

Transportation Network

Asset Description

The region's communities and economy are dependent on the network of transportation assets in the Bay Area. These assets link people with community facilities and services, jobs, family and friends, hospital trips, trips to school, recreation, and other important destinations, and link goods to markets. Regional Transportation assets include:

- Major highways (US 101, I-80, I-880, I-580, SR-37, SR-237)
- Airports and Ports
- Toll plazas and bridge approaches
- Rail service (heavy and commuter)
- Transit Services
- Bay Area Rapid Transit
- San Francisco Bay Trail.
- Local Roads



Quick Facts

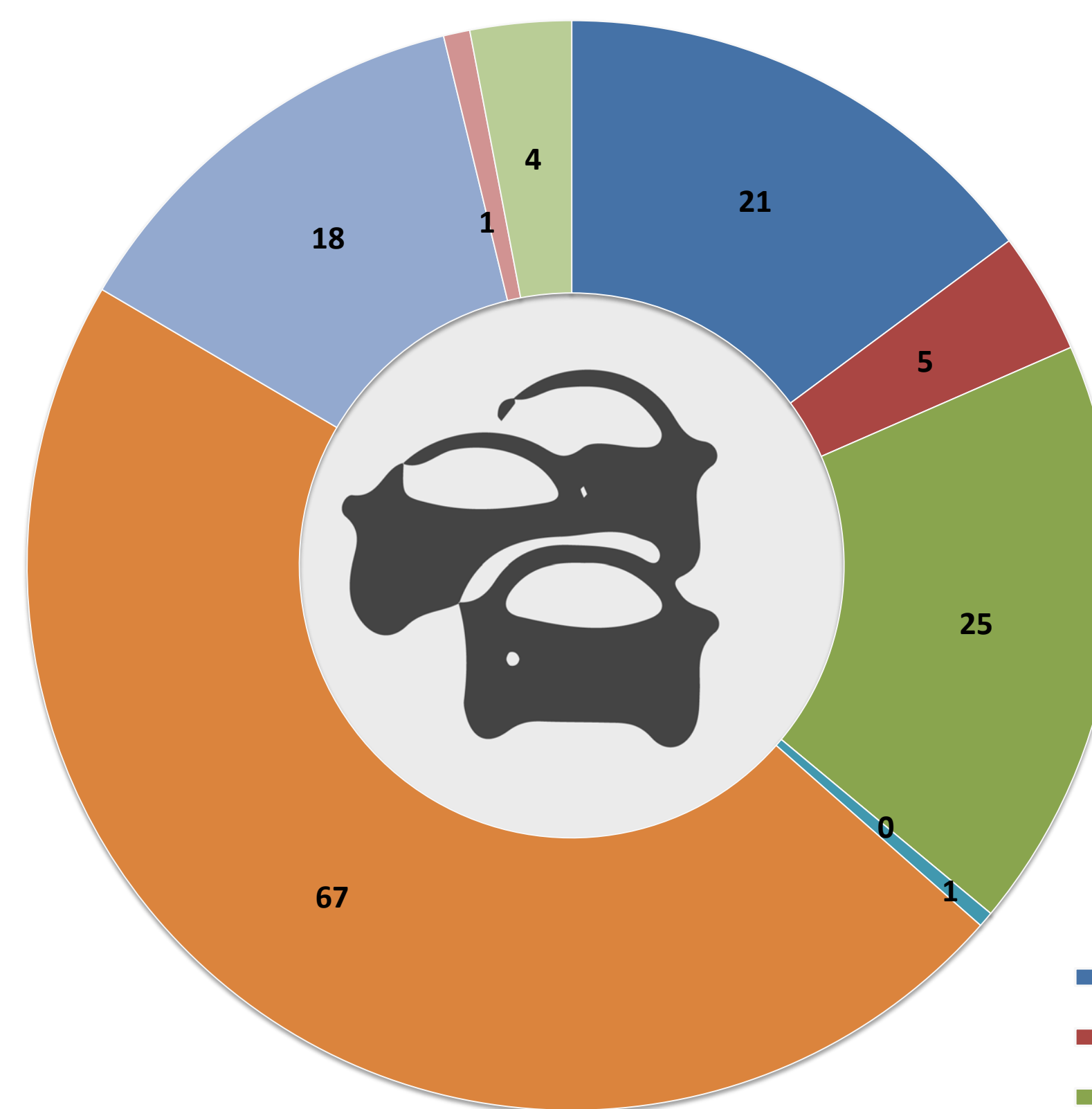
- Transit tracks, power systems and parking areas are all sensitive to flooding, and they could lose function or access if inundated (San Mateo County's SeaChange Vulnerability Assessment)
- Several key corridors, including the Manzanita Park & Ride and Tamalpais Junction corridor, experience seasonal flooding that will likely worsen in the near-term (Marin County's BayWAVE Vulnerability Assessment)
- Large segments of the rail line are located along the shoreline with either ad-hoc, or no, flood and erosion protection (Adapting to Rising Tides Contra Costa County)

Exposure Methodology

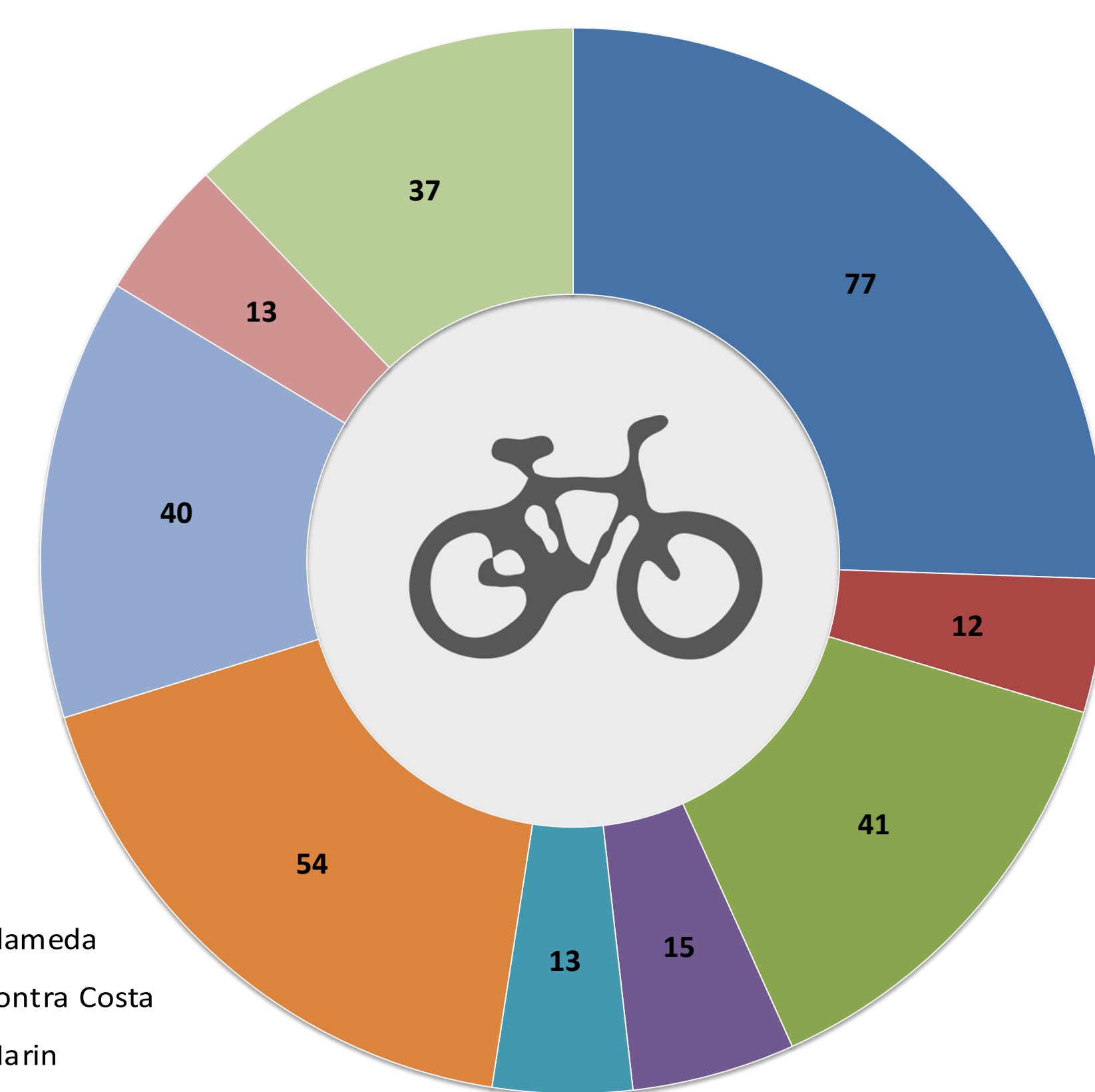
- Transportation asset data includes a variety of data sources (OSM, Caltrans, ABAG, MTC)
- GIS analysis uses both ART sea level rise maps and FEMA 100 and 500 year flood zones to determine areas of exposure to different types of flooding
- Assume 5m buffer on streets/highways
- Summarize miles and # of assets affects

County Summaries (Miles)

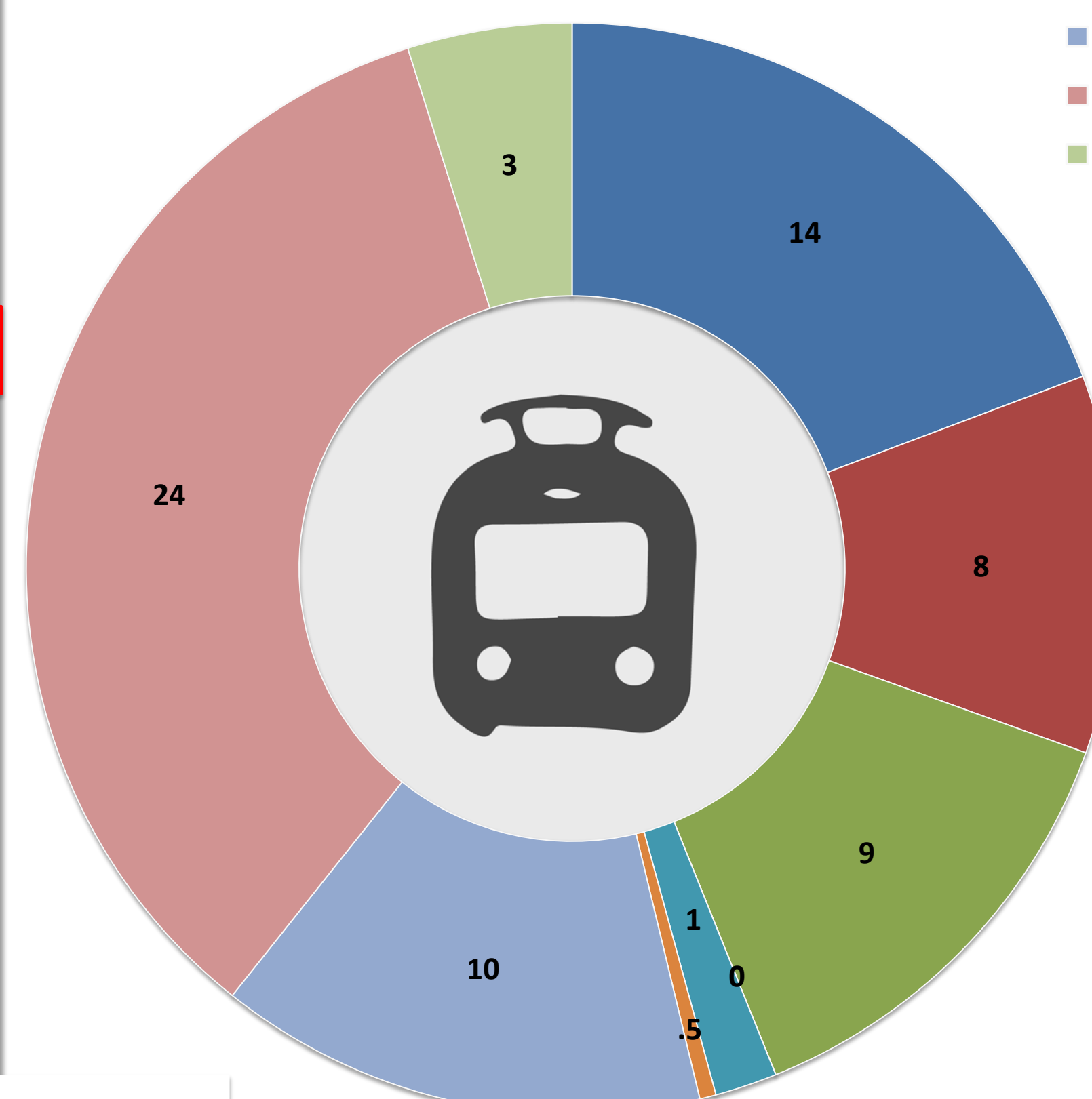
Highway Exposed at 66"



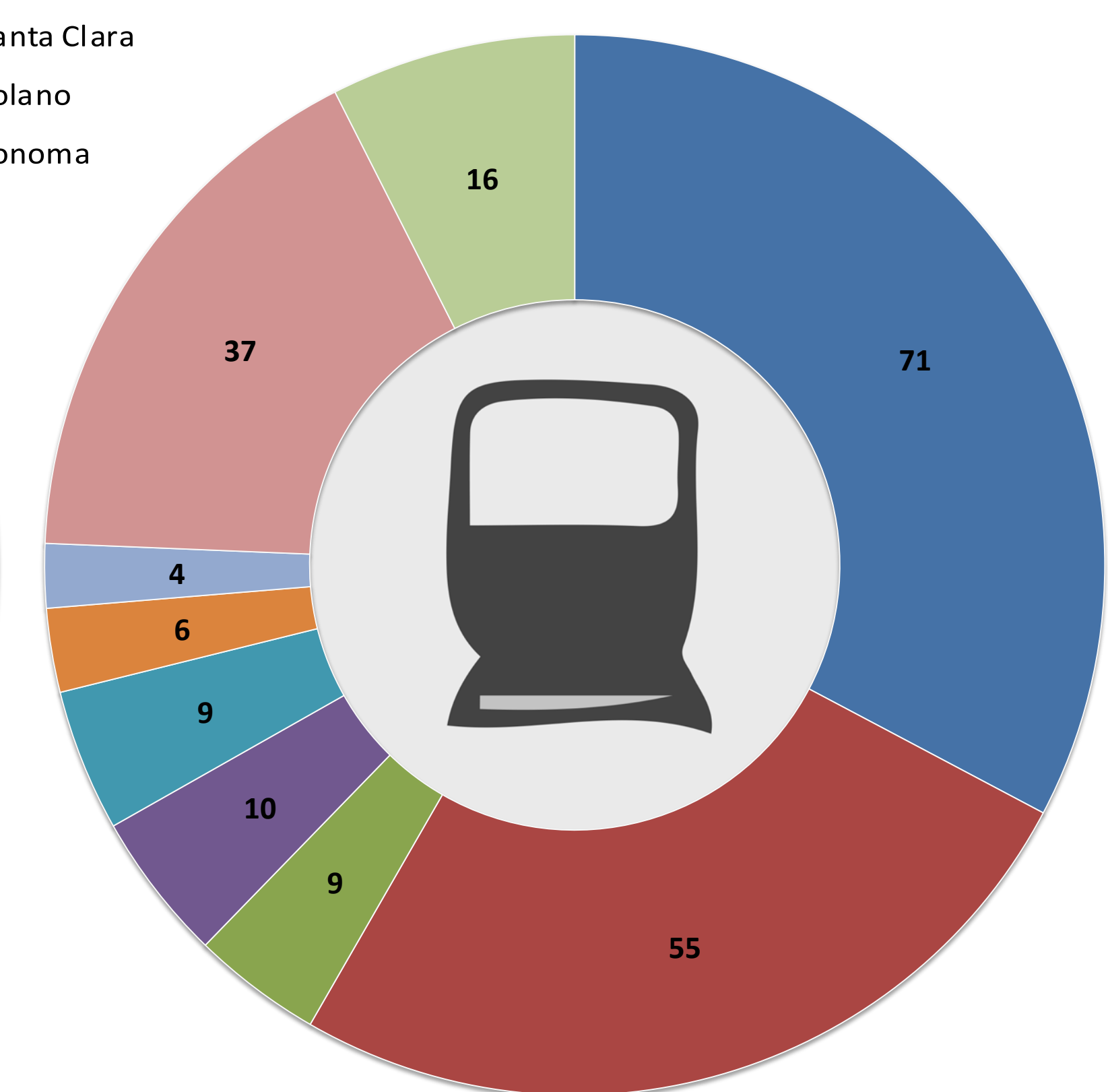
Bay Trail Exposed at 66"



Commuter Rail Exposed at 66"



Heavy Rail Exposed at 66"

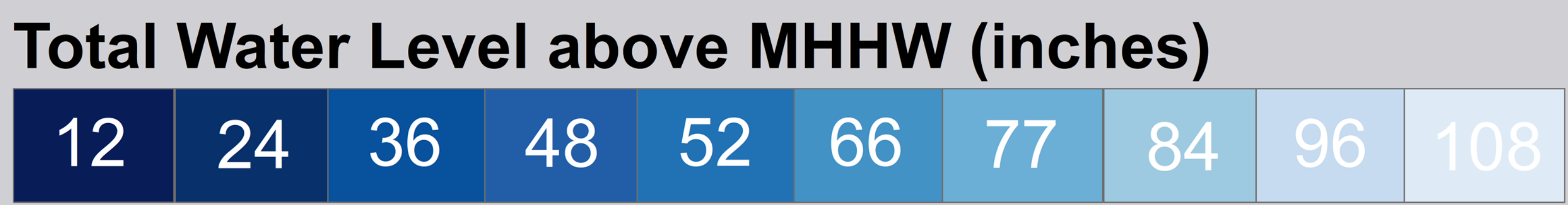
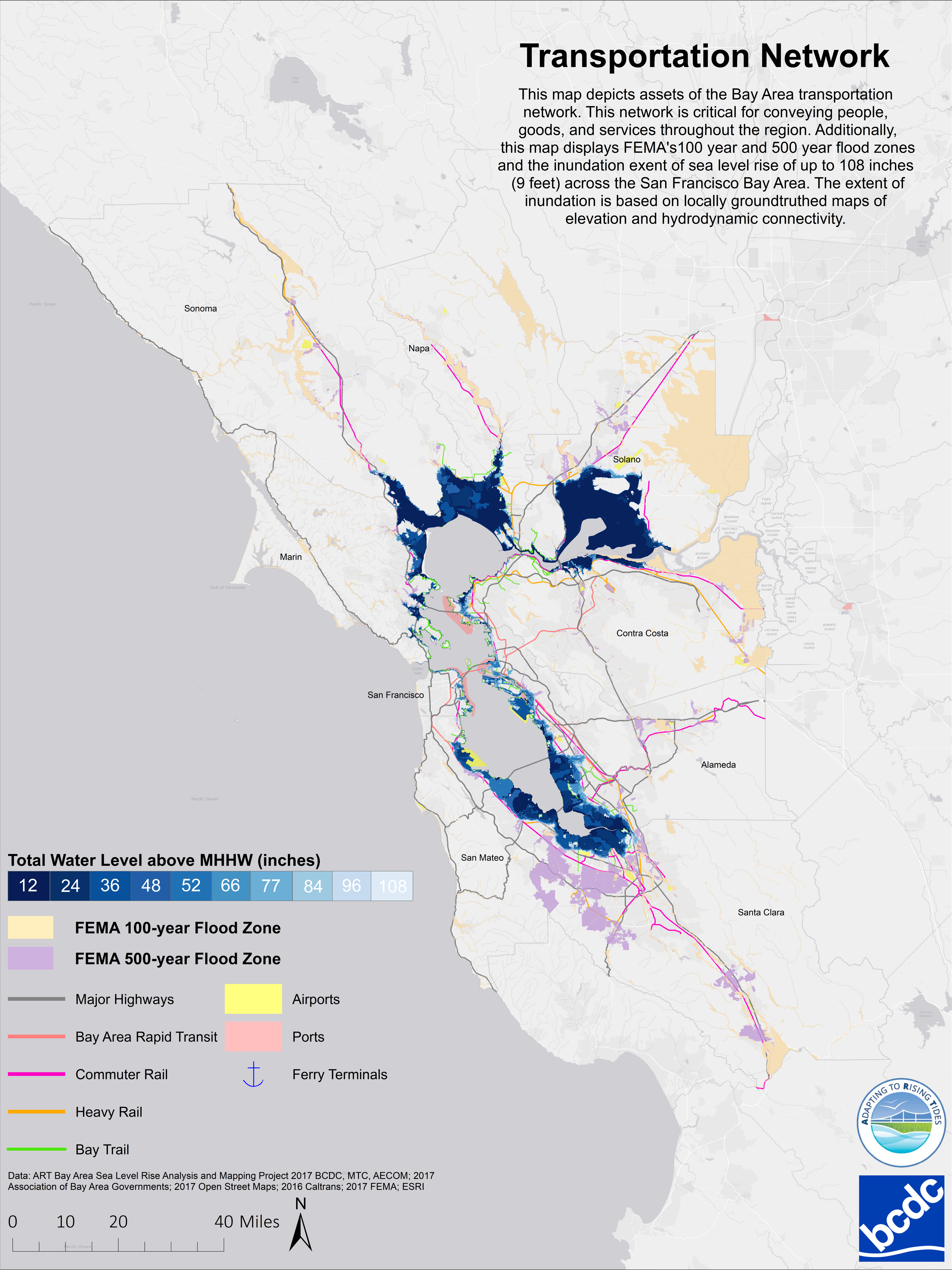


Preliminary Exposure Analysis

Total Water Level (inches)	Highways (miles)	Heavy Rail (miles)	Commuter Rail (miles)	BART (Stations)	Bay Trail (miles)	Runway and Taxiway (miles)
12	10	9	4	0	35	4
24	16	30	16	1	79	25
36	44	52	25	2	134	60
48	73	88	38	4	201	76
52	100	132	46	4	229	78
66	142	217	70	6	302	81
77	160	275	85	6	343	82
84	172	305	92	6	362	82
96	194	358	115	6	393	84
108	216	402	139	6	415	84
FEMA 100 Year Flood	158	228	121	2	291	66
FEMA 500 Year Flood	344	417	195	8	343	82

Transportation Network

This map depicts assets of the Bay Area transportation network. This network is critical for conveying people, goods, and services throughout the region. Additionally, this map displays FEMA's 100 year and 500 year flood zones and the inundation extent of sea level rise of up to 108 inches (9 feet) across the San Francisco Bay Area. The extent of inundation is based on locally groundtruthed maps of elevation and hydrodynamic connectivity.



- FEMA 100-year Flood Zone
- FEMA 500-year Flood Zone
- Major Highways
- Airports
- Bay Area Rapid Transit
- Ports
- Commuter Rail
- Ferry Terminals
- Heavy Rail
- Bay Trail

Data: ART Bay Area Sea Level Rise Analysis and Mapping Project 2017 BCDC, MTC, AECOM; 2017 Association of Bay Area Governments; 2017 Open Street Maps; 2016 Caltrans; 2017 FEMA; ESRI

