

Santa Cruz Avenue Bicycle Improvement Alternatives Analysis

SCOPE OF SERVICES

The County of San Mateo (County) has requested that Kimley-Horn and Associates, Inc. (Kimley-Horn) provide on-call transportation planning and traffic operations expertise to support Department of Public Works, Roadway Traffic Services staff, consistent with the on-call agreement between the County and Kimley-Horn.

Kimley-Horn will provide traffic engineering services to evaluate possible roadway configuration alternatives Santa Cruz Avenue between Sand Hill Road and Sharon Road. The following scope outlines the services Kimley-Horn will provide to assess the feasibility of alternative roadway design options on Santa Cruz Avenue. The corridor is currently designed as five lanes with a two-way center turn lane and two lanes of travel in each direction from Sand Hill Road to Alameda de las Pulgas. From Alameda de las Pulgas to Sharon Road, the corridor is two lanes, with a striped shoulder on both sides. There is on-street parking in the northbound direction for fronting single-family residential homes. There are no fronting residential homes on the west side of the street. A bicycle slot is present in the southbound direction at the intersection with Sand Hill Road to approximately 300' north of the intersection (driveway).

Task 1 – Data Collection and Field Review

Kimley-Horn will rely on AM and PM peak period turning movement and roadway segment count data collected in May 2016 for the Sand Hill Traffic Signal Interconnect Project. Kimley-Horn will supplement with two new weekday AM and PM peak period (7-9 AM and 4-6 PM) turning movement counts at the following intersections:

- Santa Cruz Avenue & Palo Alto Way; and
- Santa Cruz Avenue & Oak Hollow Way.

Kimley-Horn will use collision data provided by the County for analysis. The data on the study area roadway segment for the most recent 5-year period (2012-2016) will be used.

Kimley-Horn will obtain video recordings of traffic patterns on Santa Cruz Avenue between Sand Hill Road and Alameda de las Pulgas. The cameras will be placed in two locations 1) near the midblock intersection of Santa Cruz and the apartment complex driveway, facing south toward the intersection with Sand Hill Road and 2) near the midblock intersection of Santa Cruz and Oak Hollow way, facing south toward Sand Hill Road. This video will be collected on a single three-day period from Thursday through Saturday to capture typical weekday and weekend movements. Kimley-Horn will review this data to observe traffic patterns that could be impacted with the design alternative improvements.

To support the traffic diversion analysis, Kimley-Horn will conduct an existing travel time analysis along Santa Cruz Avenue and up to two parallel routes during the peak periods. Kimley-Horn will perform up to five travel time runs for each the following anticipated routes:

- Santa Cruz Avenue between Sand Hill Road and Sharon Road;
- Sand Hill Road at Santa Cruz Avenue to Oak Avenue to Vine Street to Stanford Avenue to Oakdell Drive to Santa Cruz Avenue to Sharon Road (and alternate route via Leland Avenue/Stanford Avenue will be utilized when Vine Avenue has a turn restriction); and
- Sand Hill Road at Sharon Park Drive to Sharon Road to Santa Cruz Avenue.

Travel time runs will be conducted in the peak direction of travel during the AM and PM peak periods. Kimley-Horn will calculate average travel time for each route.

Task 2 – Design Improvement Alternatives

The study will consider three (3) geometric preliminary design alternatives. The limits of design alternatives will not extend beyond Santa Cruz Avenue between Sand Hill Road and Sharon Road. All design alternatives will include a feasibility analysis of the location and design of a bicycle lane on both sides of the study corridor. The following design alternatives will be developed:

- Two lanes of travel in either direction, no two-way left-turn lane, with left-turns not allowed (striped median/double double-yellow centerline or raised median)
- Two lanes of travel in either direction, no two-way left-turn lane, with left-turns allowed from the inside lane (double-yellow centerline)
- One lane of travel in each direction, with a center-turn lane

For each design alternative, a potential roadway configuration will be prepared at 1"=40' scale on a scaled aerial background. GIS-based parcel data will be utilized to identify approximate right-of-way locations.

Task 3 - Traffic Analysis

Kimley-Horn will analyze the Level of Service (LOS), delay, and queuing for six intersections utilizing Synchro. The six intersections will include:

- Santa Cruz Avenue & Sharon Road/Oakdell Dr;
- Santa Cruz Avenue & Alameda de las Pulgas/Campo Bello Lane;
- Santa Cruz Avenue & Oak Hollow Way;
- Santa Cruz Avenue & Palo Alto Way;
- Santa Cruz Avenue & Sand Hill Road; and
- Alameda de las Pulgas & Sharon Road.

Kimley-Horn will estimate the potential for traffic to shift from Santa Cruz Avenue to a parallel route (Stanford Avenue, Leland Avenue, or Oak Avenue/Vine Street) with each of the design alternatives based on existing traffic patterns, existing travel times, and estimated changes to delay on Santa Cruz Avenue.

Task 4 - Collision Analysis

Kimley-Horn will review recent collision history on Santa Cruz Avenue and identify any collision patterns apparent in the data. Kimley-Horn will identify readily available and applicable research data on the effect of center-turn lanes, mid-block left-turns, and road diets on collision frequency.

Task 5 – Community Meetings

Kimley-Horn will support two meetings with the community during this study. The first meeting will present the alternatives developed to the community and allow them an opportunity to comment on each alternative. The second meeting will present the public with a refined set of alternatives for the corridor. These meetings may include a PowerPoint presentation, an open house format to review alternatives, and an opportunity for comments and Q&A. Up to 3 Kimley-Horn staff members will be in attendance. Additionally, an option is provided to have a public involvement facilitator attend both meetings to facilitate the discussion and document the public response. County staff will be responsible for arranging the meeting location and all noticing of the meetings.

Task 6 – Documentation and Team Meetings

Kimley-Horn will document the analysis conducted for Santa Cruz Avenue and prepare a technical memorandum for County review. Kimley-Horn will attend up to two in-person meetings or teleconferences with County of San Mateo staff to discuss the improvement alternatives and analysis findings.

One round of consolidated comments on the technical memorandum is assumed and a revised technical memorandum will be prepared.

SCHEDULE

Kimley-Horn is prepared to begin work immediately upon receipt of the notice to proceed (NTP) and will endeavor to meet your scheduling needs. We anticipate an approximately two-month period from NTP to the first community meeting. It is anticipated that additional two months will be required to prepare a draft technical memorandum.

PROFESSIONAL FEE

Kimley-Horn will provide the Scope of Services to develop and analyze the improvement alternatives for a Time and Materials fee not to exceed \$51,750.

As an optional service, Kimley-Horn will provide a meeting facilitator, Eileen Goodwin of Apex Strategies, for the two community meetings. The additional cost for the optional service is \$6,700, for a total cost including the optional service of \$58,450.

Level of Effort Estimate - Santa Cruz Avenue Analysis

Task	Sr. Prof.	Prof.	Analyst	Support	Total
Task 1 - Data Collection and Field Review	4	4	16	4	28
Task 2 - Design Improvement Alternatives	10	24	36	6	76
Task 3 - Traffic Analysis	6		30		36
Task 4 - Collision Analysis	2		10		12
Task 5 - Meetings	24	14	50	8	96
Task 6 - Documentation	10	10	36	2	58
Total Hours	56	52	178	20	306
Billing Rate	\$210	\$180	\$135	\$120	
Labor	\$11,760	\$9,360	\$24,030	\$2,400	\$47,550
Indirect and Direct Expenses (Mileage, Printing, Express, etc.)					\$3,200
Traffic Data Collection					\$1,000
Total					\$51,750

To summarize the fee, it is distributed into the following three project phases:

- Data Collection and Observations: \$6,000
- Development and Analysis of Improvements: \$6,850 each x 3 alternatives = \$20,550
- Meetings and Documentation: \$25,200 + \$6,700 as optional service = \$31,900