



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: August 17, 2021

TO: Mayor and Councilmembers

FROM: Transportation Planning and Parking Division and Street Operations and Infrastructure Management Division, Public Works Department

SUBJECT: Chapala Street Vision Zero Project: Restriping Chapala Street (Arrellaga Street To Mission Street) To One Lane

RECOMMENDATION:

That Council receive a report and presentation on the Chapala Street Vision Zero Safety Project, and direct staff to include the proposed striping option as a part of the upcoming streets pavement maintenance project.

EXECUTIVE SUMMARY:

Prior to pavement maintenance projects, staff reviews collision records and traffic operations for opportunities to incorporate cost effective safety changes into the maintenance efforts. Pavement maintenance is scheduled on Chapala Street between Sola and Mission Streets in late 2021 (Attachment 1 - Project Location Map). The Chapala Street Vision Zero Project proposes reducing Chapala Street from two lanes to one lane between Arrellaga Street and Mission Street to address patterns of intersection related broadside collisions and collisions into parked vehicles. A traffic signal is also proposed at the intersection of Chapala and Arrellaga Streets.

While the purpose of the Project is to address the pattern of broadside and sideswipe collisions, the space gained by reducing Chapala Street from two lanes to one lane presents an opportunity to improve safety and mobility for cyclists. The lane reduction creates enough space for the addition of an on-street buffered bike lane. A tradeoff of the lane reduction proposal is the net removal of four on-street parking spaces on Chapala Street near Mission Street. There will also be a slight increase in side street delay and corridor travel time. The community is generally supportive of the proposed safety improvements.

DISCUSSION:

Background

The Santa Barbara Vision Zero Strategy, which was unanimously adopted by Council on September 11, 2018, aims to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all. About 77 percent of collisions resulting in serious or fatal injuries are concentrated on just 20 percent of Santa Barbara streets, including Chapala Street. These Vision Zero Priority Corridors are where transportation efforts and investments can have the greatest results improving safety. Priority Corridors are illustrated in Attachment 2.

Prior to the planned pavement maintenance project, staff performed a Vision Zero traffic collision analysis to identify collision patterns and opportunities to eliminate collisions.

The upper portion of Chapala Street (above Micheltorena Street) is primarily a residential neighborhood, but also functions as an arterial street from Downtown to other areas of the City. In addition to the documented collision history, the City has also received numerous requests to improve traffic safety in the area given the traffic characteristics of Chapala Street passing through a residential area.

Collision History

The five year collision analysis from 2015 to 2019 revealed there were 32 traffic related collisions resulting in 19 injuries between Micheltorena and Mission Streets. The highest location is at the intersection of Chapala and Arrellaga Streets, which had seven broadside collisions. The remaining collisions were generally spread out along the corridor and not concentrated at any specific location. Refer to Attachment 3 for the detailed collision analysis on Chapala Street.

Proposed Safety Changes

The configuration for the proposed changes is shown in Attachment 4.

Chapala Street is proposed to be restriped from two travel lanes to one traffic lane from Arrellaga Street to just south of Mission Street. The one-lane configuration will address the patterns of collisions along the corridor:

- One lane will promote slower traffic speeds, which will reduce the frequency of severity of collisions.
- The single traffic lane will be positioned closer to the center of the street, which will improve sight lines between drivers on Chapala Street and drivers on side streets, thus reducing broadside collisions at Valerio, Islay, and Pedregosa Streets. This will also reduce the frequency of collisions involving parked vehicles.

The single lane configuration will also make it safer and easier for pedestrians to cross Chapala Street. The multiple threat condition is eliminated with a single lane configuration (where a driver stopping in one lane to permit a pedestrian to cross, and a driver in the adjacent lane does not stop).

The space gained by restriping two traffic lanes into one traffic lane provides an opportunity to extend the existing Chapala Street bike lane from Mission Street to Arrellaga Street, improving safety and comfort for cyclists. Per the Bicycle Master Plan, green conflict striping is planned for upper Chapala Street; green markings will be applied to this section as well. Staff has identified a darker shade of green than was used on State Street that meets Federal Highway Administration standards.

Other planned safety improvements include a new traffic signal planned at the intersection of Chapala and Arrellaga Streets and improved intersection lighting along the corridor. This will also address the pattern of broadside collisions.

Traffic Performance and Capacity Discussion

For other recent lane reduction projects in Santa Barbara, field studies were performed to test the viability of the lane reduction. For example, on Anacapa Street (lane reduction project implemented in 2020), a traffic lane was closed for a day and traffic counts and measurements were taken and compared to a computerized traffic model.

For this proposal on Chapala Street, a day-long lane closure was not done, since the traffic volumes during the pandemic were about 20 percent below pre-pandemic volumes, and field studies would not give an accurate representation of “normal” traffic conditions. Instead, staff compared this segment of Chapala Street to other one-lane streets, and also analyzed Chapala Street using a computerized traffic model.

Table 1, below, compares the traffic volumes on this segment of Chapala Street with other one lane projects. Note, that De La Vina Street from Constance to Padre has not been implemented yet (scheduled for fall of 2021), but was thoroughly studied prior to the pandemic, including a lane closure to simulate the one lane condition.

Table 1: Traffic Volumes On Other One Lane Streets

Street	From/To	Daily Traffic Volume	PM Peak Hourly Traffic Volume	Comments
Chapala (this proposal)	Arrellaga to Mission	5,400	670	Various traffic counts along Chapala Street were performed between 2015 and 2019 and were utilized for this analysis.
Anacapa	Mission to Micheltorena	5,900	700	Implemented 2020
De La Vina	Constance to Padre	8,900	800	Implementation fall 2021. This was studied in 2019 (prior to pandemic) and approved by City Council in 2020.
Bath	Carrillo to Micheltorena	4,600	500	Implemented 1970s

Table 2, below, shows the results of a traffic modeling effort to quantify corridor travel time on Chapala Street between Micheltorena to Mission Streets, and side street delay for both two lane and one lane conditions. Side street delay is an important metric for consideration because with traffic on Chapala Street concentrated into one lane, there will be fewer gaps for side street traffic.

Overall corridor travel time will likely increase an average of about ten seconds. Side street delay at Valerio Street, Islay Street, and Pedregosa Street will increase an average of about one to two seconds. At Arrellaga Street, side street delay will increase an average of about 10 to 15 seconds due to the installation of a traffic signal, which is typically less efficient for side street traffic than stop signs.

Table 2: Expected PM Peak Traffic Performance

Performance Metric		Existing Conditions (Two Lanes)	Traffic Signal at Arrellaga and One Lane Configuration	Difference
PM Peak Travel Time (Sola To Mission)		144.3s	153.5s	+9.2s
PM Peak Side Street Delay (Average)	WB Arrellaga	13.9s	27.3s	+13.4s
	EB Arrellaga	14.7s	23.9s	+9.2s
	WB Valerio	9.9s	13.2s	+3.3s
	EB Valerio	10.3s	10.6s	+0.3s
	WB Islay	8.7s	9.7s	+1.0s
	EB Islay	8.6s	9.5s	+0.9s
	WB Pedregosa	8.5s	10.2s	+1.7s
	EB Pedregosa	8.4s	9.5s	+1.1s

Parking Removal Near Mission Street

The traffic capacity analysis revealed that one lane can accommodate traffic on Chapala Street between Arrellaga Street to just south of Mission Street. However, two northbound lanes of traffic are needed at the intersection of Chapala and Mission Streets. The traffic signal at intersection of Chapala and Mission Streets favors Mission Street due to higher traffic volumes and the amount of green light time needed to clear queues on Mission Street. This leaves a limited amount of green time available for Chapala Street. With only one northbound lane on Chapala Street at Mission Street, queues will form during the PM peak that are nearly a block long.

In order to provide two northbound lanes plus the bike lane, parking removal will be required along the west side of Chapala Street to create enough room for the second northbound lane. Approximately eight parking spaces will have to be removed along the west side of Chapala Street. To mitigate the loss, one parking space can be added on the east side of Chapala Street, and the City is working with the First Christian Church, which has a three-space long passenger loading zone (currently 24/7) to allow parking when the passenger loading zone is not needed, creating a net loss of four parking spaces in the vicinity. The affected parking spaces are illustrated in Attachment 4. Staff has heard from businesses near Mission Street that two parking spaces north of Mission Street are particularly valuable. These two spaces could be preserved with an alternate lane configuration, but the alternate lane configuration would likely result in long queues during peak hours.

Community Feedback

On Wednesday, June 16, 2021, the City hosted a public webinar to describe the planned changes. The meeting was advertised through a media press release, City News In Brief,

and Nextdoor.com. Posters were placed at each intersection along Chapala Street from Micheltorena Street to Mission Street, and a project web site was created.

Preliminary feedback from residents that live on or near Chapala Street are generally supportive of the overall project. Other comments included:

- Not supportive of parking removal.
- Would like to see more speed control incorporated into the project.
- Concerned about possible congestion in the 1900 block (between Pedregosa and Mission Streets).
- Not supportive of the merge condition north of Mission Street (existing or proposed).

TRANSPORTATION AND CIRCULATION COMMITTEE REVIEW:

The Transportation and Circulation Committee reviewed the Project on June 24. The Committee unanimously supported the Project, and found the Project consistent with the City's Vision Zero Strategy, Bicycle Master Plan, and Pedestrian Master Plan.

BUDGET/FINANCIAL INFORMATION:

The Project cost for restriping is approximately \$5,000, due to the additional pavement markings beyond those that would be re-installed after the pavement maintenance project. Approximately \$1,000 of new street signs will also be needed.

The new traffic signal at Arrellaga Street will cost approximately \$100,000. Improved intersection lighting along the corridor will cost approximately \$60,000.

Adequate appropriation exists for the overlays, striping and traffic signal upgrades in the Measure C capital fund. And adequate appropriation exist for the traffic safety/capacity upgrades in the Measure A capital fund.

ENVIRONMENTAL REVIEW:

Under provisions of the California Environmental Quality Act (CEQA), staff conducted preliminary review of the Project and determined that it qualifies for exemption from further environmental review and documentation, under the following provisions:

- Statutory Exemptions - Public Resources Code §21080.19, Restriping of streets to relieve congestion; and
- Categorical Exemption - State CEQA Guidelines 15301, Existing Facilities, minor alteration of existing public facilities involving negligible or no expansion of existing use, including existing streets and similar facilities; and List of City determined activities qualifying as categorically exempt – Installation of traffic safety devices.

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- Categorical Exemption - State CEQA Guidelines 15304, Minor Alterations to Land, which allows for creation of bicycle lanes on existing rights-of-way.

ATTACHMENTS:

1. Project Location Map
2. Vision Zero Priority Corridors
3. Vision Zero Traffic Collision Data
4. Proposed Project Configuration

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