SJSU SAN JOSÉ STATE UNIVERSITY

MTI MINETA TRANSPORTATION INSTITUTE

Inventorying San Francisco Bay Area Parking Spaces: Technical Report Describing Objectives, Methods, and Results

Mikhail Chester, PhD
Alysha Helmrich, PhD
Rui Li

MINETA

ASU Arizona State University

SPUR

Research Partnership

Mikhail Chester, Ph.D.
Associate Professor of Civil, Environmental, and Sustainable Engineering
Director of the Metis Center for Infrastructure and Sustainable Engineering
mchester@asu.edu

Alysha Helmrich,Ph.D.
Doctoral Candidate
Civil, Environmental, and Sustainable Engineering
ahelmric@asu.edu

Rui Li
Doctoral Candidate
Civil, Environmental, and Sustainable Engineering
ruili11@asu.edu

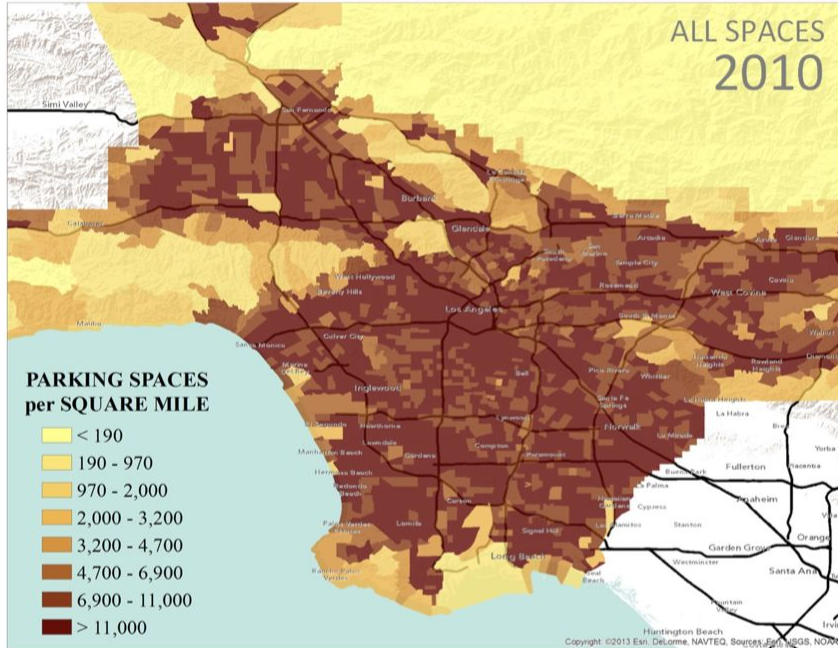MINETA   **ASU** Arizona State University   SPUR
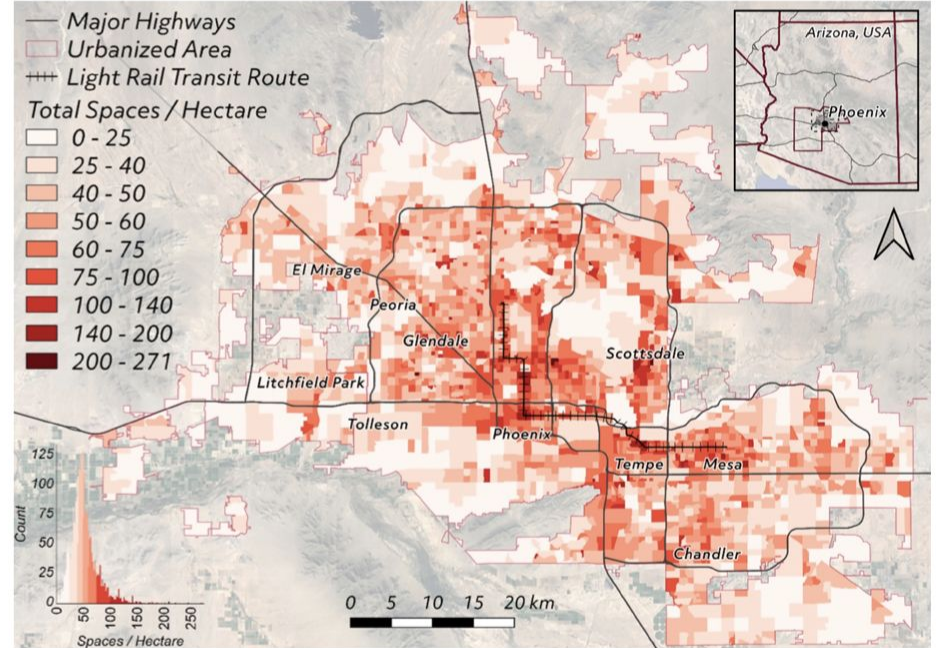
Why Parking?

Sergio Ruiz for SPUR

Project Goals: How much parking do we have?

1. Develop the Bay Area's first comprehensive, public dataset of on- and off- street parking and disrupt the tendency to "predict and provide".

2. Use data to shift the narrative and build the case for parking policy reform by identifying the negative impacts of parking--and what we can have instead.

Estimating Urban Parking

LOS ANGELES COUNTY: Chester et al. (2015), 10.1080/01944363.2015.1092879.

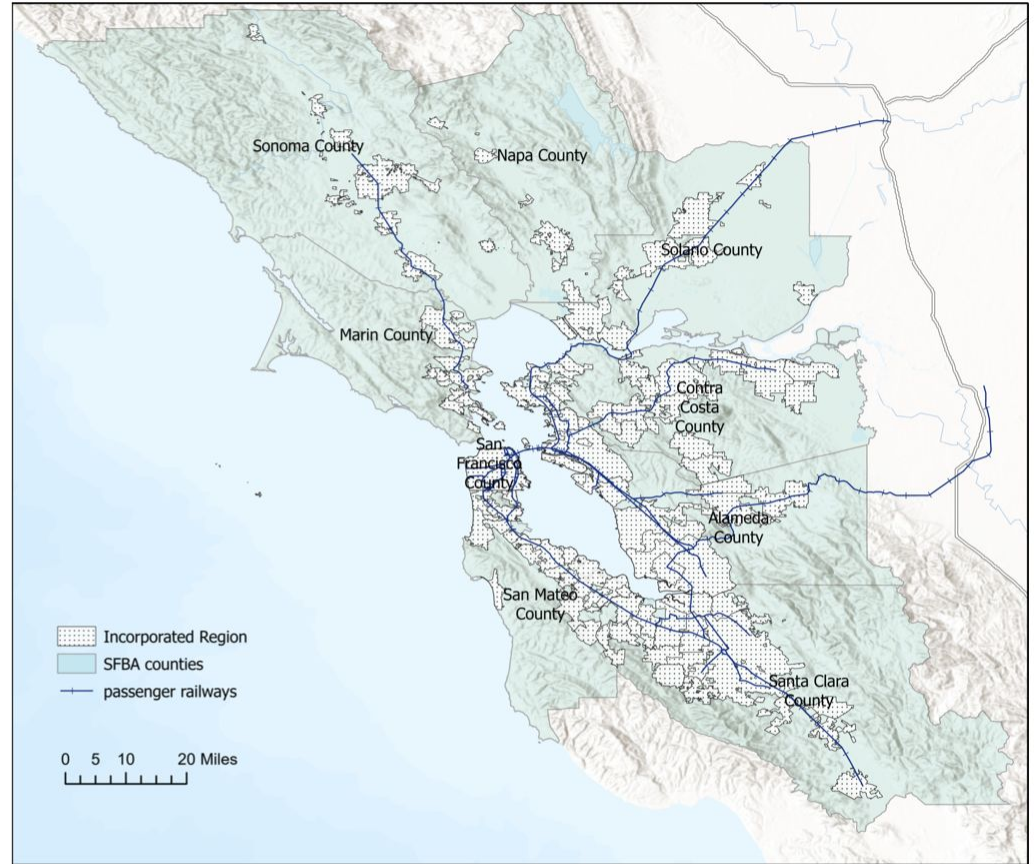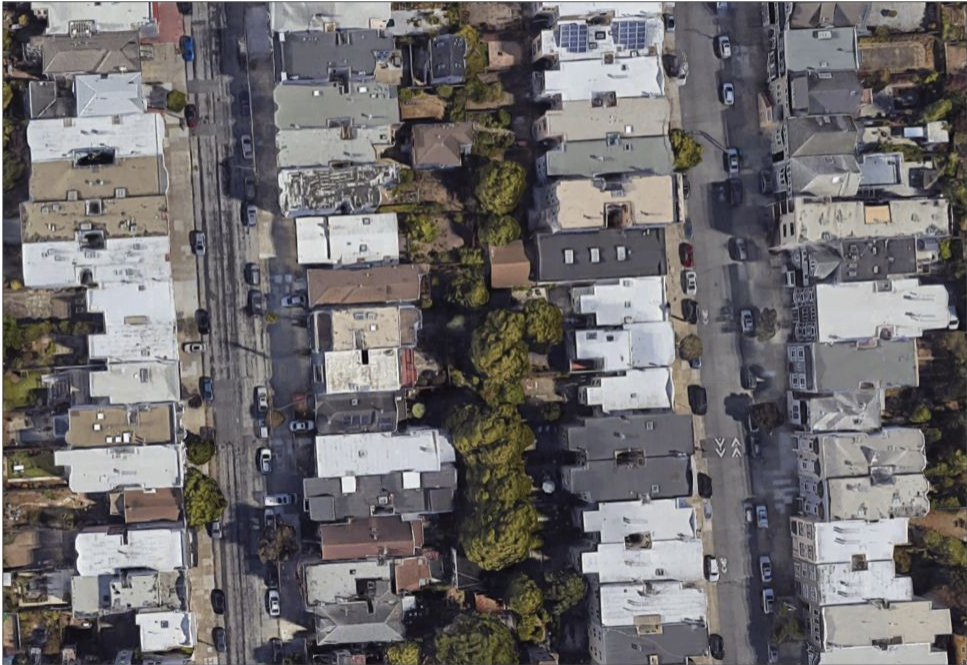**PHOENIX METRO**: Hoehne et al. (2019), 10.1016/j.cities.2019.02.007.

Methods

ON-STREET

OFF-STREET

Bay Area

Incorporated ≈ urban

Unincorporated ≈ non-urban

On-street

TRANSIT STOP
33 ft

INTERSECTION
30 ft

BRIDGE
Asset excluded

TUNNEL
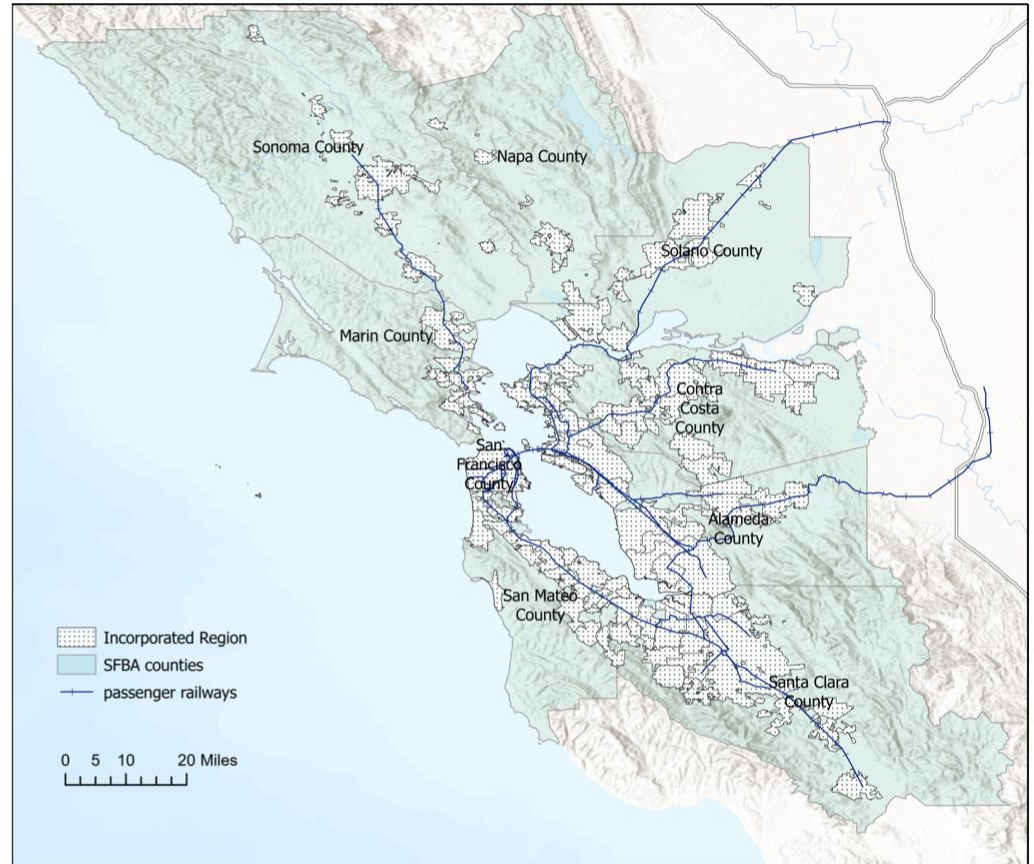Asset excluded

DRIVEWAY
15 ft

HYDRANT
1 space per
500 ft of curb

Off-street

MTC Consolidated Assessor
  database

Key Properties:
- Building & Parcel Area
- Bedrooms

Land-use

	Residential	Commercial Retail	Commercial Office	Public Service	Recreational	Industrial	Agricultural	Miscellaneous
Alameda	54%	11%	8%	7%	1%	19%	0%	0%
Contra Costa	67%	12%	9%	7%	1%	4%	0%	0%
Marin	66%	28%	0%	3%	0%	3%	0%	0%
Napa	72%	12%	3%	0%	0%	13%	0%	0%
San Francisco	69%	14%	6%	7%	0%	4%	0%	1%
San Mateo	68%	9%	12%	3%	1%	7%	0%	0%
Santa Clara	58%	8%	14%	3%	1%	16%	0%	0%
Solano	80%	9%	3%	2%	1%	5%	0%	0%
Sonoma	67%	11%	6%	4%	3%	9%	0%	0%

Off-street Edge Cases

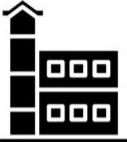AIRPORTS

ASSEMBLY PLACES

AUTO REPAIR

CAR WASH

CEMETARIES

PLACES OF WORSHIP

CONVENTION CENTERS

DAY CARE

GAS STATIONS

GOLF COURSES

HOSPITALS

MARINAS

HIGH-RISES

NURSING HOMES

RESTAURANTS

SCHOOLS

UNIVERSITIES

STADIUMS

THEATERS

PARKS

UTILITIES