



San Mateo County Shared Micromobility Feasibility Study

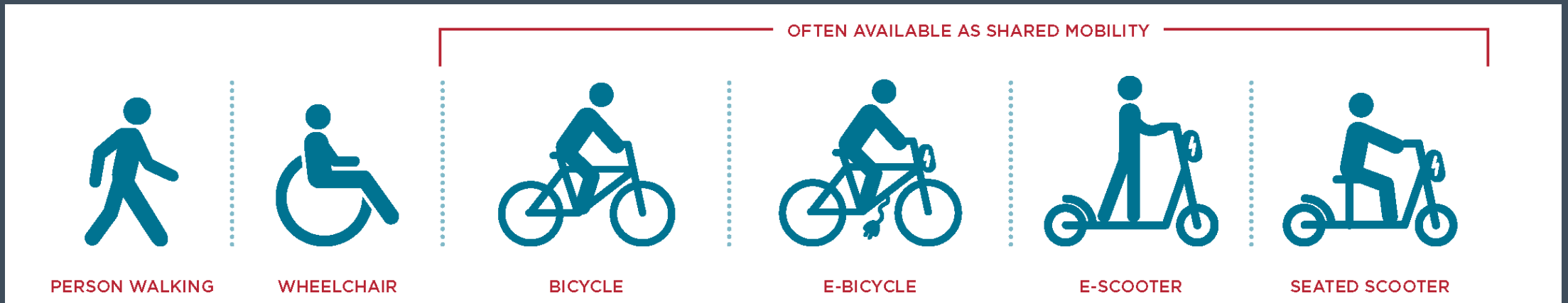
Caltrain Bicycle and Active Transportation Advisory Committee



July 21, 2022

What is Shared Micromobility?

- Network of shared vehicles
- Quick and convenient option for short, one-way trips (usually 15-45 minutes)
- E-devices give an electric “assist” to help new and experienced bike riders get around more easily



How to use shared micromobility



Sign Up



Check Out



Ride



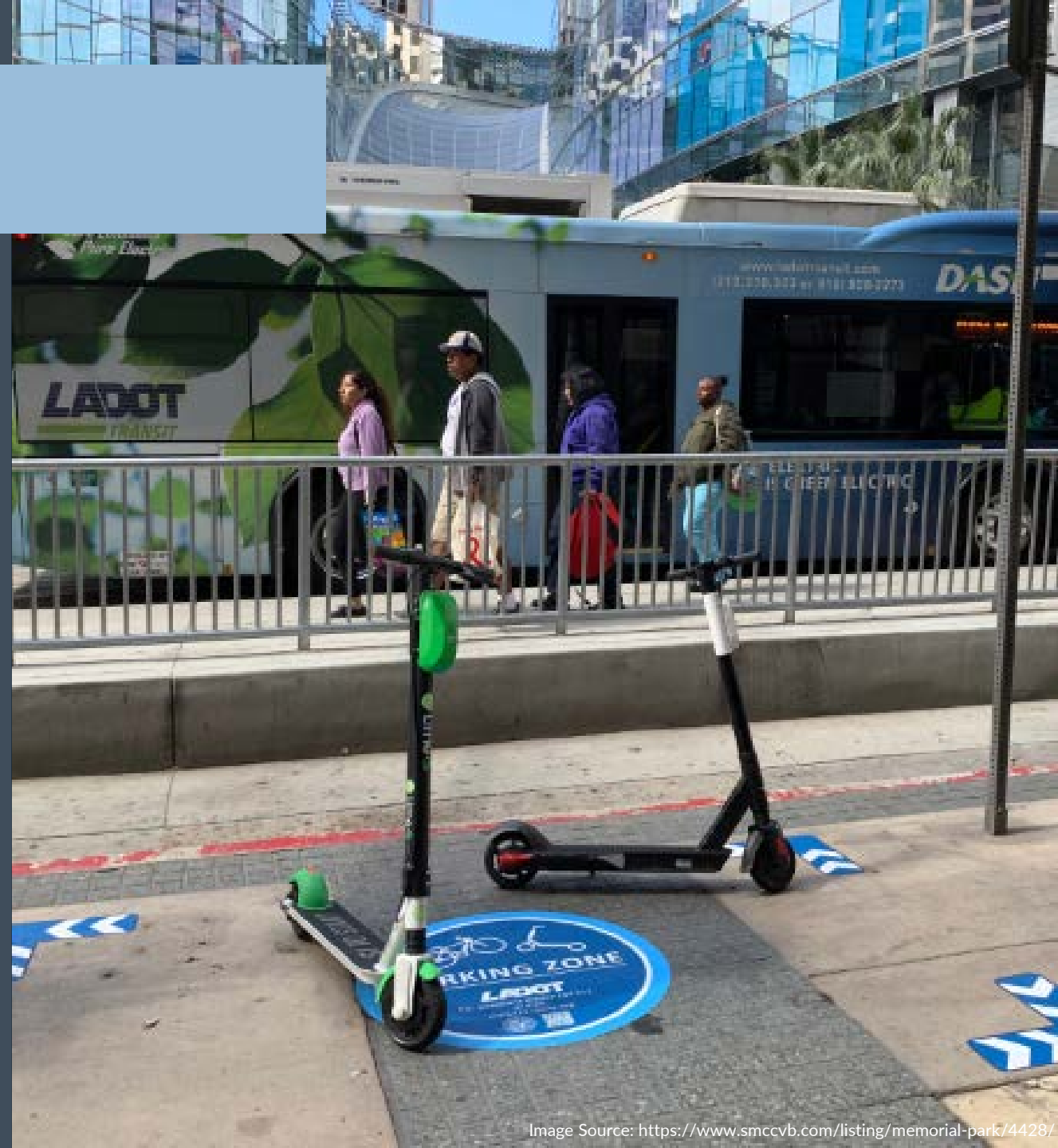
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Study Background

- Micromobility was a recommended program in the Board-adopted 2021 C/CAG Comprehensive Bicycle and Pedestrian Plan
- 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

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:

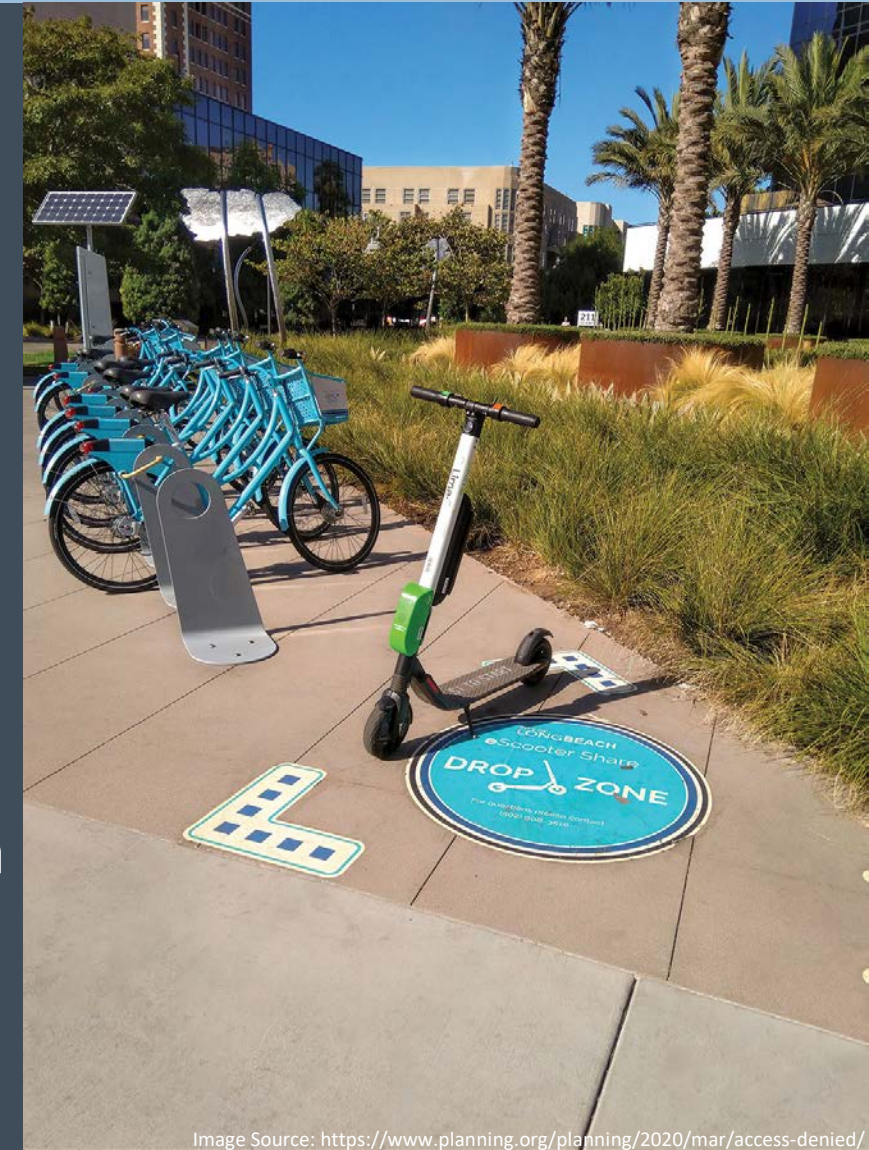
- Identify fatal flaws and/or significant barriers to implementing a shared micromobility program in San Mateo County
- Better understand how a program might achieve its goals

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

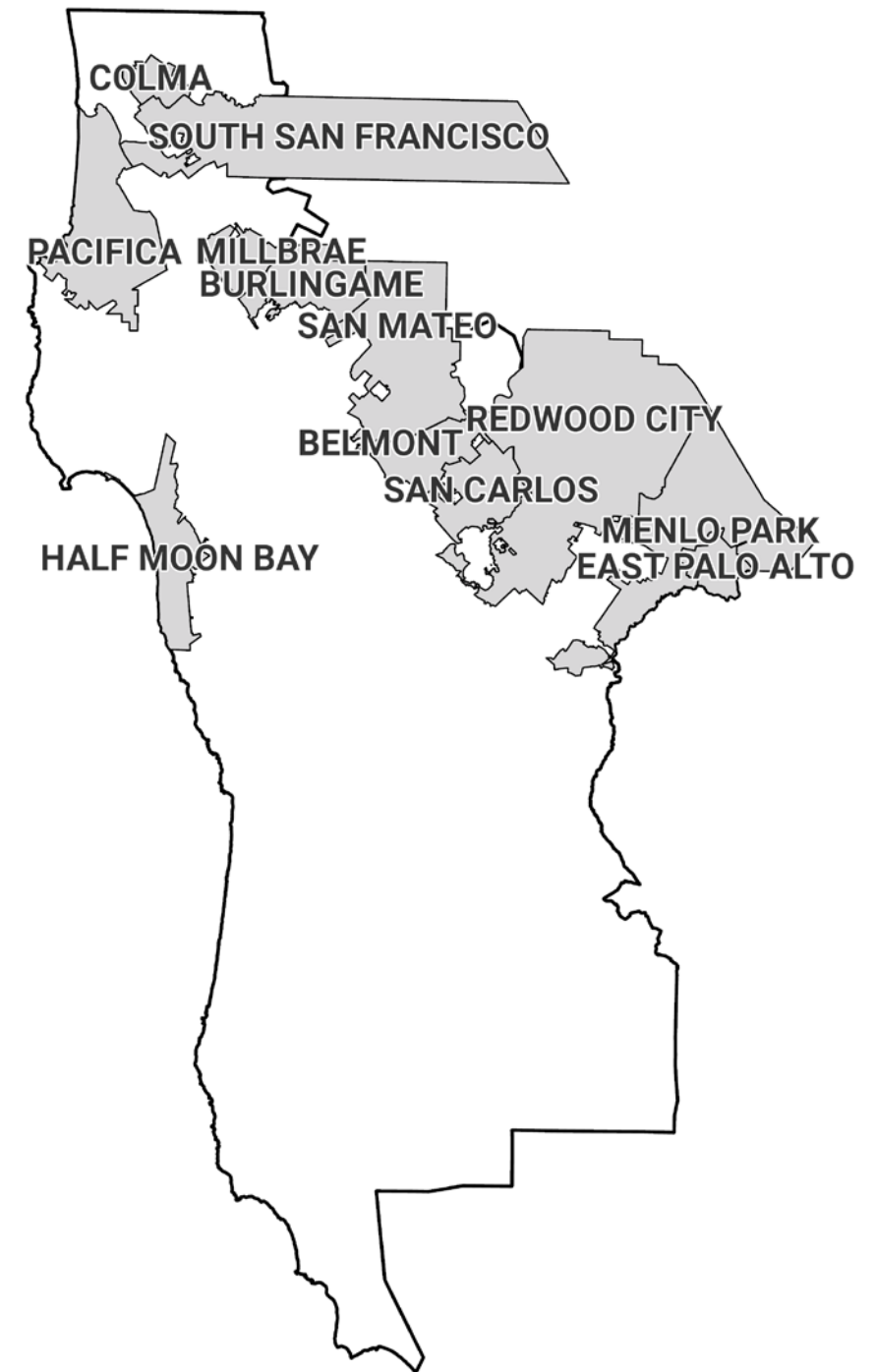
Medium -
High



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

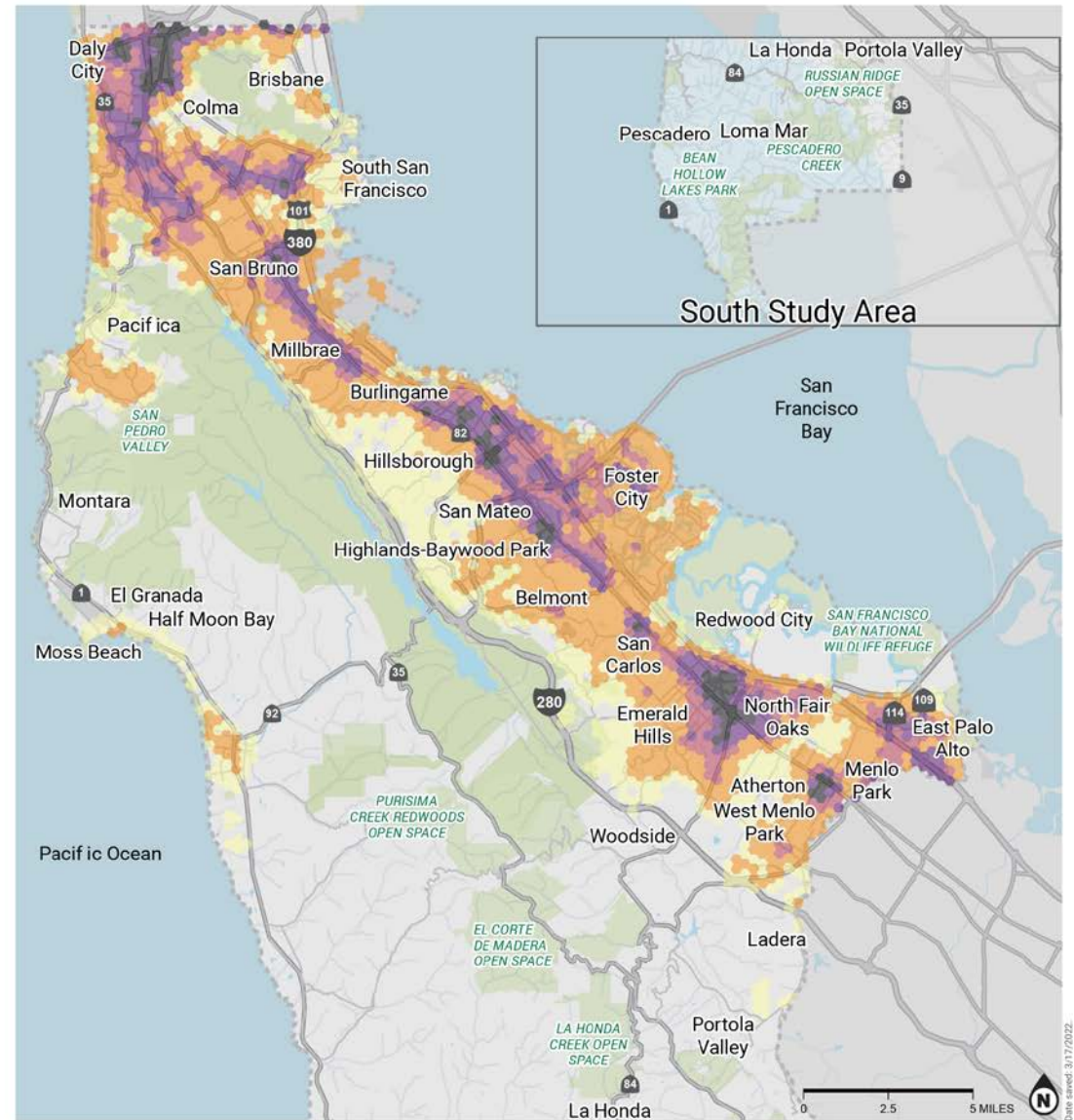
Inputs:

- 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



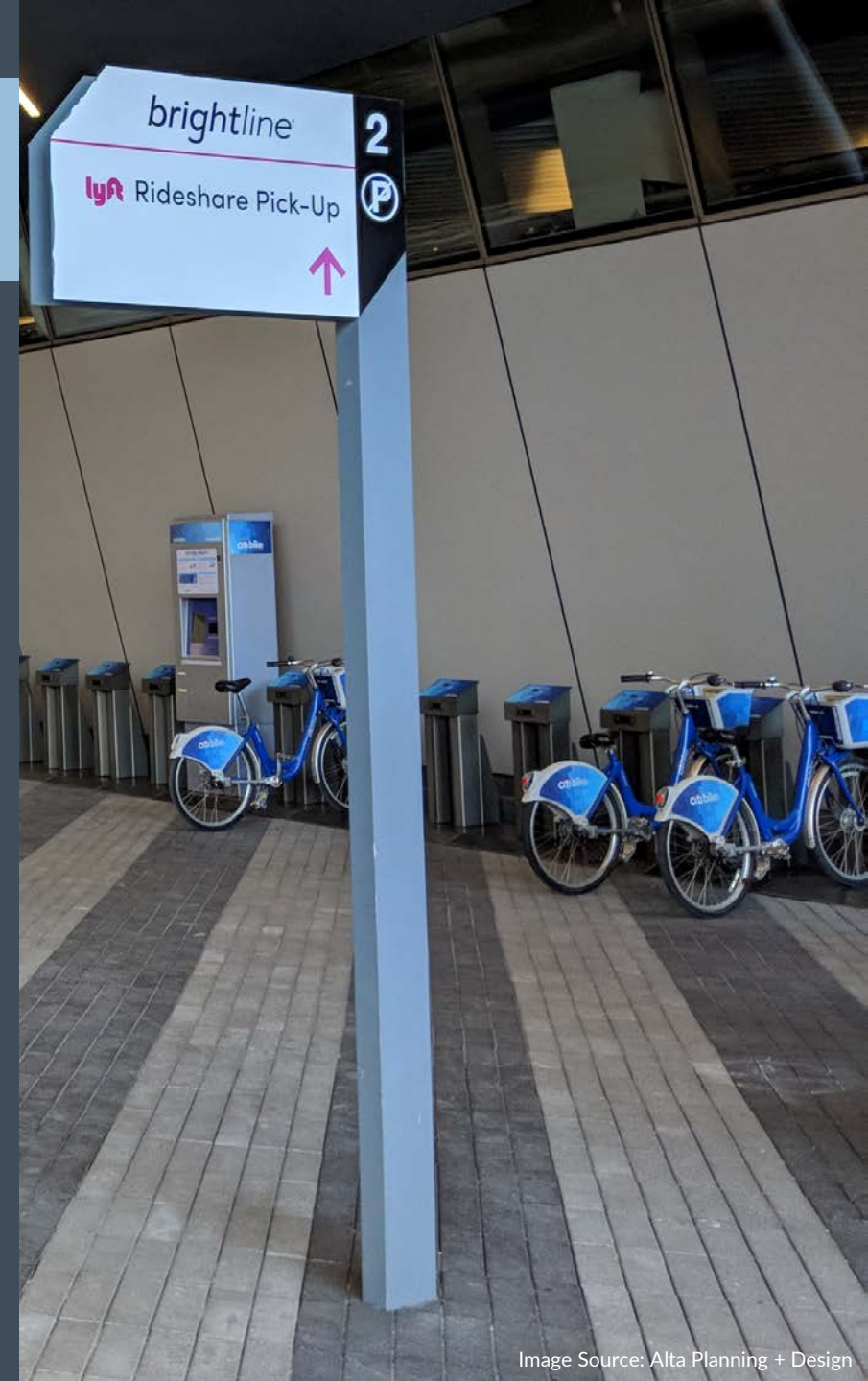
DESTINATIONS + BOUNDARIES



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.

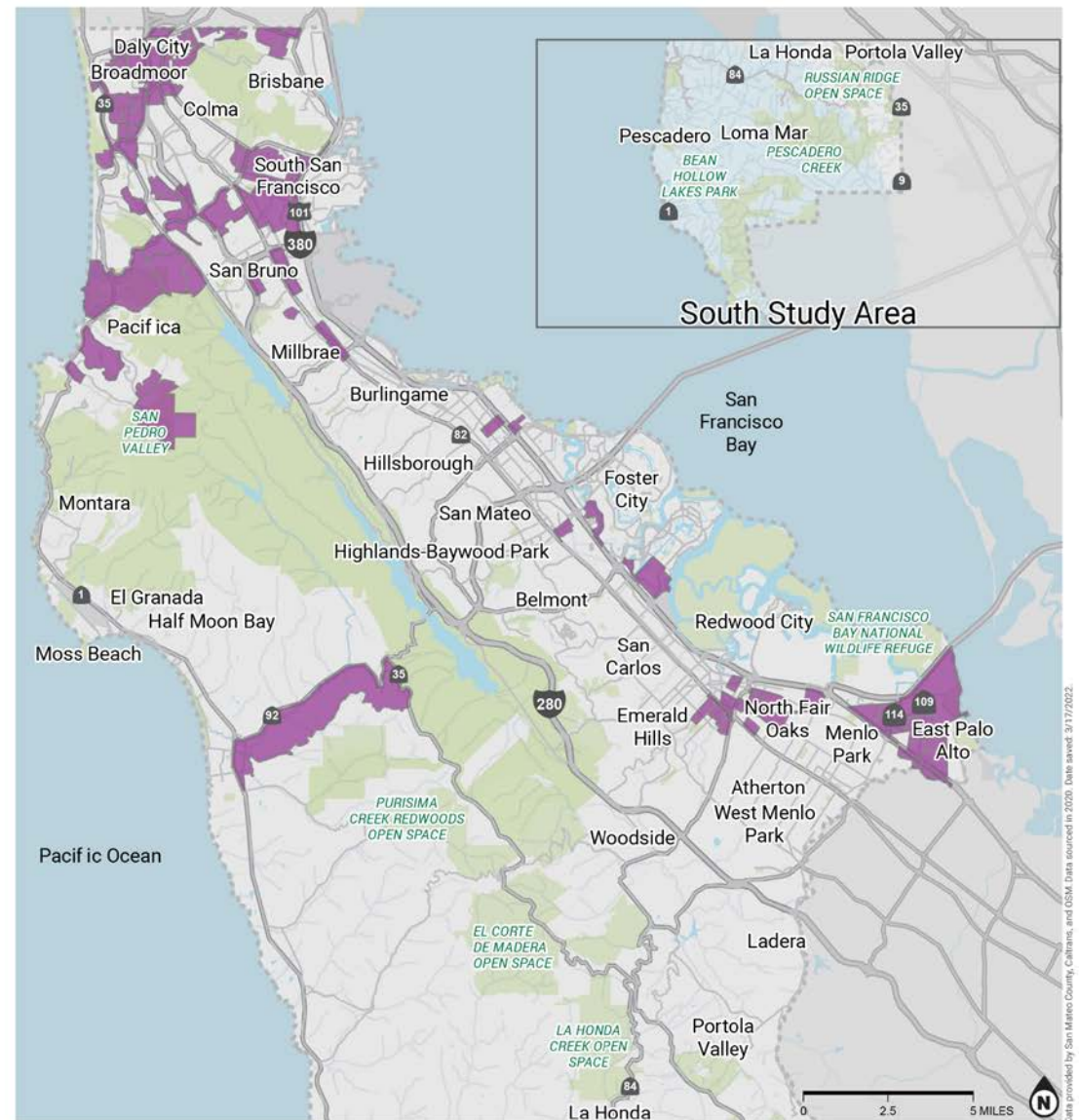


Image Source: Alta Planning + Design

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

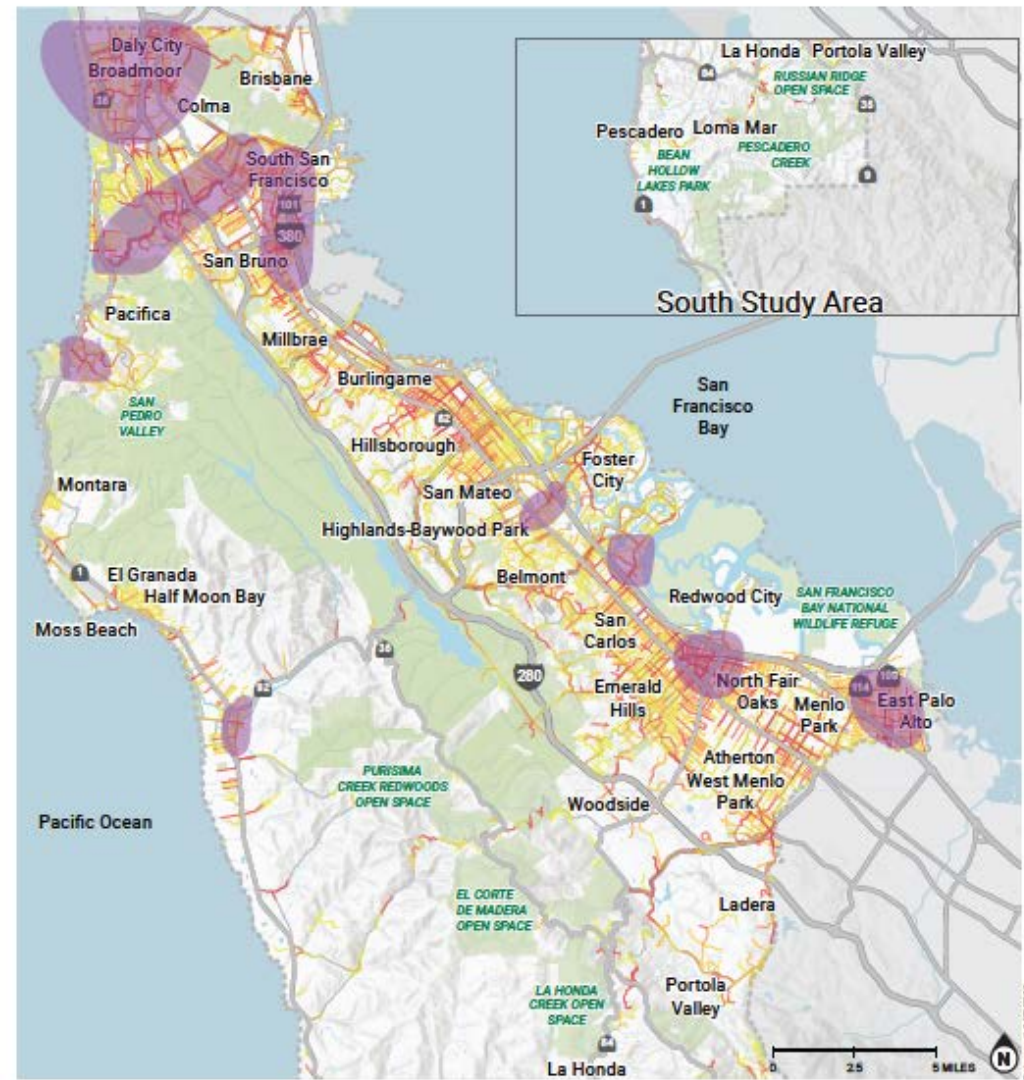
County Boundary

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 (shaded)



COLLISION ANALYSIS

SAN MATEO COUNTY
SHARED MICROMOBILITY
FEASIBILITY STUDY



SEVERITY WEIGHTED COLLISION INTENSITY

- High
- Medium
- Low

DESTINATIONS + BOUNDARIES

- Park
- Water
- County Boundary

MAP 8

Data provided by C/CAG of San Mateo County(2021), Caltrans State Highway Network (2021), Statewide Integrated Traffic Records System (2014-2020), and OpenStreetMap(2021).

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)



Image Source: Detroit Office of Mobility Innovation

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

Milestones	Date
Present Draft Feasibility Memo	Now
Present Best Practices and Draft Program Recommendations	Summer 2022
Review and approve Implementation Plan (Program Guidelines and Regulatory Framework)	Fall 2022

THANK YOU. QUESTIONS?

Project Webpage:

<https://ccag.ca.gov/programs/transportation-programs/shared-mobility/>

C/CAG

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