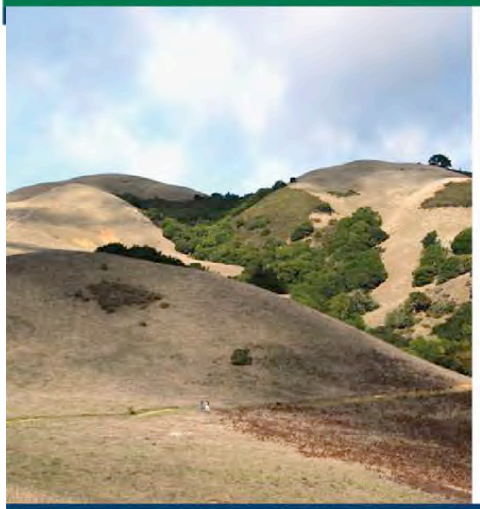

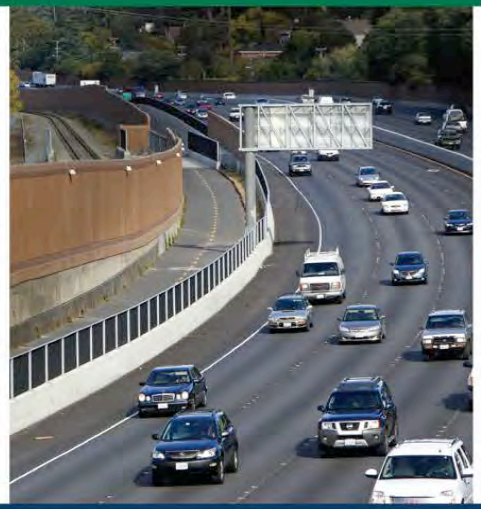


US 101 Interchanges

Expenditure Plan Advisory Committee

September 18, 2017

Discussion of Interchanges that have been the subject of recent planning studies or included in the Regional Transportation Plan (RTP)

Highway 101 / Local Road Interchanges

- Tiburon Blvd / East Blithedale Interchange
- Tamalpais Drive Interchange
- Central San Rafael ramps to and from 2nd Street
- Merrydale Road / North San Pedro Interchange
- Manuel T Freitas Parkway Interchange
- Lucas Valley / Smith Ranch Road Interchange

General Observations

- US101 Interchanges were constructed in the 1950's.
- Many have non-standard features such a loop ramps, narrow shoulders or limited vertical site distance.
- Increased demand is limiting traffic operations which leads to increased congestion.
- Most are lacking adequate pedestrian and bicycle facilities.

Highway 101 / Local Road Interchanges

CORRIDOR DEVELOPMENT (1960 TO TODAY)

Tiburon Blvd / East Blithedale Interchange

- Caltrans prepared a Project Study Report -2004. SB off-ramp improvements completed. Limited multi-modal improvements considered.
- TAM Completed a Bicycle & Pedestrian Study – 2016. Study identified short, medium and long term improvements.
- Caltrans will be widening northbound on-ramp as part of the Phase-One ramp metering project.
- TAM also studied traffic mitigation improvements consisting of an auxiliary lane approaching the on-ramps.
- US101 Annual Average Daily Traffic Volumes Range 128,00-166,000 (Yr. 2015).
- Approximately 80,000 vehicles a day approach the interchange from the local roads.

Tamalpais Drive Interchange

- Multiple studies of the interchange have been prepared over the years.
- TAM prepared planning level study in 2007. Suggested modifying ramp configuration and multi-modal improvements.
- A northbound Auxiliary Lane connecting the interchange with Sir Francis Drake Blvd off ramp was considered during Greenbrae Corridor Project.
- Caltrans recently announced it has begun work on a project to improvement pedestrian access in the area.
- US101 Annual Average Daily Traffic Volumes Range 166,00-169,000 .

Central San Rafael Ramps at 2nd Street

- City of San Rafael requested the ramps be studied in the Regional Transportation Plan.
- Area experiences heavy peek traffic congestion. Northbound off-ramp backs-up onto highway during AM and PM commutes.
- San Rafael Transit Center, Marin's largest bus transfer facility, serves 750 buses a day and the SMART train is to the north.
- Possible two-lane onramp to SB US101 to improve merging characteristics. Element discussed during HOV Gap Closure Project development process.

Merrydale / North San Pedro Road Interchange

- City of San Rafael requested the interchange be studied in the Regional Transportation Plan to improve and standardize the North San Pedro/ Merrydale Interchange.
- Merrydale ramps experience congestion due to high demand and unique geometry
- Southbound on-ramp joins Highway 101 on an uphill grade resulting in differential speed at the merge
- US101 Annual Average Daily Traffic Volumes Range 188,000-200,000.

Manuel T Freitas Parkway Interchange

- City of San Rafael requested the interchange be studied in Regional Transportation Plan.
- Multiple roadway and ramp approaches intersect on the east side with uncontrolled traffic movements.
- Southbound approach roadway has re-occuring congestion due to closely space intersections and short available weave length.
- US101 Annual Average Daily Traffic Volumes Range 180,000-188,000.

Lucas Valley / Smith Ranch Road Interchange

- Project Study Report completed in 2003 – Suggested modifying ramp configurations.
- Report needs to be updated to address limited multi-modal access improvements.
- Roadway recently closed due to flooding (Provides access to County EOC).
- US101 Annual Average Daily Traffic Volumes Range 171,00- 180,000.

Opportunities / Solutions

- Interchange Improvements are costly.
- All interchanges have deficiencies to some degree and priorities must be defined.
- Need in-depth analysis and study (project study report, environmental studies, design) to get projects “shelf-ready”
- Possible to implement select features on a phased approach.
- Construction of Interchanges are good candidates for future STIP funds and possibly other state or federal funds. Funding for initial studies are limited and difficult to obtain.
- Consider directing a portion of the Transportation Sales Tax funds to initiate interchange studies and possibly use as “seed money” for a construction funding plan.

Questions and Discussion

How Ramp Metering Works

- Maintain Corridor at Maximum Performance
- Reduce total travel delay
- Provide consistent travel times
- Provide HOV Incentives with HOV Bypass Lanes.
- Break up Platoons
- Make Merging Safer

Typical Setup