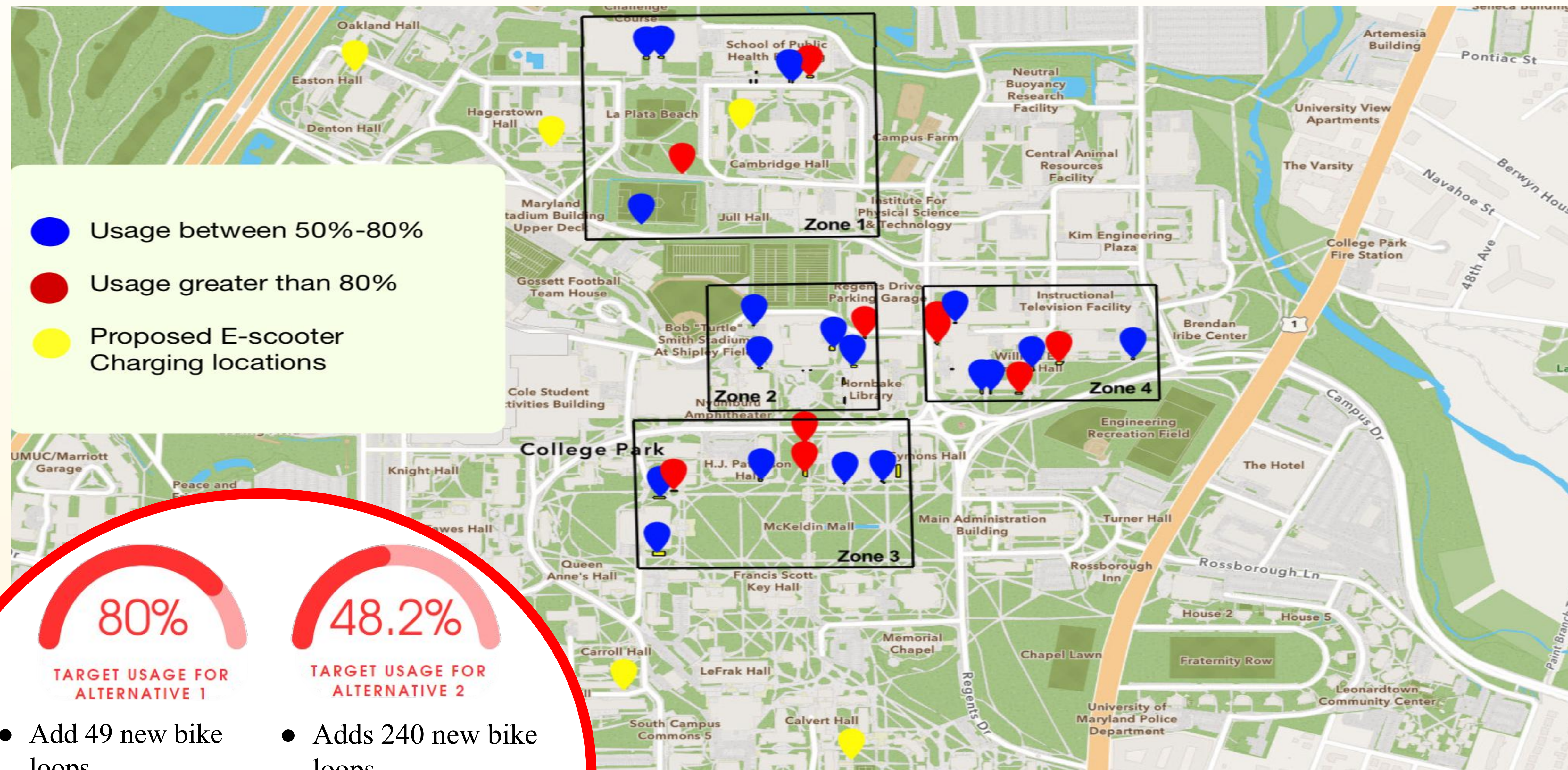


Bicycle and E mobility Parking Allocation for UMD

Abraham Getenet, Joshua Kluska, Craig Mackel, Marne Malone



Background

- As the population on campus increases, UMD continues to push sustainable modes of transportation
- This project aims to promote micro mobility on campus by determining where the demand for additional parking is highest
- We are proposing safe, accessible parking loops for all users to create an enjoyable transportation experience
- E-scooters are now prohibited in resident dorms due to fire concerns, so we are proposing charging stations within five different campus communities

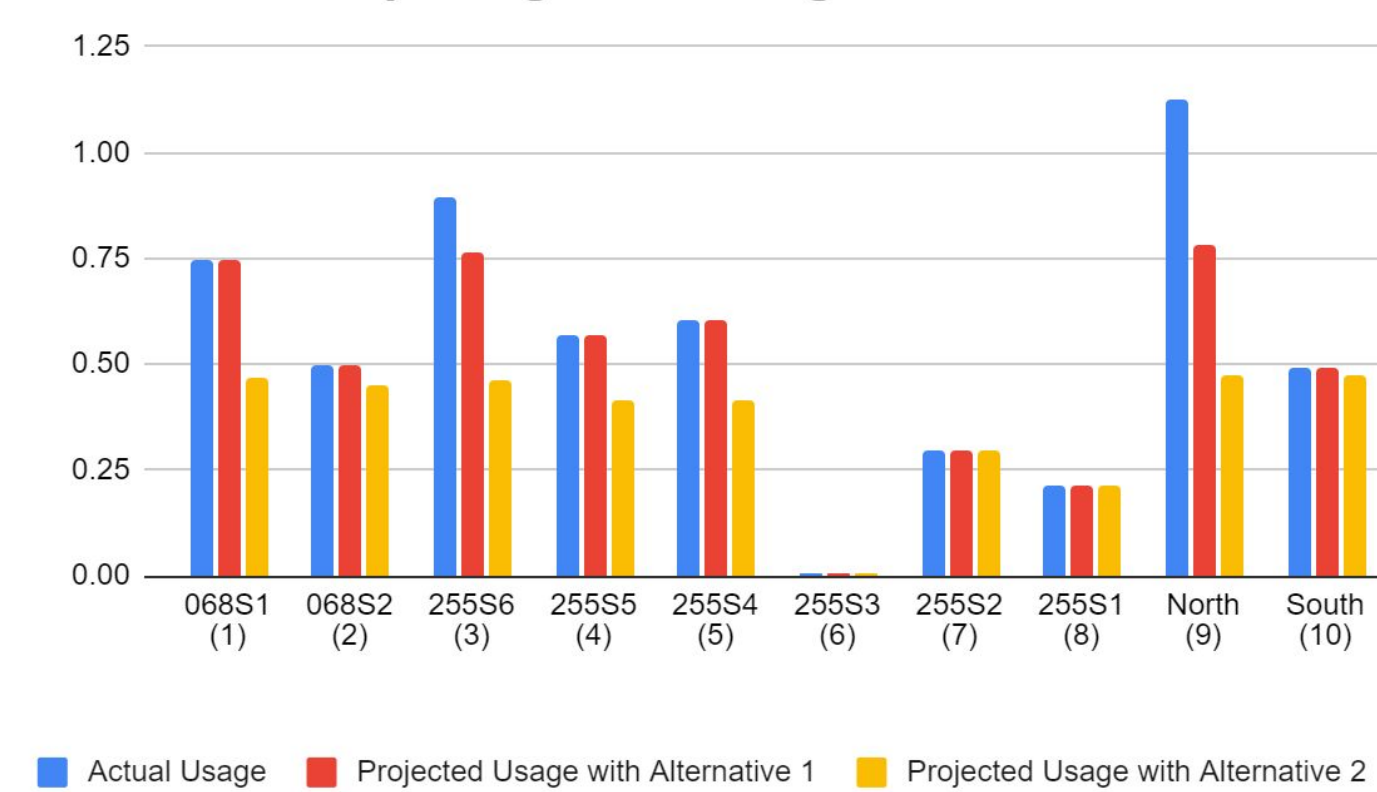


- Add 49 new bike loops
- The ideal utilization rate for most companies
- Cost: \$18375 to buy and install
- Adds 240 new bike loops
- DOTs is in possession of 240 bike loops
- Cost: \$90,000 to buy and install

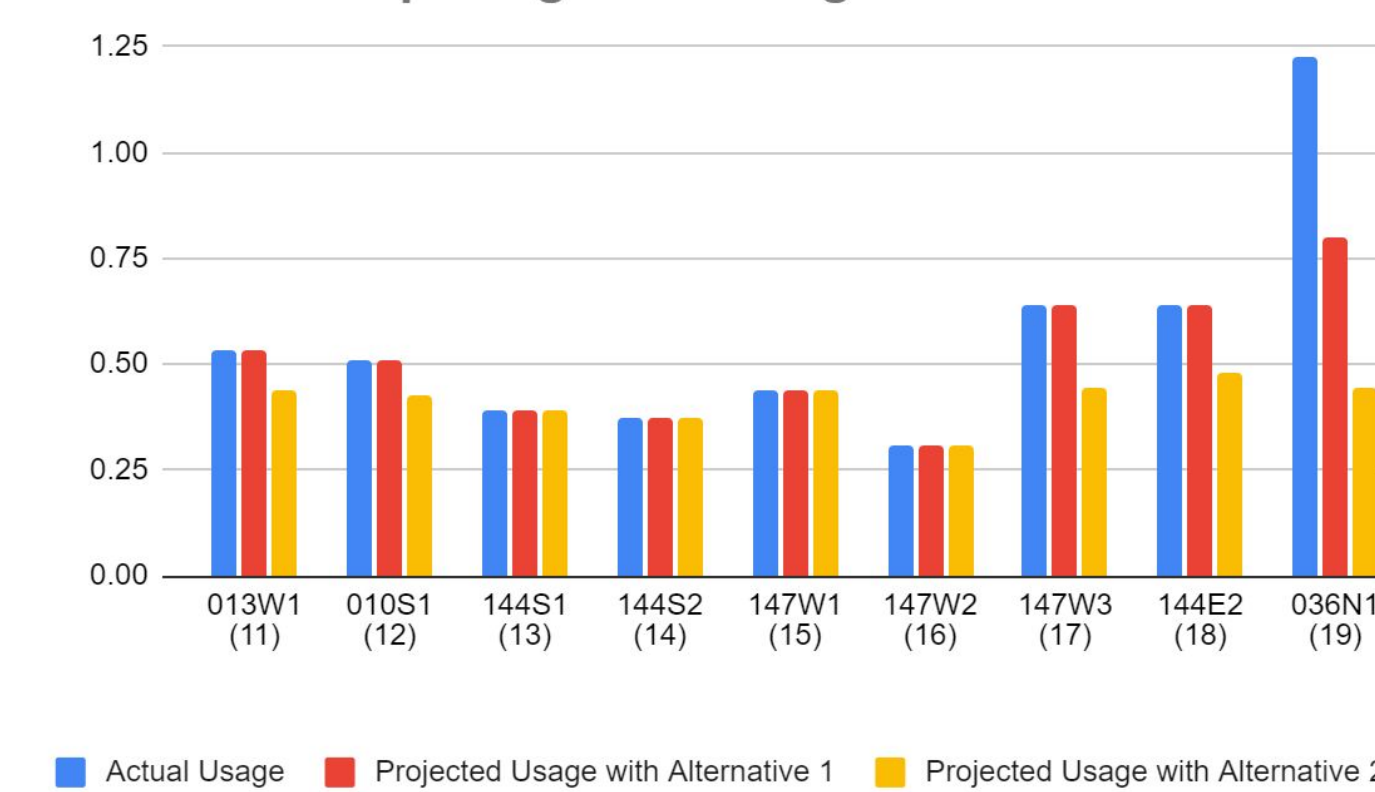
Data Collection

- Collected bike parking usage data from four zones, totalling 104 hours over a six week period
- Zones were based upon class registration data and bike parking capacity data
- Counted the amount of bikes and personal e-scooters at bike loops

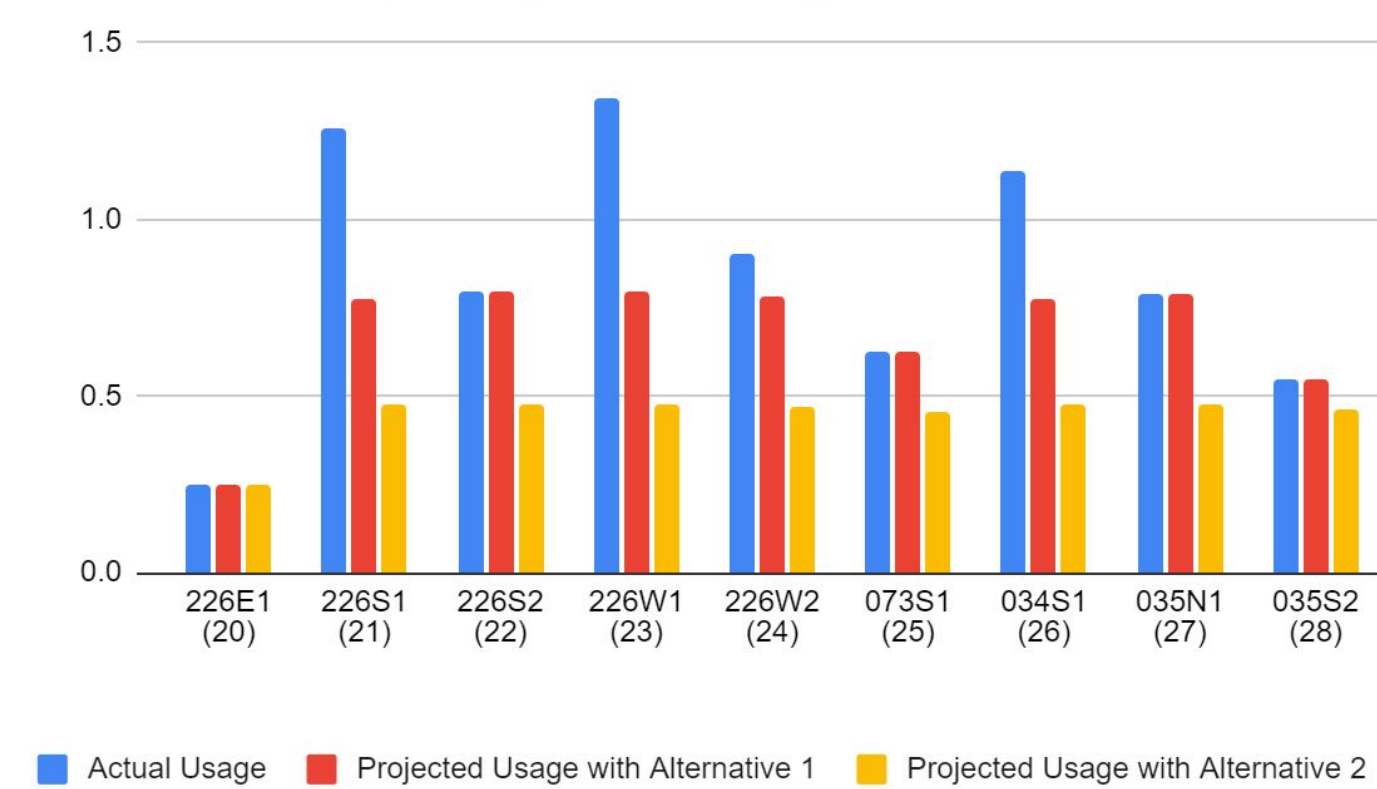
Zone 1 Bike Loop Usage Percentage



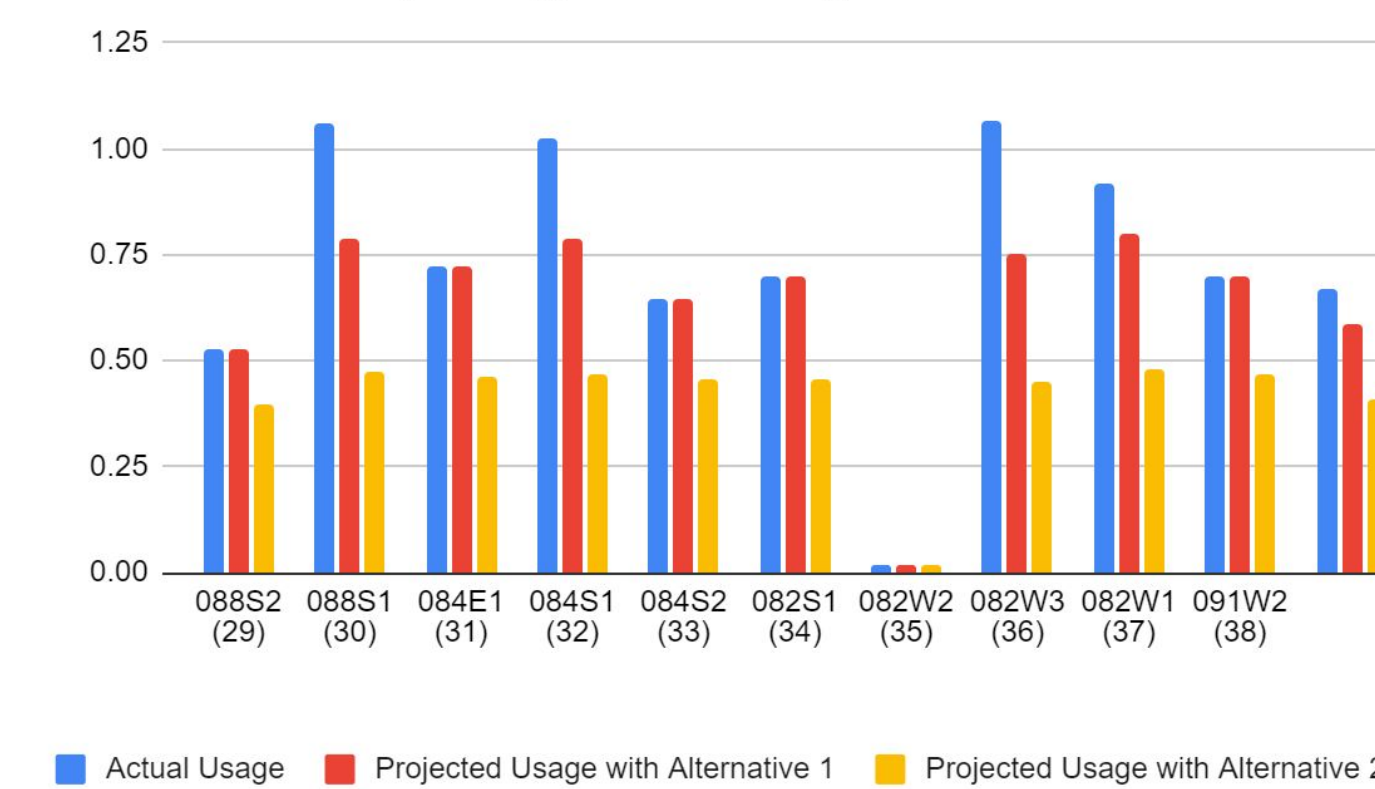
Zone 2 Bike Loop Usage Percentage



Zone 3 Bike Loop Usage Percentage



Zone 4 Bike Loop Usage Percentage



E-Scooter Charging

- Recommend adding 50 e-scooter charging spaces
- 33% of all new proposed parking are for e-scooter charging
- Currently 35% of all bike parking usage is from personal e-scooter vehicles
- E-Scooter stations come from Bikeep and cost \$18,000

