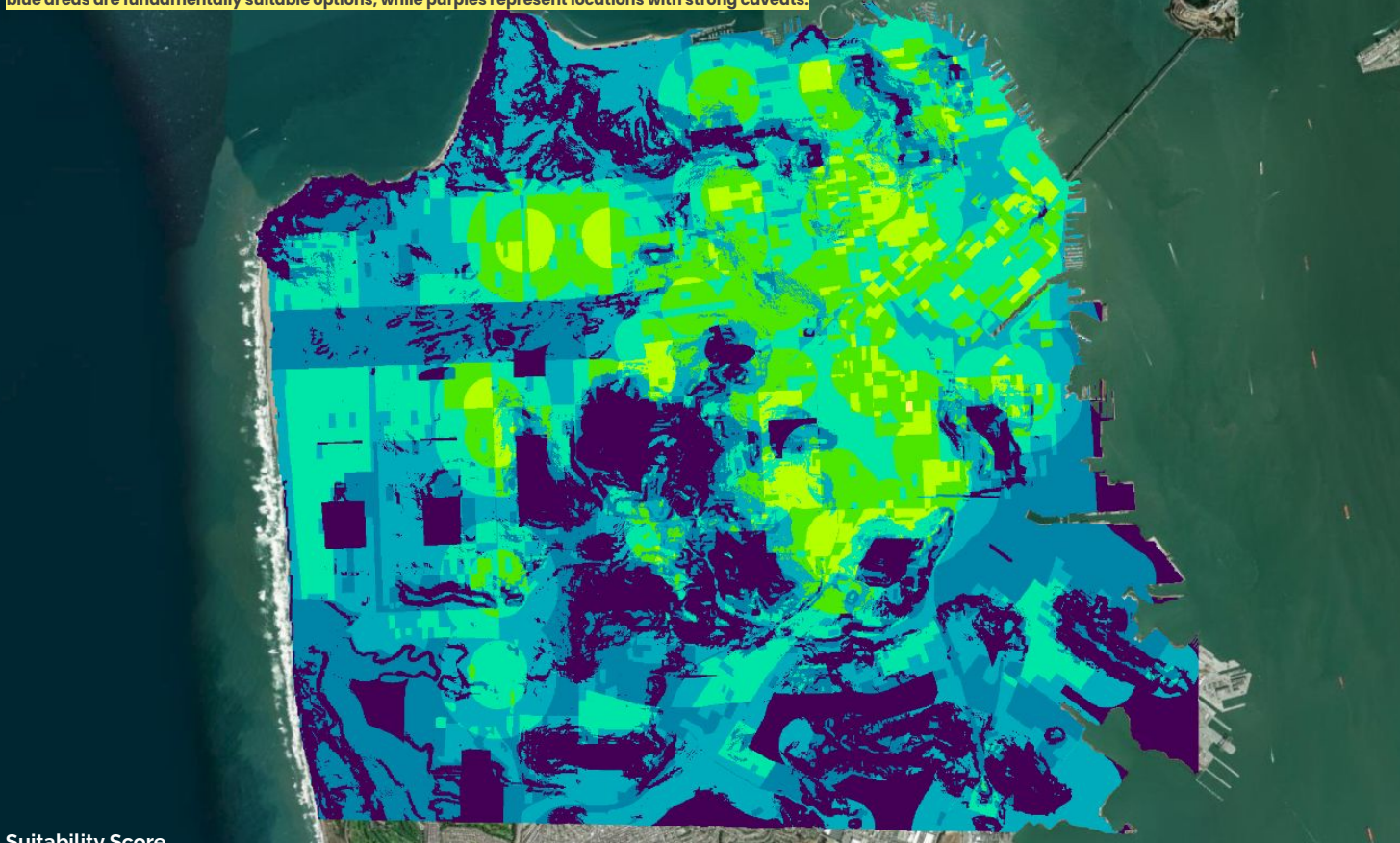
Bike Pod Site Suitability Study

N

1 Mile

The goal of this bike pod site proposal is to create a more equitably "healthy" San Francisco. In this study, healthy is defined not just as physical health, but also economic (accessibility to more job opportunities), social (making it easier to connect with people in different parts of the city), and environmental (decreasing the quantity and impact of SOVs).

Each area received a total suitability score between 0–12 based on different combinations of bike lane accessibility, population density, slope suitability, commuter shuttle proximity, and potential for residents to adopt biking as a commute mode. Yellow to green areas indicate the most ideal pod recipient; blue areas are fundamentally suitable options, while purples represent locations with strong caveats.



Suitability Score

12 (Most Ideal) | 11 | 10 | 9 | 8 | 7 | < = 6 (Unsuitable As Is)

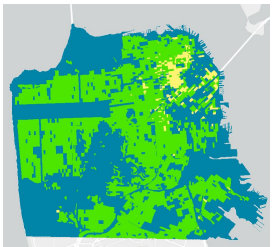
Criteria included in site suitability scoring system:

Bike Lane Accessibility

<= ¼ MI. (+3)
OVER ¼ MI. (+0)

Data shown: ¼ mile buffer along existing bike lanes. Classification method: Unique values.
Source: MTA.bikewaynetwork, 2019-2022, datasf.org/opendata/

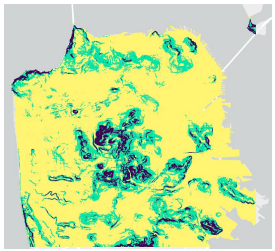
Population Density



HIGH (+3)
MED (+2)
LOW (+1)

Data shown: Population density per SF block. Classification method: Natural breaks (jenks).
Source: Census Blocks for San Francisco, 2020, datasf.org/opendata/

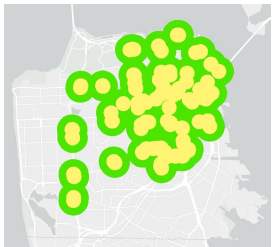
Slope Suitability



<=2.00° (+3)
<=5.00° (+1)
<=18.70° (+0)

Data shown: Slope as degrees of incline. Classification method: Natural breaks (jenks).
Source: Digital Elevation Model (30m): San Francisco Bay Area, California, 2011, earthworks.stanford.edu/

Shuttle Proximity



<= ¼ MI. (+2)
<= ½ MI. (+1)
OVER ½ MI. (+0)

Data shown: Multiple ring buffer (¼ and ½ mile) around currently approved commuter stops. Classification method:
Source: Commuter Shuttle Stops, 2022, data.sfgov.org

Adoption Potential

SHOWS PROMISE (+1)
INCONCLUSIVE (+0)

Data shown: Bike vs. SOV commuters as % of 16+ workforce. Classification method: Bivariate.
Source: ACS 5-year Estimates, 2019, census.gov

Process & Considerations

Goal: Create a more connected and healthy San Francisco.

- Physical health = normalize biking as a mode of transport
- Economic health = make job opportunities more accessible and affordable
- Social health = connecting people of different communities (socialization)
- Environmental health = provide a viable alternative to driving a single-occupancy vehicle (SOV)

Bike Pod Use Cases

1. Daily commute (primary)
2. Errands/daily needs
3. Fun/leisure/touristing

Bicycling Pain Points → Insights

- *"I drive because it's more convenient, and waiting for public transport just takes too long. Sometimes taking Bart can be efficient…to get to certain parts of the city…I've done the bike/Bart combo, but I got parts stolen."* → What is the time/ease threshold when trying to make it to/from a destination? Time/cost leaks from trying to find parking and a secure lockup.
- *"My brother and boss bike. But I don't really want to get hit by a car. There are some streets and intersections that don't follow a grid and cars can be unpredictable."* → Biking isn't the easiest way to move through SF. Fewer SOVs could help in some parts. Partner with programs, like Commuter Shuttle Program, looking to lessen number of SOVs on streets?
- *"These SF hill are crazy, and I don't really want to get to work all sweaty."* → Biking can be an option if it's not too strenuous or long. Opportunity to supplement a more "door-to-door" commute (bike from home to nearby pod/commute stop)
- *"I've tried the bike thing. Not a huge fan. Lots of stealing even with the best locks."* → If parking was safer, this person could be converted to a bicycle believer.

Scoring Weights

1. Population density (potential reach) → up to 3 pts
2. Bike lane accessibility (within ¼ mile to existing bike lane) → up to 3 pts
3. Slope suitability (installation feasibility) → up to 3 pts
4. Shuttle proximity (supplement to commuter shuttle program and mass transit) → up to 2 pts
5. Adoption potential (is there a relationship between bike and SOV usage → is biking already recognized as a somewhat viable option in the area → are there SOV commuters who could be converted to bicycle and transit users) → up to 1 pt

Interpreting the Scores

Tier 1 (10-12 pts):
Large reach and almost turn-key scenario to install a bike pod.

Tier 2 (7-9 pts):
While a bit less than ideal, these sites have potential to be fantastic areas of opportunity.

Tier 3 (6 or fewer pts):
In their current states, these locations have too many physical hurdles to make them viable bike pod recipients at this time.