



San Mateo County Shared Micromobility Feasibility Study

C/CAG TAC



April 21, 2022

Study Background

- Micromobility was a recommended program in the Board-adopted 2021 C/CAG Comprehensive Bicycle and Pedestrian Plan
- TAC reviewed and approved the scope of work for the Study on August 19, 2021
- A Request for Proposal was released on September 23, 2021.
- In December 2021, Board approved a consultant contract with Alta Planning + Design to prepare the Study

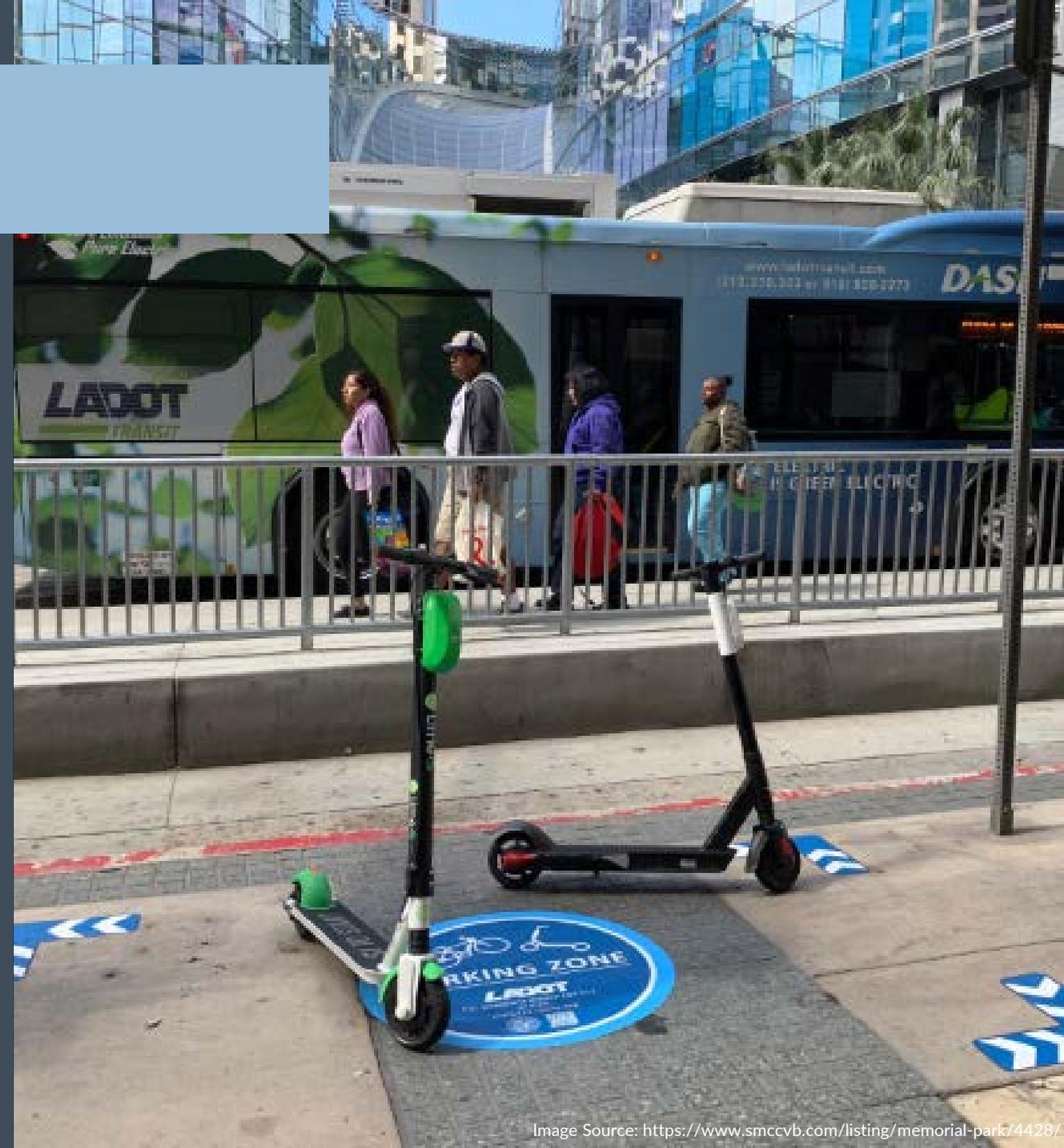
Shared Micromobility

- “Small, low-speed transportation vehicles”
- Human or electric-powered
- Part of a shared mobility service



What We've Done

- Two Ad-Hoc Advisory Group (AHAG) Meetings
- Shared Micromobility Feasibility Analysis



AHAG Members

Representatives from the following organizations are serving on the Ad Hoc Advisory Group:

- Caltrain
- SamTrans
- San Mateo County Transportation Authority (SMCTA)
- BART
- Commute.org
- Silicon Valley Bicycle Coalition
- C/CAG Bicycle Advisory Committee (BPAC)
- City of Redwood City
- City of San Mateo
- City of San Carlos
- City of Burlingame
- Samaritan House
- Meta (Facebook)
- Genentech/Oyster Point Commuter Coalition
- Kaiser Permanente
- Pacifica Voice/Coast Commute
- San Mateo County Planning
- San Mateo County Office of Sustainability
- College of San Mateo/Community School District
- A small business in Pacifica
- San Mateo County Chamber of Commerce

Program Feasibility

Qualitative review of different factors to:

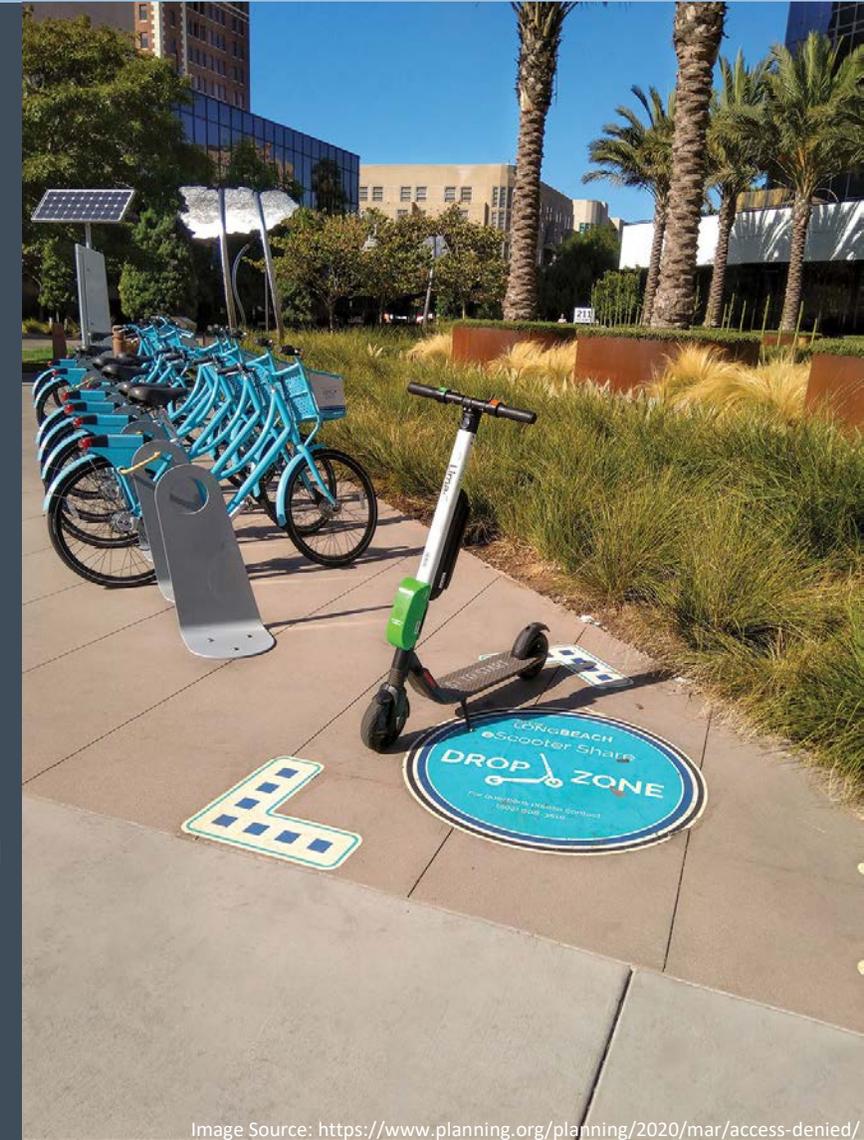
- Identify fatal flaws and/or significant barriers to implementing a shared micromobility program in San Mateo County
- Better understand how a program might achieve its goals

Meant to guide decision-making, NOT serve as program recommendations

Draft Program Goals

Proposed Overall Program Goals:

- Replace Motor Vehicle Trips
- Integrate with Transit
- Ensure the Program Benefits Everyone
- Enhance Mobility Options for Local Residents
- Create a Cost-Effective and Self Sustaining Program
- Support Economic Development
- Generate Positive Public Perception about the Program
- Support Tourism Opportunities



Program Feasibility

Demand Analysis
Results



Where and how often would it likely be used?

Destinations +
Barriers Analysis
Results



Are there viable routes/connections?

Equity Analysis
Results



Who could benefit the most from a program?

Program
Opportunity +
Resource
Analysis Results



What resources & opportunities are available?

Program Feasibility

Demand Analysis
Results

High

Destinations +
Barriers Analysis
Results

Medium -
High

Equity Analysis
Results

High

Program
Opportunity +
Resource
Analysis Results

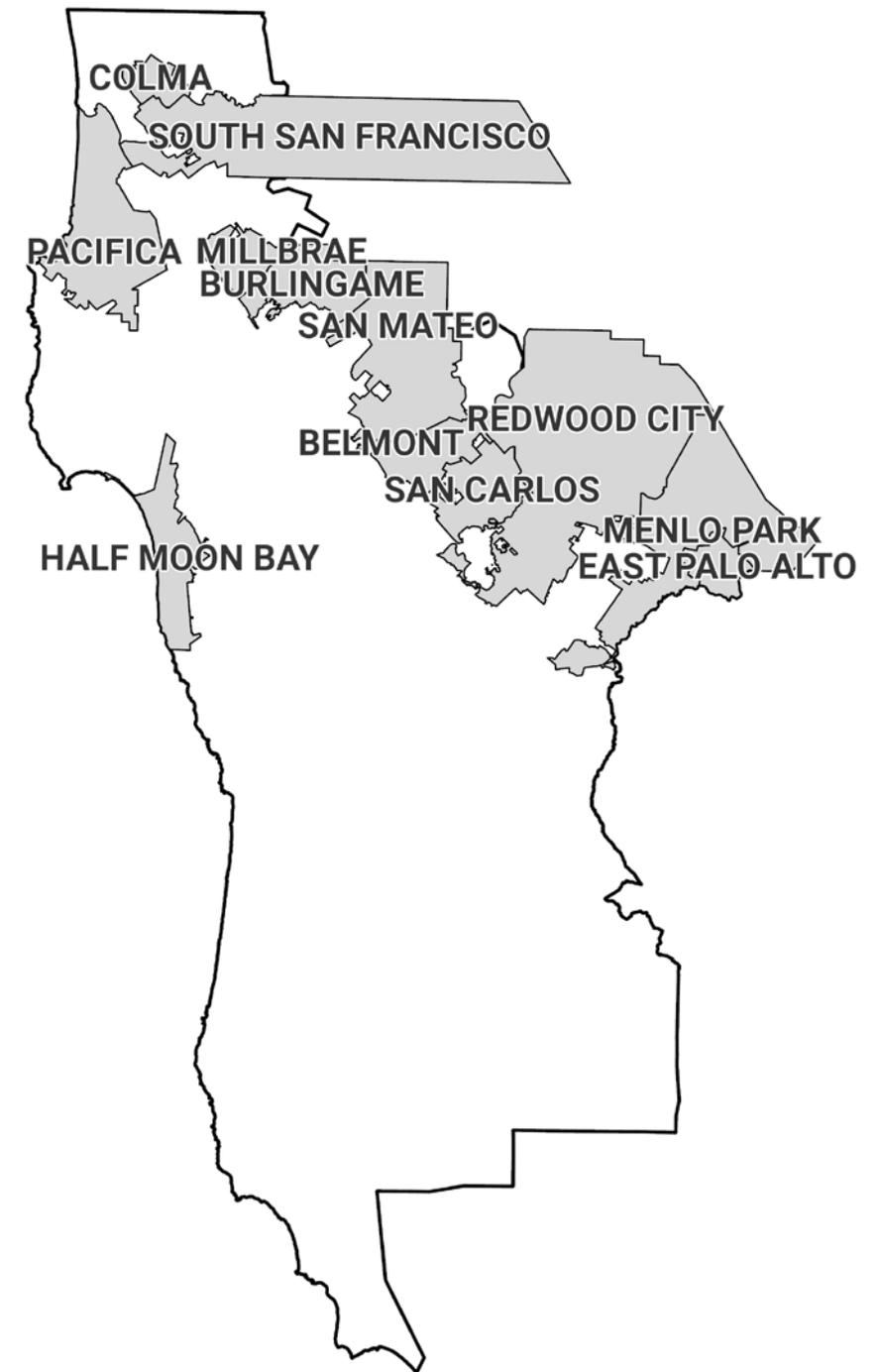
Medium -
High



A Program is Feasible!

Plan & Policy Review

- **Regional and County** plans promote or recommend shared micromobility
- Over half (12 out of 20) of **local** plans include a shared micromobility recommendation



Demand Analysis

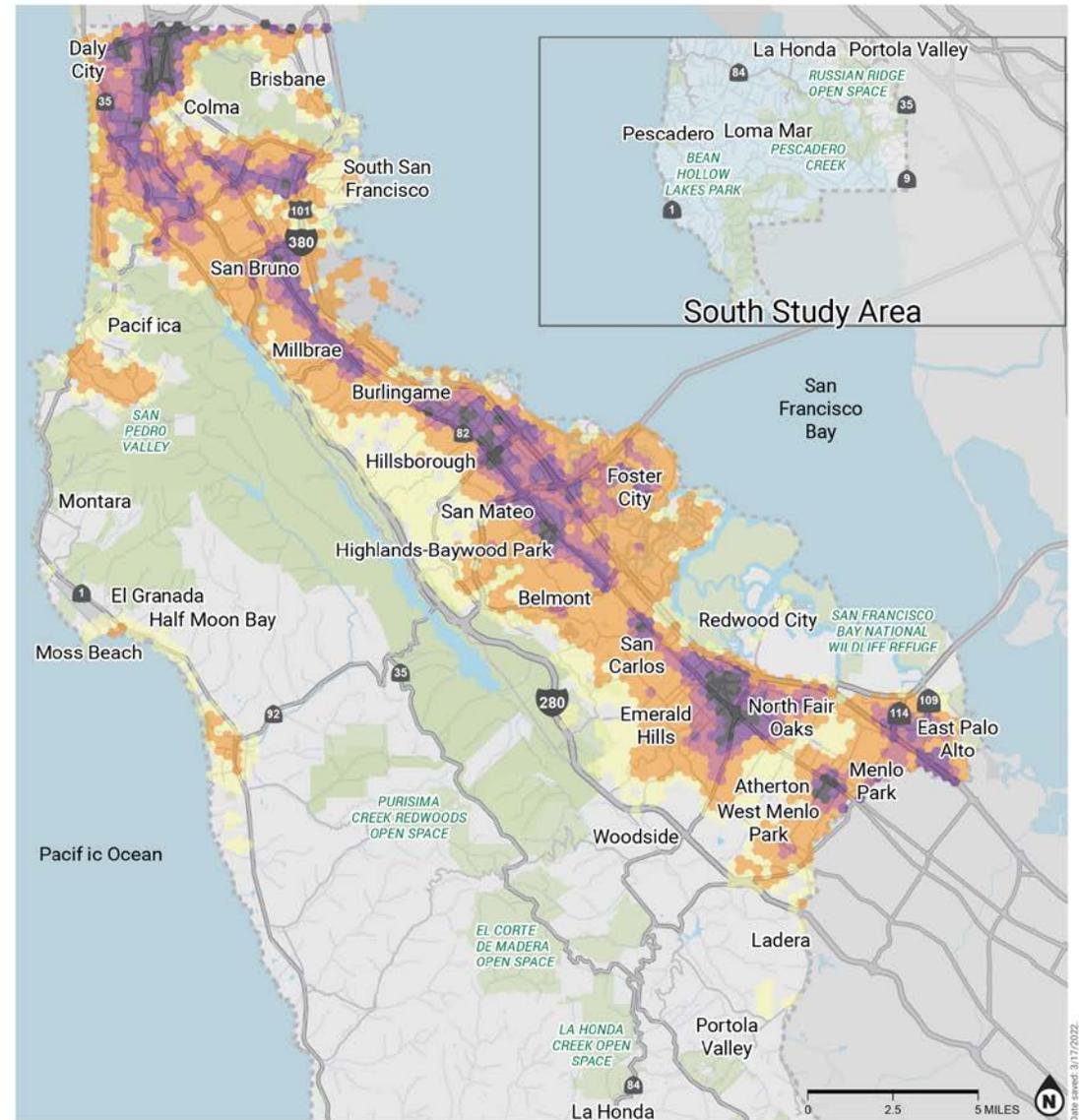
Inputs:

- Where people live (**Population Density**)
- Where people work (**Employment Density**)
- Where people shop (**Shops**)
- Where people attend higher education (**Student Density**)
- Where people can ride transit (**Availability of Transit**)
- Where people visit (**Tourist Destinations and Accommodation Services**)



Demand Analysis

- Downtown & High-Density areas
- Areas close to BART & Caltrain Stations
- Bayside & Coastal communities



DOCKED PROJECTED DEMAND MAP

SAN MATEO COUNTY
SHARED MICROMOBILITY
FEASIBILITY STUDY

PROJECTED DEMAND



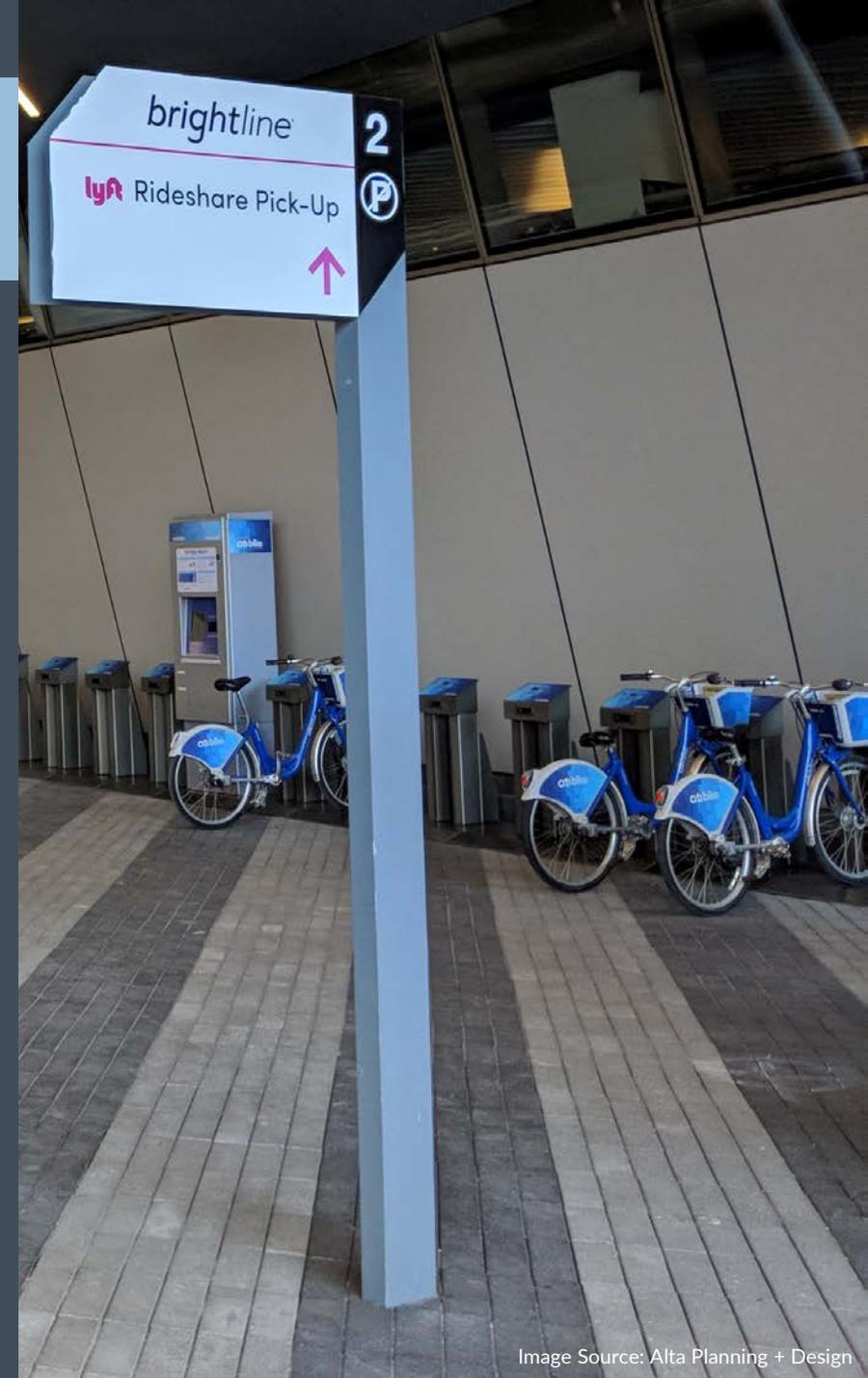
DESTINATIONS + BOUNDARIES



Barriers Analysis

Inputs:

- Roadway level of traffic stress (LTS) (from C/CAG Bike/Ped Plan)
- Clusters of Automobile Focused Businesses (defined in OpenStreetMap) such as car dealerships, car repair shops, gas stations, etc.
- Railways
- Highways
- Slope greater than 10%



Barriers Analysis

Results & Takeaways:

- Downtown areas have some clusters of automobile focused businesses
- Most major roadways are high stress, and therefore uncomfortable, for potential micromobility users
- Bayside communities have many areas without steep slope, but become steeper to the west
- Barriers will require mitigation in program recommendations



BARRIER ANALYSIS

SAN MATEO COUNTY
SHARED MICROMOBILITY
FEASIBILITY STUDY

BARRIERS

- Cluster of Automobile Focused Businesses
- Railway
- Areas of High Slope
- Level of Traffic Stress Score
- Level of Traffic Stress 4
- Level of Traffic Stress 3

DESTINATION + BOUNDARIES

- Park
- Water
- County Boundary

Equity Analysis

Inputs:

- Equity focus areas from the San Mateo County Comprehensive Bicycle and Pedestrian Plan
- Collisions from 2014-2020 (Data from Statewide Integrated Traffic Records System)
 - People walking and biking are at a greater risk of injury or death from traffic-related collisions, compared to people driving. Low-income residents and people of color are also more likely to both rely on active transportation and be injured or killed in traffic-related collisions.

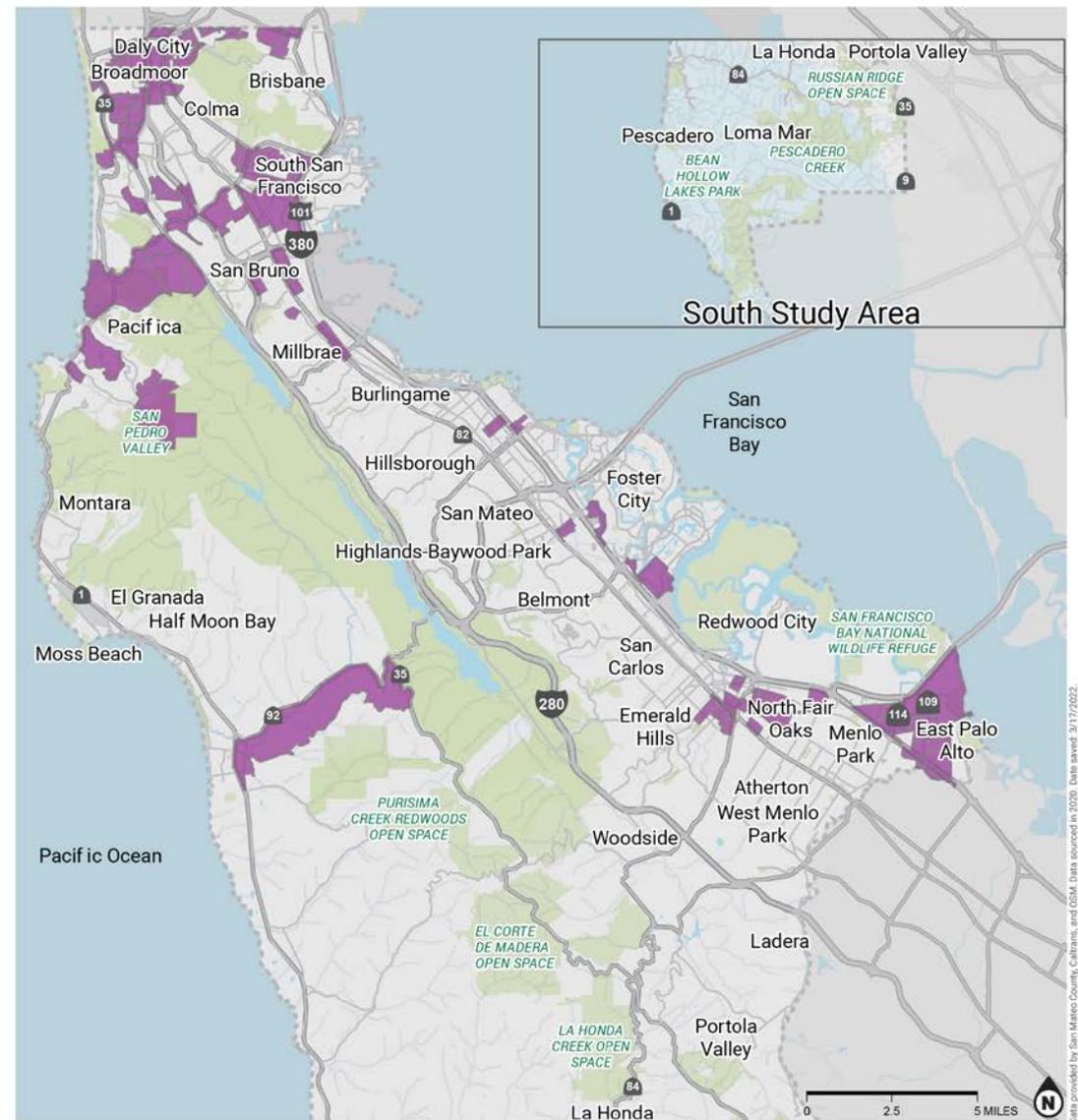


Image Source: Alta Planning + Design

Equity Analysis

Equity Focus Area Results:

- The highest equity index scores include areas of East Palo Alto, South San Francisco, Daly City, and the census-designated place of North Fair Oaks
- Many other jurisdictions have small areas with high equity index scores, mostly east of El Camino Real towards the Bay



EQUITY

EQUITY FOCUS AREAS

Equity Focus Areas

DESTINATIONS + BOUNDARIES

Water

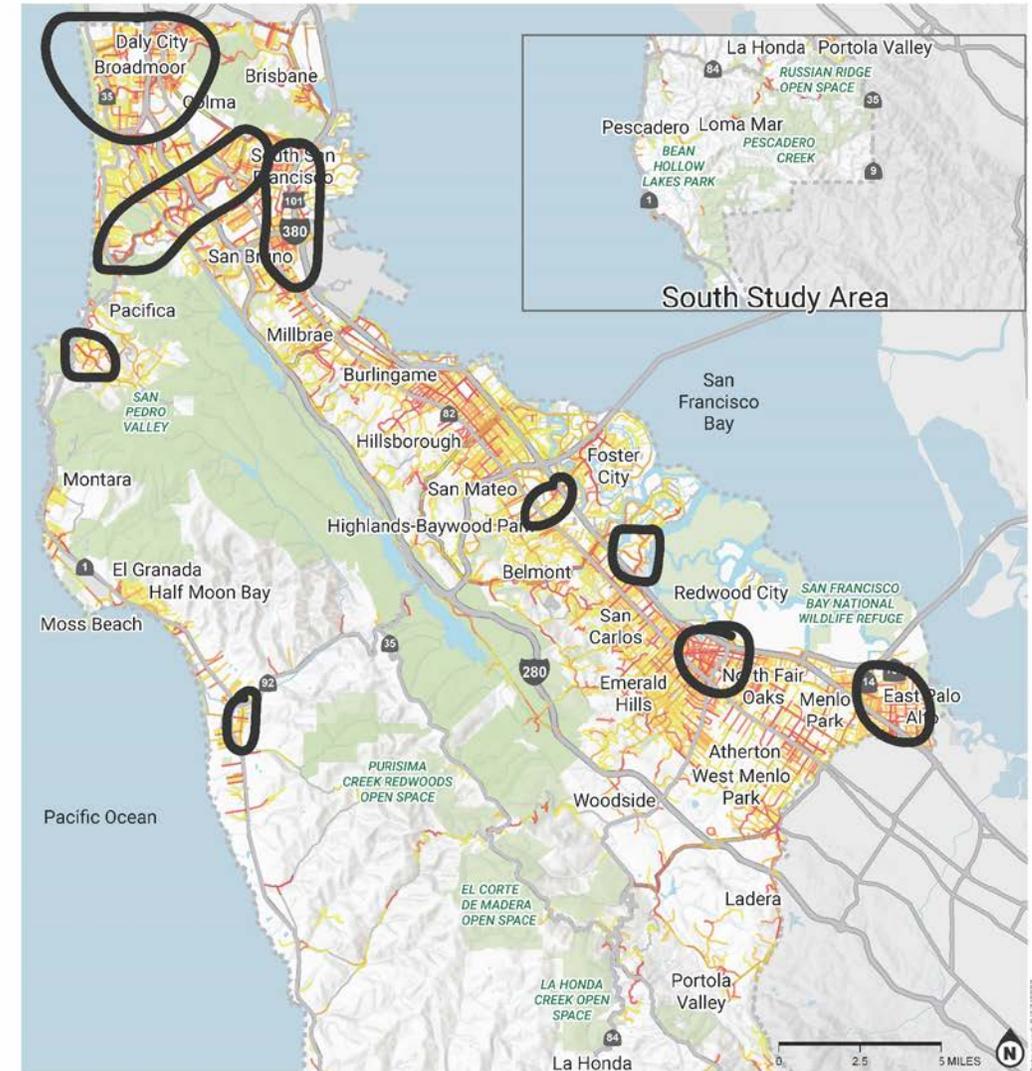
County Boundary

SAN MATEO COUNTY
SHARED MICROMOBILITY
FEASIBILITY STUDY

Equity Analysis

Collision Results:

- High collision corridors are concentrated in many downtown areas
- High collision corridors overlap with many equity focus areas (circled)



COLLISION ANALYSIS

SAN MATEO COUNTY
SHARED MICROMOBILITY
FEASIBILITY STUDY

SEVERITY WEIGHTED COLLISION INTENSITY

- High
- Medium
- Low

DESTINATIONS + BOUNDARIES

- Park
- Water
- County Boundary

Program Opportunity & Resource Analysis

Management Capability

- Successful programs require a champion to move it forward to implementation
- Tasks involved in launching and managing a shared micromobility program will be different for a **contracted system and a permitted system**
- **Potential agencies/organizations that could manage a system include:**
 - C/CAG
 - Interested San Mateo County jurisdictions
 - County/regional transit agencies (San Mateo County Transit District (SamTrans) or Caltrain)
 - Commute.org
 - Or a combination

Program Opportunity & Resource Analysis

Management Capability

- Staff involvement varies based upon the chosen shared micromobility program structure and scale as well as the program ownership model
- There are four basic shared micromobility ownership models in the United States:
 - Privately owned and operated (permitted or contracted) (low to medium staff involvement)
 - Publicly owned and privately operated (medium to high staff involvement)
 - Publicly owned and nonprofit operated (medium to high staff involvement)
 - Nonprofit owned and operated (low to medium staff involvement)



Program Opportunity & Resource Analysis

Vendor Availability

- The market for vendors is volatile
- Chosen vendor needs to have operated in communities similar to San Mateo County's suburban and semi-rural character
- One Vendor vs. Multiple Vendors
- Contract System vs. Permitted System



Image Source: Alta Planning + Design

Program Opportunity & Resource Analysis

Funding Capacity

- Sources typically include user fees, sponsorship and advertising, and grants
- High local investment = program longevity, equity program, flexibility for program structure
- Minimal local investment = unreliable funding sources, reliance on partnerships, uncertainty of long-term viability
- Local jurisdictions could pay a fee to fund the staff who would operate/manage the program



NEXT STEPS

Tentative Schedule

Event	Date
Present Draft Feasibility Memo	April-May 2022 (Today)
Present Best Practices and Draft Program Recommendations	June-July 2022
Review and recommend Draft Implementation Plan (including Program Guidelines and Regulatory Framework) by Ad Hoc Advisory Group and C/CAG Committees	July/August 2022
Review and approve Implementation Plan (including Program Guidelines and Regulatory Framework) by C/CAG Board	September 2022

THANK YOU. QUESTIONS?

C/CAG

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