

memorandum



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Date: May 29, 2014

To: **Mr. Steve Marshall**
Mr. Bob Brown
City of Novato

From: Zack Matley

Project: NOV911

Subject: San Marin Interchange Evaluation – Alternatives 5 and 6

W-Trans has completed an analysis of Alternatives 5 and 6 of the San Marin Interchange evaluation. Following is a summary of the alternatives and the operational findings.

Description of Alternatives

Following is a description of the assumptions applied in each Alternative. Screenshots of the Alternative 5 and Alternative 6 Synchro networks are attached for reference.

Alternative 5A

- Buildout assumptions for the North Redwood Boulevard Corridor Study area (NRB study) are applied, excluding the Marin Municipal Water District (MMWD) and Golden Gate Transit (GGT) parcels on the east side of the SMART rail corridor, where the existing uses are assumed to remain (rather than be replaced by a home improvement store).
- The formerly-proposed Commons at Mt. Burdell project is assumed to be completed, minus 200,000 square feet of office.
- All future development potential at the Birkenstock parcel is removed.
- San Marin Business Park (SMBP) Site 6c is assumed to be Research and Design uses instead of office/hotel uses.
- The same adjustments for vacant office space and entitled projects in the area used in previous analyses are applied.
- Assume the realignment and extension of East Campus Drive to Redwood Boulevard at the Rush Landing intersection. At the new East Campus-Rush Landing intersection, all southbound traffic on North Redwood Drive would divert to East Campus Drive in order to reach San Marin Drive. Westbound right turns from San Marin Drive onto northbound Redwood Boulevard would continue to be allowed, with a single northbound lane remaining on Redwood Boulevard between San Marin Drive and Rush Landing Road.
- Eliminate the southbound Redwood Boulevard approach to San Marin Drive, reconfiguring the signal to serve incoming traffic from three legs instead of the current four.
- Install a signal or roundabout at Redwood Boulevard/Rush Landing Road-East Campus Drive.
- Reconstruct East Campus Drive to contain two through lanes in each direction. On the southbound approach to San Marin Drive, provide triple left turn lanes plus a right turn lane.
- Assume other roadway mitigation currently included in the General Plan/CIP, plus signalization at the intersection of Atherton Avenue/Binford Road and coordination of interchange-area signals.

Alternative 5B

- Assumptions are identical to Alternative 5A, except that the MMWD and GGT parcels in the North Redwood Boulevard study area are assumed to be developed with a 100,000 square foot home improvement store.

Alternative 6A

- Buildout assumptions for the North Redwood Boulevard Corridor Study area (NRB study) are applied, assuming no home improvement store on the MMWD and GGT parcels.
- The formerly-proposed Commons at Mt. Burdell project is assumed to be completed, minus 200,000 square feet of office.
- All future development potential at the Birkenstock parcel is removed.
- SMBP Site 6c is assumed to be 300 multi-family residential units instead of office/hotel uses.
- SMBP Site 6d is assumed to be a 100-room senior assisted living facility instead of office uses.
- The same adjustments for vacant office space and entitled projects in the area used in previous analyses are applied.
- Extend Rush Landing Road into Fireman's Fund site as a low-speed, two-lane "complete street."
- Realign East Campus Drive within Fireman's Fund site and connect it to the new Rush Landing extension.
- Assume other roadway mitigation currently included in the General Plan/CIP, plus signalization at the intersection of Atherton Avenue/Binford Road and coordination of interchange-area signals.

Alternative 6B

- Assumptions are identical to Alternative 6A, except that the MMWD and GGT parcels in the North Redwood Boulevard study area are assumed to be developed with a 100,000 square foot home improvement store.

Findings

With the Alternative 5A buildout and network assumptions, intersection levels of service are projected to remain at acceptable LOS C or better levels. Queuing problems are projected to occur, however, on the US 101 southbound ramp during the a.m. peak hour, with offramp queues extending onto the mainline freeway. Queuing problems are also projected to occur during the p.m. peak hour, when backups on eastbound San Marin Drive would extend through East Campus Drive to the west of Santolina Drive. This San Marin Drive queuing would also spill back onto East Campus Drive, with southbound queues on that roadway extending all the way to Redwood Boulevard.

Alternative 5B would have very similar operation to Alternative 5A, with the primary difference being LOS D operation during the a.m. peak hour at San Marin Drive/US 101 South Ramps (instead of LOS C as in Alternative 5A).

The buildout and network assumptions associated with Alternatives 6A and 6B would result in very similar operation. Intersection levels of service are projected to remain at acceptable LOS D or better. Queuing would generally remain acceptable, though during the p.m. peak hour queues on eastbound San Marin Drive that are created at the Redwood Boulevard intersection would extend nearly to East

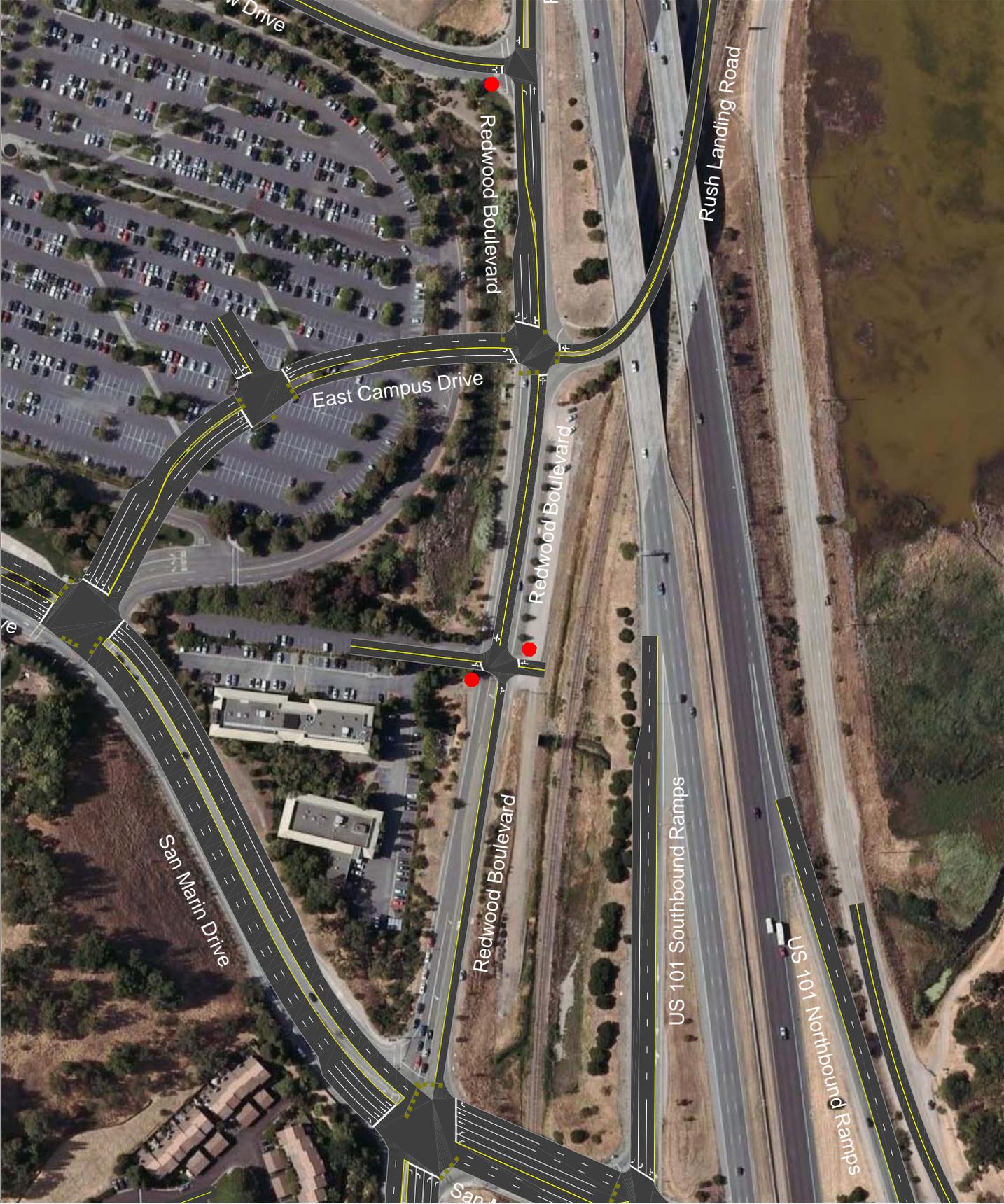
Campus Drive. Queuing on northbound Redwood Boulevard at the San Marin Drive intersection would remain acceptable under both alternatives, though would be slightly longer with Alternative 6B than 6A.

The findings of the operational analysis are shown in Table I.

Table I
Summary of Operational Findings

Alternative	LOS	Queuing
Alternative 5A	The two freeway ramp intersections as well as Redwood/San Marin operate acceptably in the LOS C range during both peak hours.	Queues on the southbound offramp would spill onto the mainline freeway in the morning. In the afternoon, queues on eastbound San Marin Drive would extend to just beyond Santolina Drive, through the East Campus Drive intersection. These queues would also spill back on East Campus Drive, extending all the way to Redwood Boulevard.
Alternative 5B	The Redwood/San Marin intersection would operate at LOS C during both peak hours. The freeway ramp intersections would operate in the LOS C-D range in the morning and at LOS C in the afternoon.	Queues are very similar to Alternative 5A, though are slightly longer on northbound Redwood Boulevard at the San Marin Drive intersection in the afternoon.
Alternative 6A	The two freeway ramp intersections as well as Redwood/San Marin operate acceptably at LOS D during both peak hours.	Queues are generally acceptable. During the afternoon, eastbound queues on San Marin Drive occasionally extend to East Campus Drive.
Alternative 6B	The two freeway ramp intersections operate at LOS C-D during both peak hours. Redwood/San Marin operates at LOS C in the morning, but at LOS E in the afternoon.	Queues are very similar to Alternative 6A, though are slightly longer on northbound Redwood Boulevard at the San Marin Drive intersection in the afternoon.

Alternative 5 Network



Alternative 6 Network

