

Complete Streets, Completely Safe?

Comparing The Embarcadero Corridor, San Fransisco, to Vallley Blvd, Alhambra



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INTRODUCTION

Freeway Removal

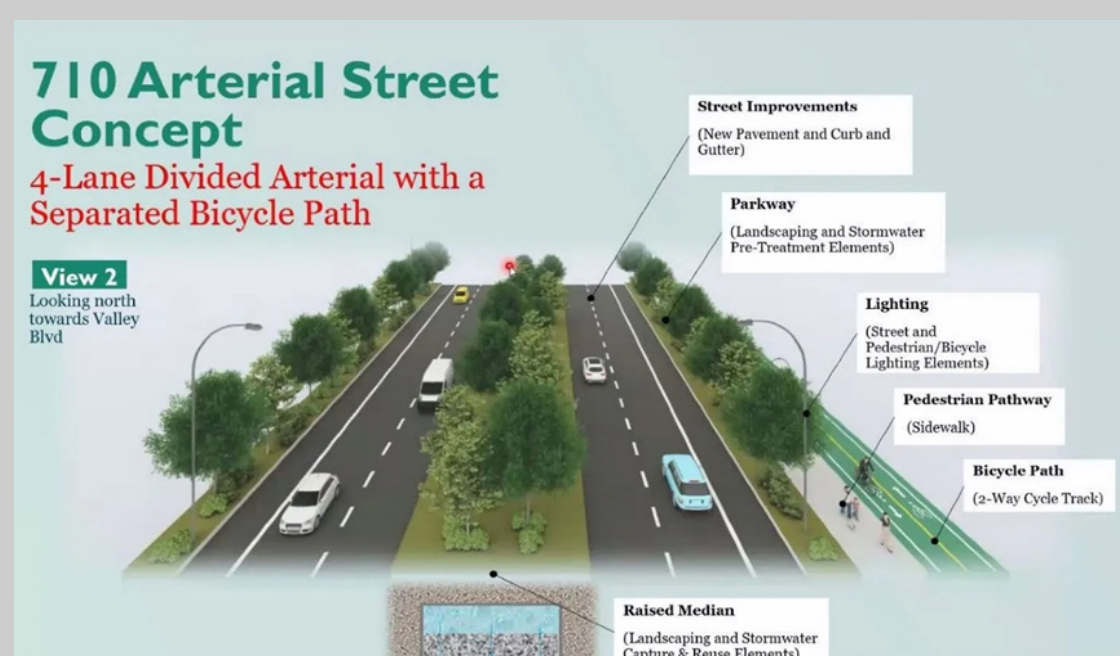
- Freeway Removal has become a growing trend in Urban Planning. The purposes of freeway removal vary, but most cases have proven how this process benefits communities through re-connectivity, open and public space creation, and renewing neighborhood Identity.
- Freeway construction during the 'Urban Renewal' era divided many communities and created lasting negative impacts on residents. The removal of some of these freeways is a way for Urban Planners to combat these mistakes.

The Embarcadero, San Francisco

- A strong example of a positive outcome of freeway renewal is The Embarcadero, located in San Francisco.
- The Embarcadero, originally a highway ramp, was destroyed by the Loma Prieta earthquake in 1989.
- The city of San Francisco has transformed the Embarcadero into a complete street full of safe pedestrian amenity routes.

710-Freeway Stub, Alhambra

- The city of Alhambra is currently in the planning stages of removing the 710-Freeway Stub and replacing the corridor with an Arterial street connecting to another major street - Valley Boulevard.
- Valley Boulevard spans across the city of Alhambra and into neighboring cities, it is important for Alhambra to address the redevelopment of Valley Boulevard along with the 710-FreewayStub.



METHODOLOGY

Purpose

- The purpose of this study is to Analyze the safety of The Embarcadero corridor, in order to compare to the current conditions of Valley Boulevard, which will be the main arterial connection from the future 710-Freeway Arterial Corridor.
- This study will compare quantitative crash data along The Embarcadero and Valley Boulevard routes, in order to analyze the safety of proving pedestrian amenities, as well as travel behavior based on traffic infrastructure.

Transportation Injury Mapping System: TIMS

- This study utilized UC Berkeley's TIMS crash data to compare crash patterns and safety along Valley Boulevard and The Embarcadero Corridor between the years 2014-2025.

Domains	Variables	Reason
Public Safety	Vehicle Only Crashes, Vehicle + Pedestrian collisions, Vehicle + Bicycle Collisions	Visual representation of where crashes are occurring as well as total counts
Public Health	Pollution Burden	Visualize impacted areas where public health is at risk based on corridor locations

FINDINGS

Current Conditions



Valley Boulevard

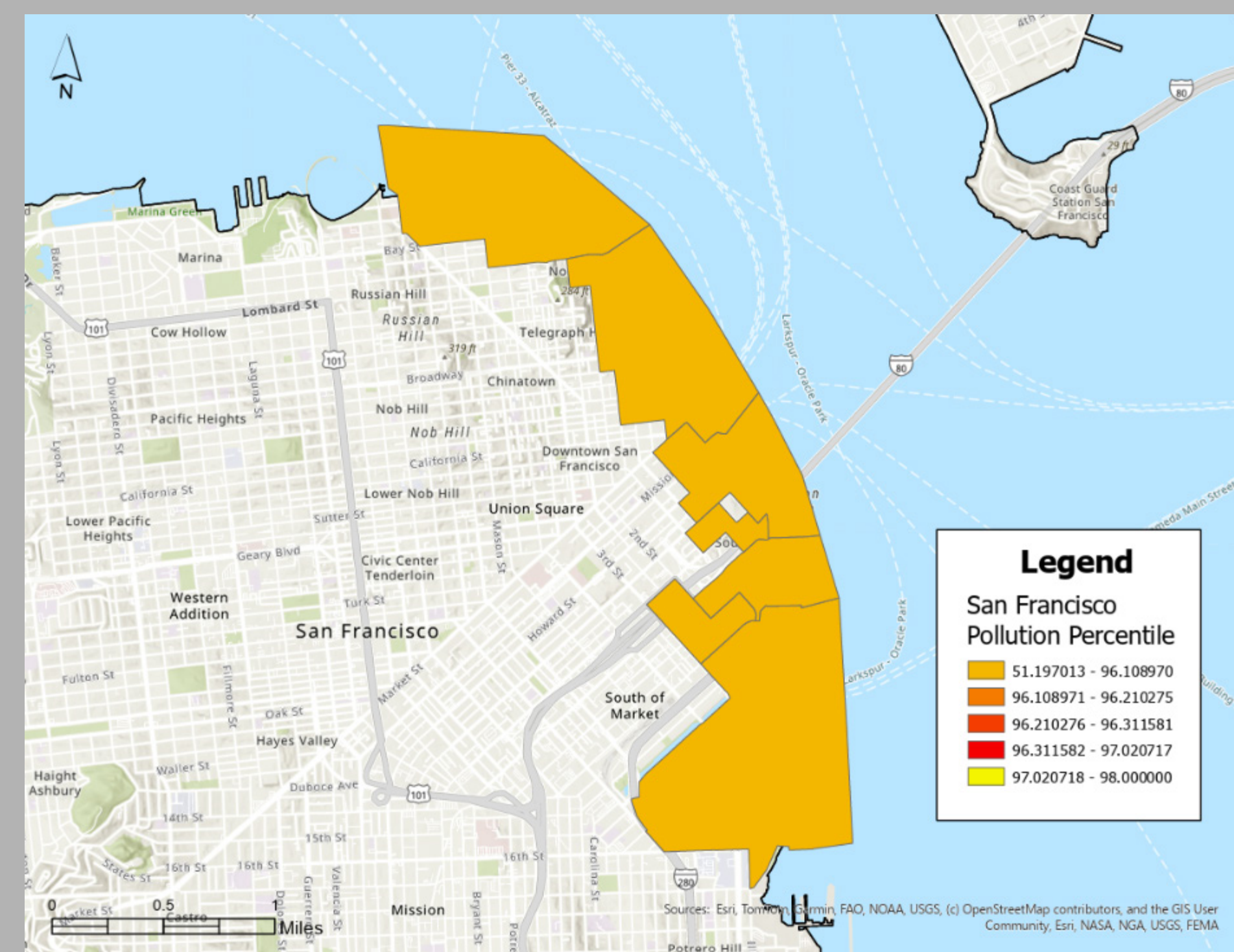
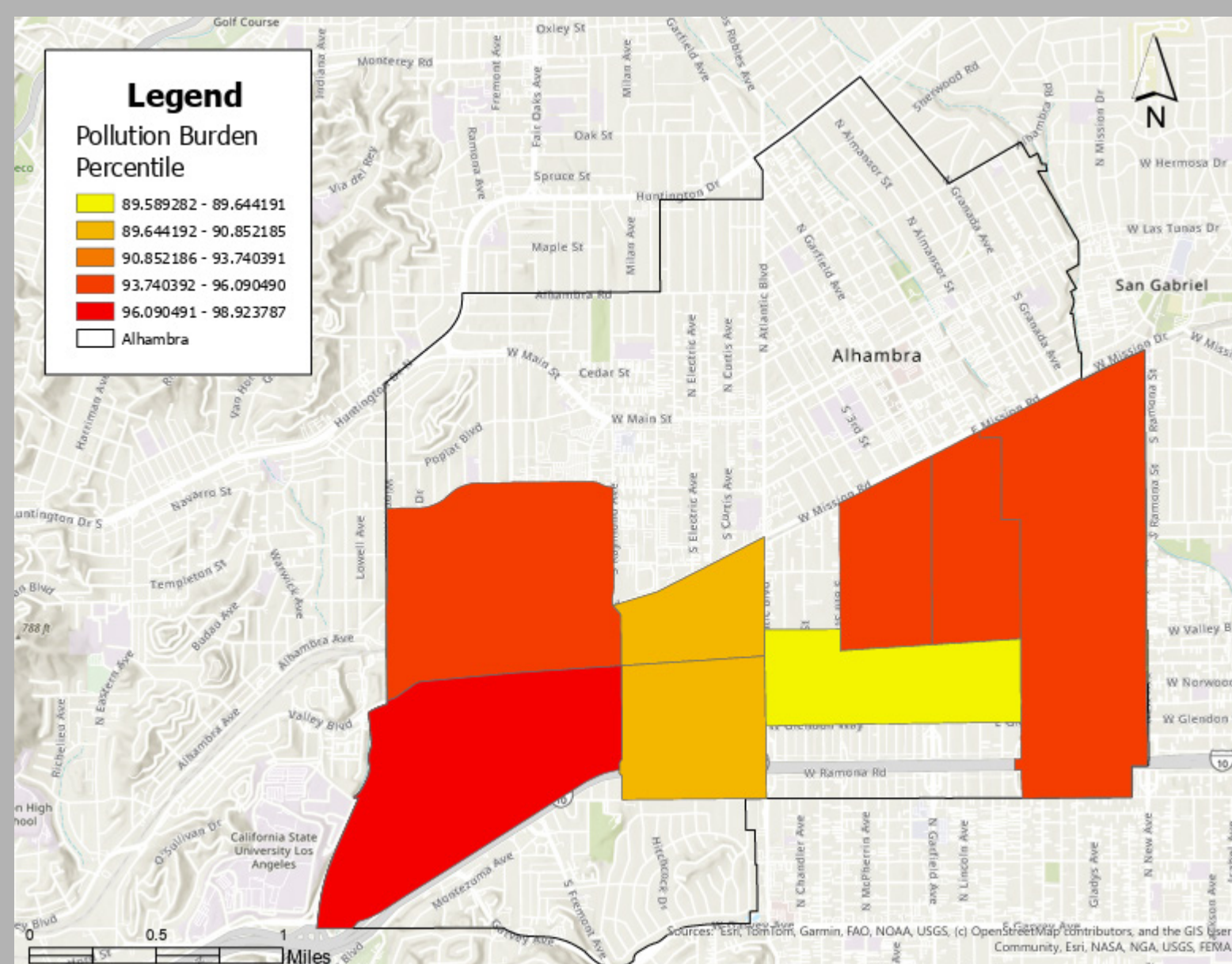


Embarcadero

Crash Data Results

Corridor	Length (miles)	Vehicle(s) Only	Vehicle + Pedestrian	Vehicle + Bicycle	Total	Crashes per mile	Multimodal Crash Share
Embarcadero	2.7	214	49	121	384	144.4	44.3%
Valley Blvd	3.1	385	65	37	487	156.1	20.9%

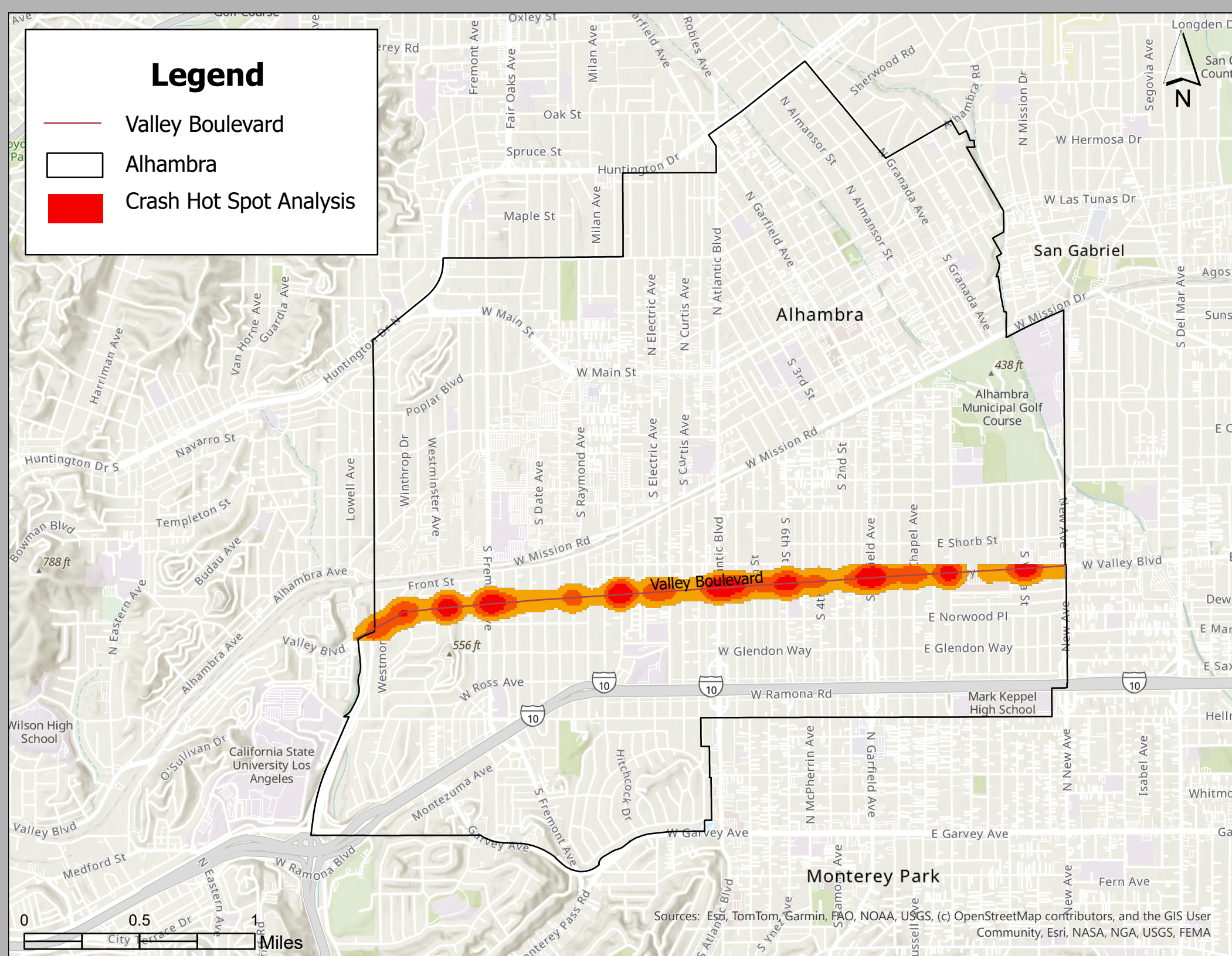
Cal Enviro Pollution Data



CONCLUSIONS/RECOMMENDATIONS

Discussion

- For the quantitative analysis of this study, 3 crash data variables were measured for each corridor.
- Vehicle(s) alone, Vehicle + Pedestrian, and Vehicle + Bicycle crashes.
- Valley boulevard reported the most overall crashes for the time period between 2014-2025. Valley boulevard had a higher count for the variables of Vehicle(s) only, and Vehicle + Pedestrian.
- The Embarcadero had a higher reported number for Vehicle + Bicycle collisions.
- Although the Embarcadero corridor has safer bicycle routes, it still reported higher numbers in bicycle related accidents.
- This data helps illustrate that travel behavior depends on infrastructure.
- Where there is increased vehicle infrusture there may be more vehicle collisions and likewise with bicycles.
- This may not mean that Valley Boulevard is a more safe place to bike, but rather, the Embarcadero has different travel behavior.
- This is an important analysis for planners when considering implementing complete streets and tradeoffs in travel behavior.



Valley Boulevard Crash Analysis

- To further analyze the crash data, I conducted a hot spot analysis, locating the densities of crash areas along the Valley Boulevard route.
- These interesctions have the highest concentration of crashes reported.
- The city of Alhambra should include concepts from the embarcadero corridor such as wider sidewalks for pedestrian safety as well as wider medians, and bike lanes in these higly concentrated zones.