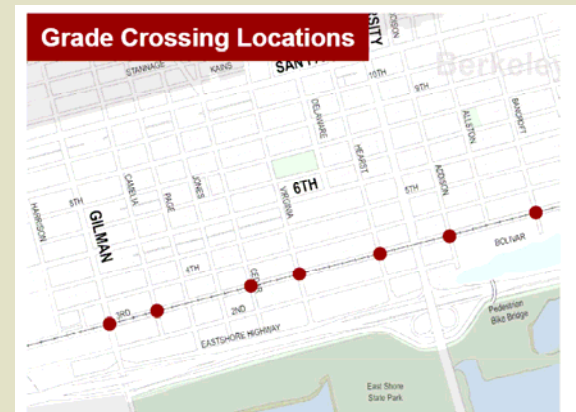
Berkeley Quiet Zone Feasibility Study

BRA Presentation

June 2, 2009

Project Website:

[http://www.ci.berkeley.ca.us/
ContentDisplay.aspx?id=18408](http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=18408)



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What is a Quiet Zone?



- One or more at-grade highway-rail crossings where railroads are ordered not to routinely sound the train horn
 - At least $\frac{1}{2}$ mile in length
 - At a minimum all crossings are equipped with automatic gates and flashers
 - “Risk Index” evaluation approach



Berkeley Quiet Zone Feasibility Study

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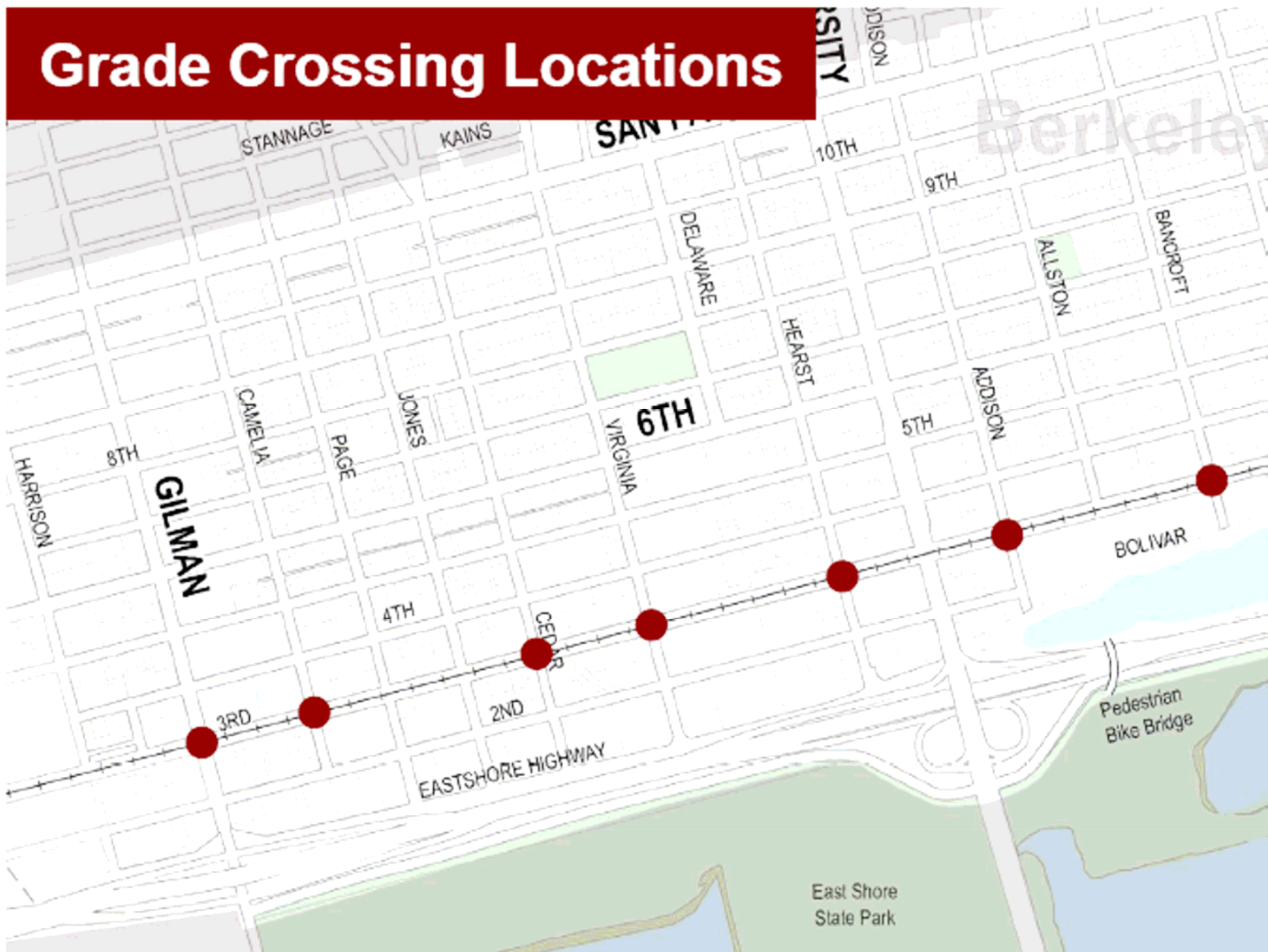
The Berkeley Redevelopment Agency extended the WBCMP Report contract to include a Quiet Zone Feasibility Study in September, 2007

- Encapsulated Council referral
- Conducted separately from Emeryville, but in parallel by the same firm, Wilbur Smith and Assoc. (WSA)
- Peak current rail travel and forecasts captured in Study (since declined)
- PAC advised study development

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Grade Crossing Locations



Risk Analysis

WSA determined Berkeley current risk at crossings with horns is higher than the national risk with horns, due to number and speed of both vehicles and trains.

A Berkeley QZ requires Improvements or Closures that reduce risk below either the:

- National Significant Risk
- OR**
- Berkeley' Risk Index with Horns

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Possible Improvements

Improvements to reduce risk sufficiently to qualify for QZ Berkeley and associated costs include:

- Grade Separation (\$20M)
- 4 Quadrant gates (\$1.5M)
- Medians (\$30K)
- Permanent Closures (\$50K)

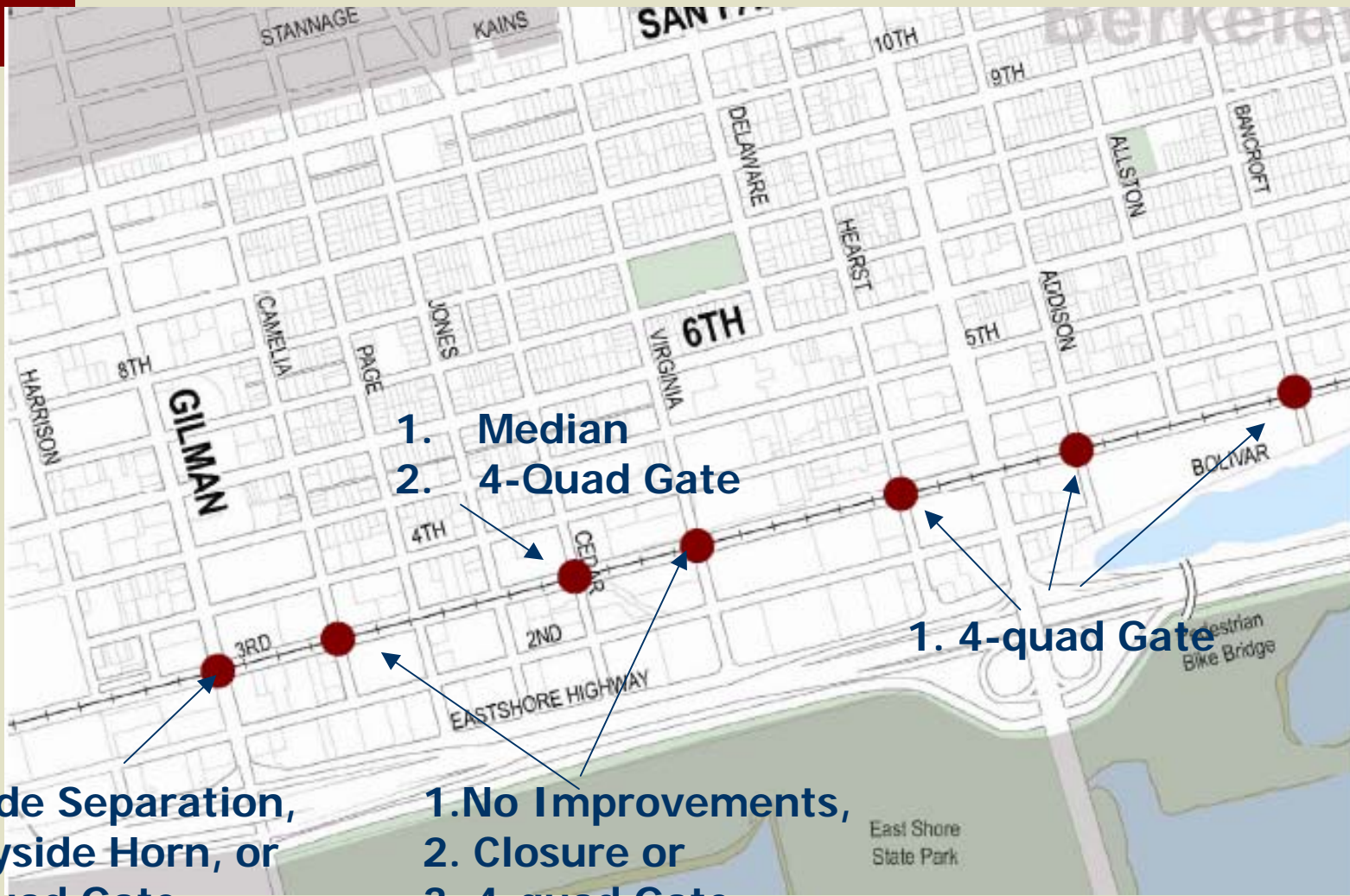
Alternative to QZ is Wayside Horns (\$224K/each)

Conceptual costs include soft costs

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Possible Improvements by Location



Grade Separation – Gilman

Separation options include:

- Roadway overpass
- Roadway underpass
- Elevate railway

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Four Quadrant Gates

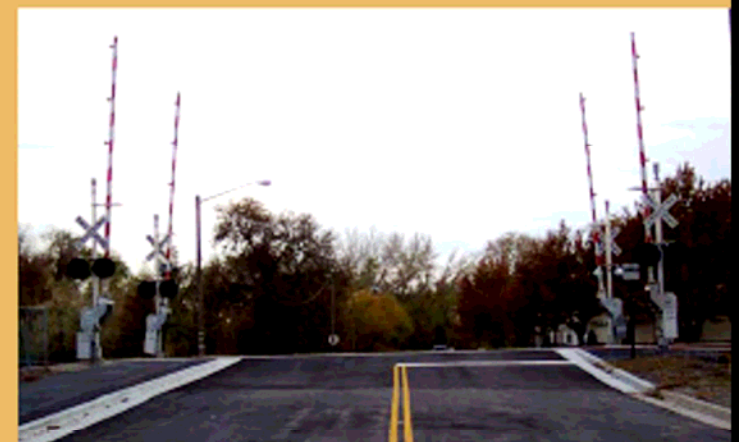
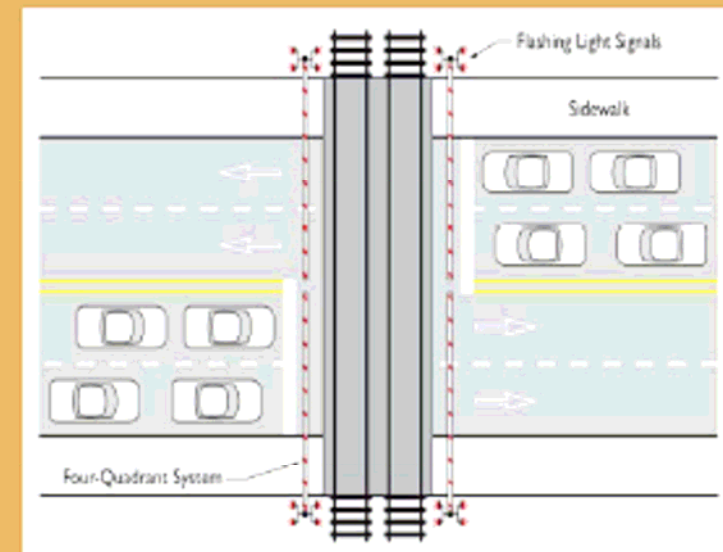


Pros

- Full closure of crossing for vehicles and pedestrians
- No access impacts to local businesses or residents
- Can be used adjacent to parallel roadway and driveways

Cons

- Higher implementation and maintenance costs
- Requires coordination with RR
- Vehicle detection issues



Automatic Gates plus Non-mountable Medians

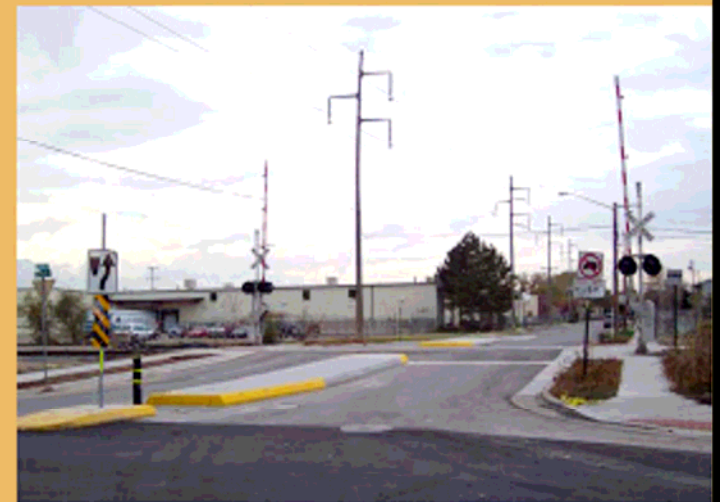
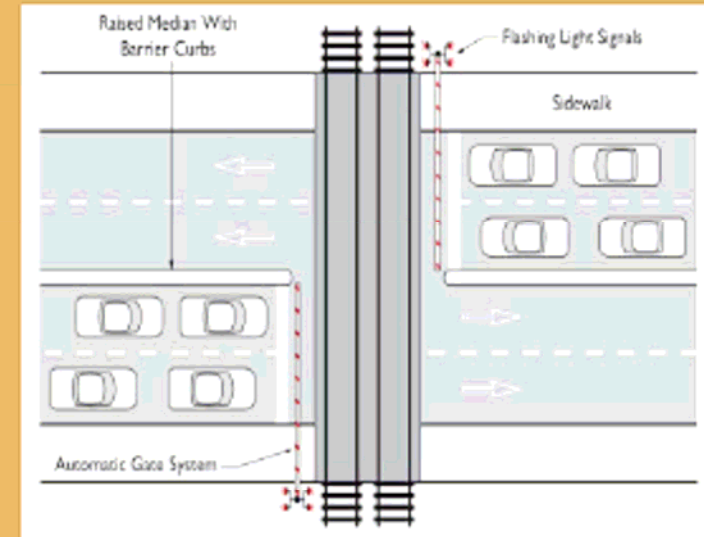


Pros

- Full closure of crossing for vehicles
- Lowest implementation and maintenance costs
- Minimal railroad coordination required

Cons

- Local access issues
- Minimum median length and width requirements
- Does not affect pedestrians



Street Closures



Pros

- Eliminates potential conflicts with vehicles
- Lower maintenance

Cons

- Disrupts traffic patterns
- Impacts pedestrians



No Improvements?

Quiet Zone can qualify without improvements to crossings on low volume streets. However, additional evaluation and reporting required.

Considered for:

- Camelia
- Virginia



Automated Wayside Horns



- One-to-one substitution
- Intensifies adjacent impacts



6 Scenarios Analyzed

- WSA Analyzed 6 scenarios for both their efficacy and cost of implementation
 - **Risk:** Improvements and risk vary by scenario
 - **Cost:** Scenarios ranged from \$4.8 to \$24.5M
- WSA recommended 4-Quad gates at every crossing for \$10.5M

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Key Options among Scenarios

	4 Quad Feasible	Median Feasible	Wayside Horn Feasible	Closure or No Improvements Feasible	Grade Separation Preferable
Gilman	Yes		Yes		Yes
Camelia	Yes			Yes	
Cedar	Yes	Yes			
Virginia	Yes			Yes	
Hearst	Yes				
Addison	Yes				
Bancroft	Yes				
Cost with Assumptions	\$10.5M	\$9M	\$7.8M	\$4.8M	\$24.5M

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Train Noise Post QZ

Horns will blow:

- whenever engineer sees pedestrian or vehicle in right of way and possibly if near tracks
- as 32 Capitol Corridor trains leave the Berkeley Amtrak station (only 5% of existing whistles)

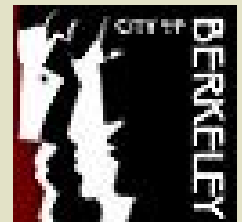
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Issues

- Loitering /Foot traffic: station, Hearst, Gilman
- Driveways near tracks
- Parking/driving on right of way: Gilman/Camelia
- Pedestrian/Bicycles walking around gates and crossing to park and bridge
- Number of tracks in future (improvement location affected)

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Next Steps

For a QZ to be implemented in Berkeley, need:

- Transportation Commission recommendation, legal review, and Council action
- Design improvements (Gilman GS significant)
- Have Federal Rail Administration (FRA), CA Public Utility Commission and Union Pacific review design & approve
- Secure funding and construct
- Periodic updates to FRA to maintain QZ

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