

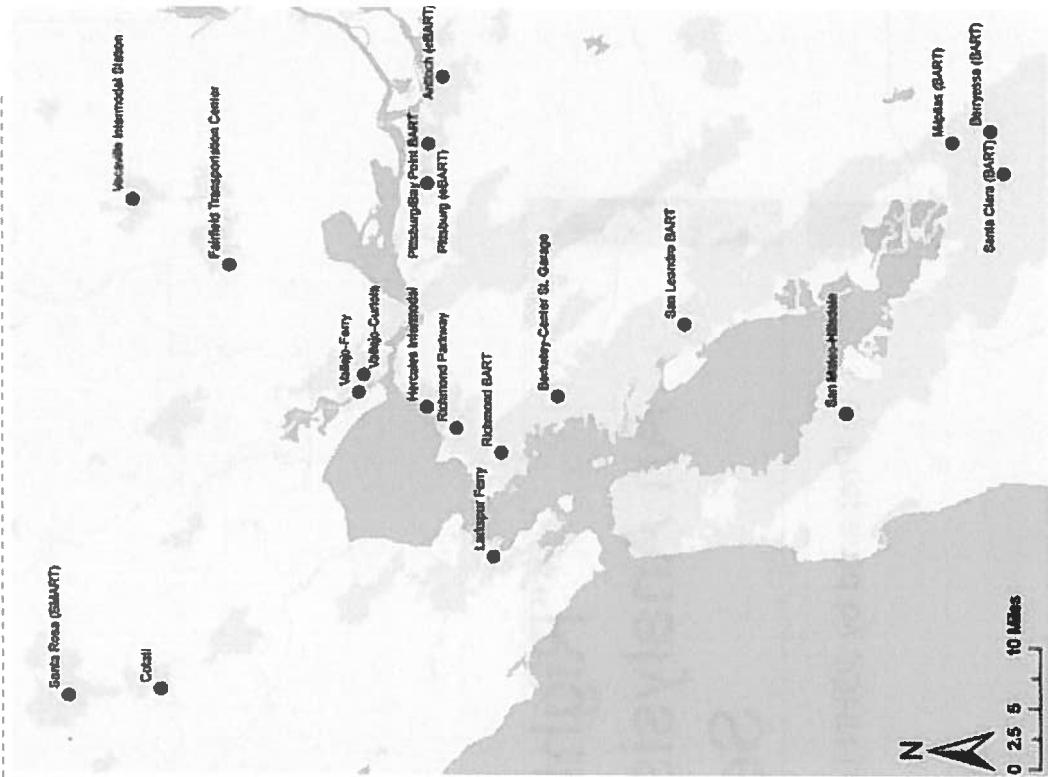
Right Sizing

“Right Sizing” Parking: An Analysis of Parking Structures Serving Transit

Prepared by JOHN URGO for the Metropolitan Transportation Commission
March 6th, 2012

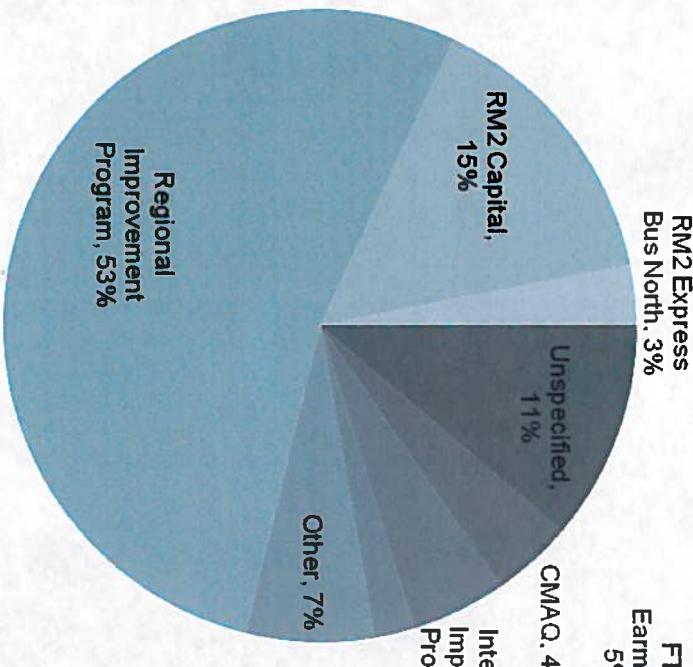
Project Studies

- ▶ Transportation Improvement Program (TIP)
 - ▶ Richmond BART Station Parking Structure
 - ▶ Hercules Intermodal Station
 - ▶ Fairfield Transportation Center
 - ▶ Richmond Parkway Transit Center
 - ▶ Vacaville Intermodal Station
 - ▶ Vallejo Ferry Terminal
- ▶ Plan Bay Area—Regional Transportation Plan (RTP)
 - ▶ Curtola Transit Center (Vallejo)
 - ▶ Larkspur Ferry Terminal
 - ▶ Berkeley Center Street Garage
- ▶ MTC Station Area Planning (SAP) Grant Program
 - ▶ Cotati Station (SMART)
 - ▶ Santa Rosa (SMART)
 - ▶ San Leandro (BART)
 - ▶ Pittsburg/Bay Point (BART)
 - ▶ Pittsburg/Railroad Ave (eBART)
 - ▶ Antioch (eBART)
 - ▶ Milpitas (BART to Silicon Valley)
 - ▶ Santa Clara (BART to Silicon Valley)
 - ▶ San Mateo-Hillsdale (Caltrain)
 - ▶ Other
 - ▶ Berryessa Station (BART to Silicon Valley)

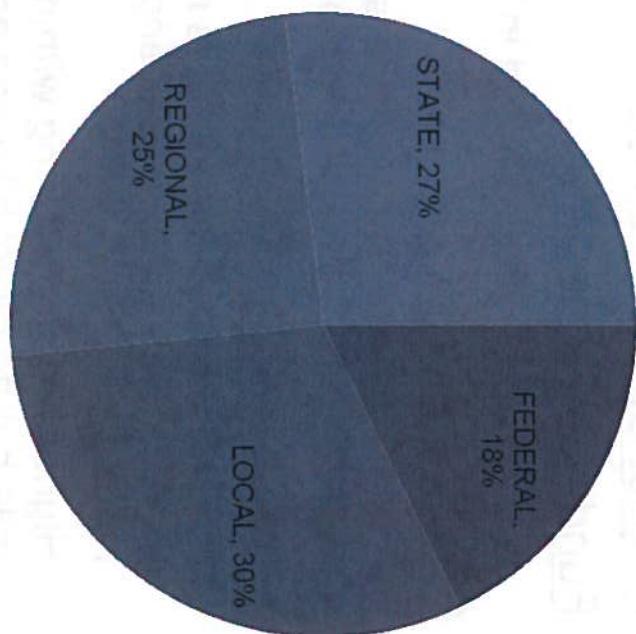


Funding for Projects with Parking Structures*

Funding by Program
(Total: \$205M)



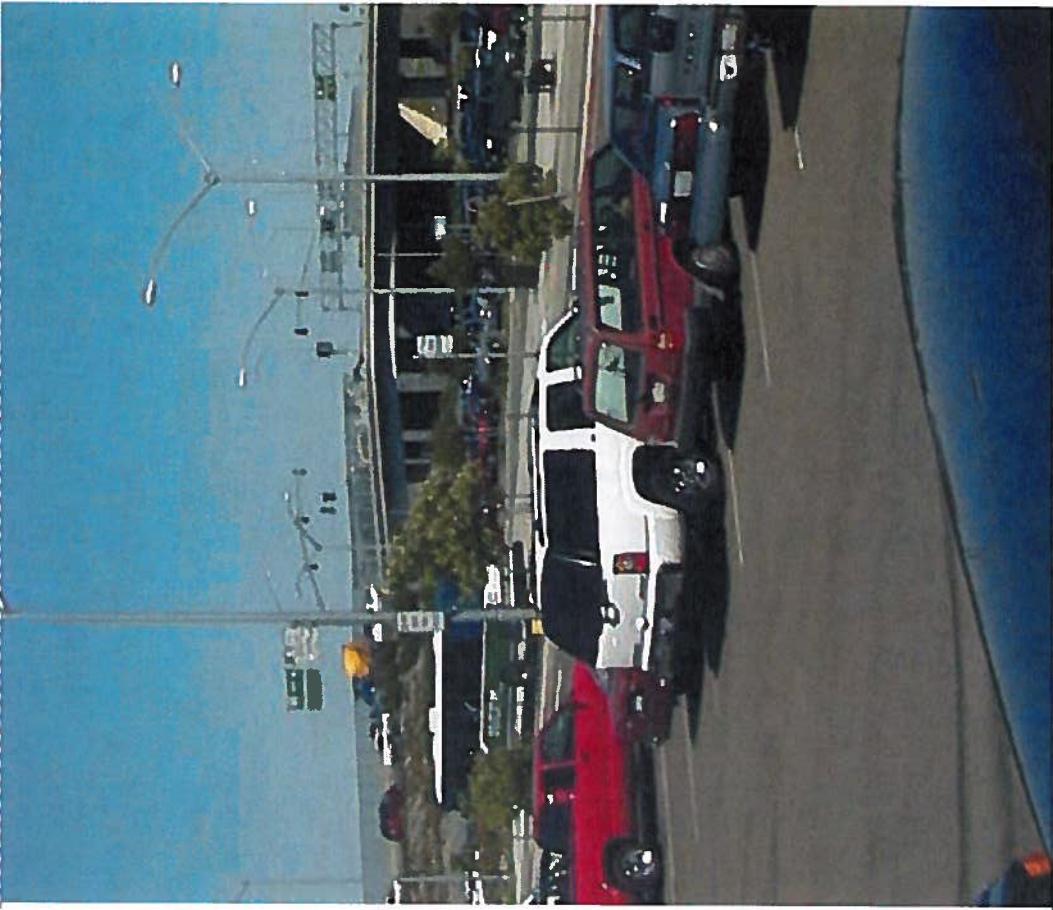
Funding by Type
(Total: \$205M)



*Total includes all project costs for projects with most complete data available and with funds programmed in TIP. It is not an exhaustive list of parking projects planned or in process in the Bay Area.

Richmond Parkway Transit Center

- ▶ Location: Richmond Parkway at Blume Drive
- ▶ Agency: AC Transit
- ▶ Project Status: Planned
- ▶ Funding:
 - ◀ \$30.5 Million programmed in TIP
- ▶ Primary Users:
 - ◀ Trans-bay express bus riders from west Contra Costa to downtown SF
- ▶ Station area access:
 - ◀ Housing across the street is more than 2 miles away on existing road network
 - ◀ Higher density housing within $\frac{1}{2}$ mile but no direct bike/ped access
- ▶ Potential for reduced parking:
 - ◀ Hilltop Plaza adjacent to site



Richmond Parkway Transit Center

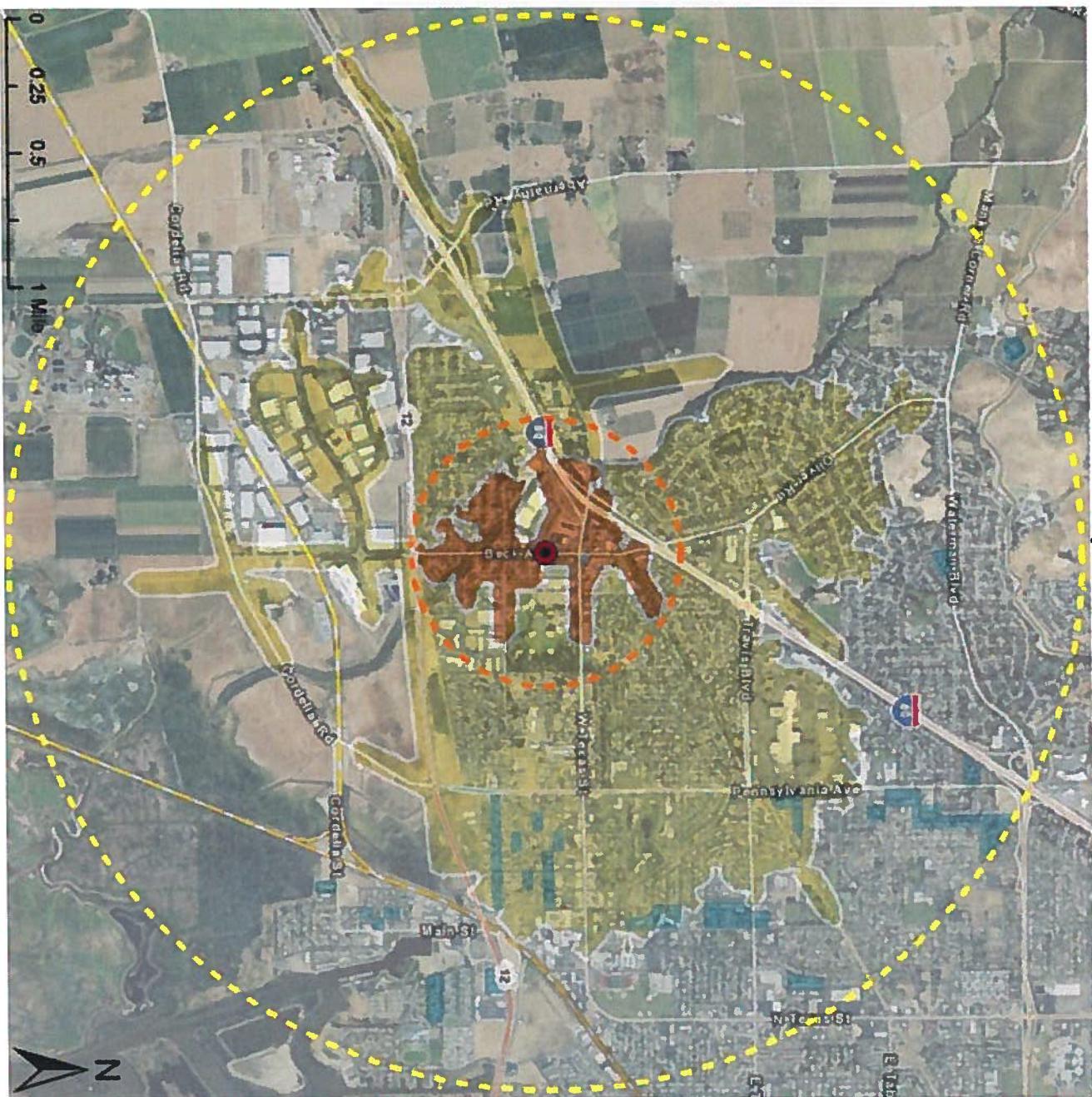


Fairfield Transportation Center



- ▶ Location: I-80 and West Texas St
- ▶ Agency: City of Fairfield
- ▶ Project Status: Near Completion
- ▶ Funding:
 - △ \$8.5 Million programmed in TIP
- ▶ Primary Usage:
 - △ 4 local FAST routes, express bus to El Cerrito, Walnut Creek, Pleasant Hill
- ▶ Station area access:
 - △ Limited pedestrian access from the north (no sidewalk, fence)
- ▶ Potential for reduced parking:
 - △ Shared parking in adjacent surface lots at Target, 99-Cents Store, Winery Square
 - △ Improved bike/ped connectivity to denser housing in north and west

Fairfield Transportation Center



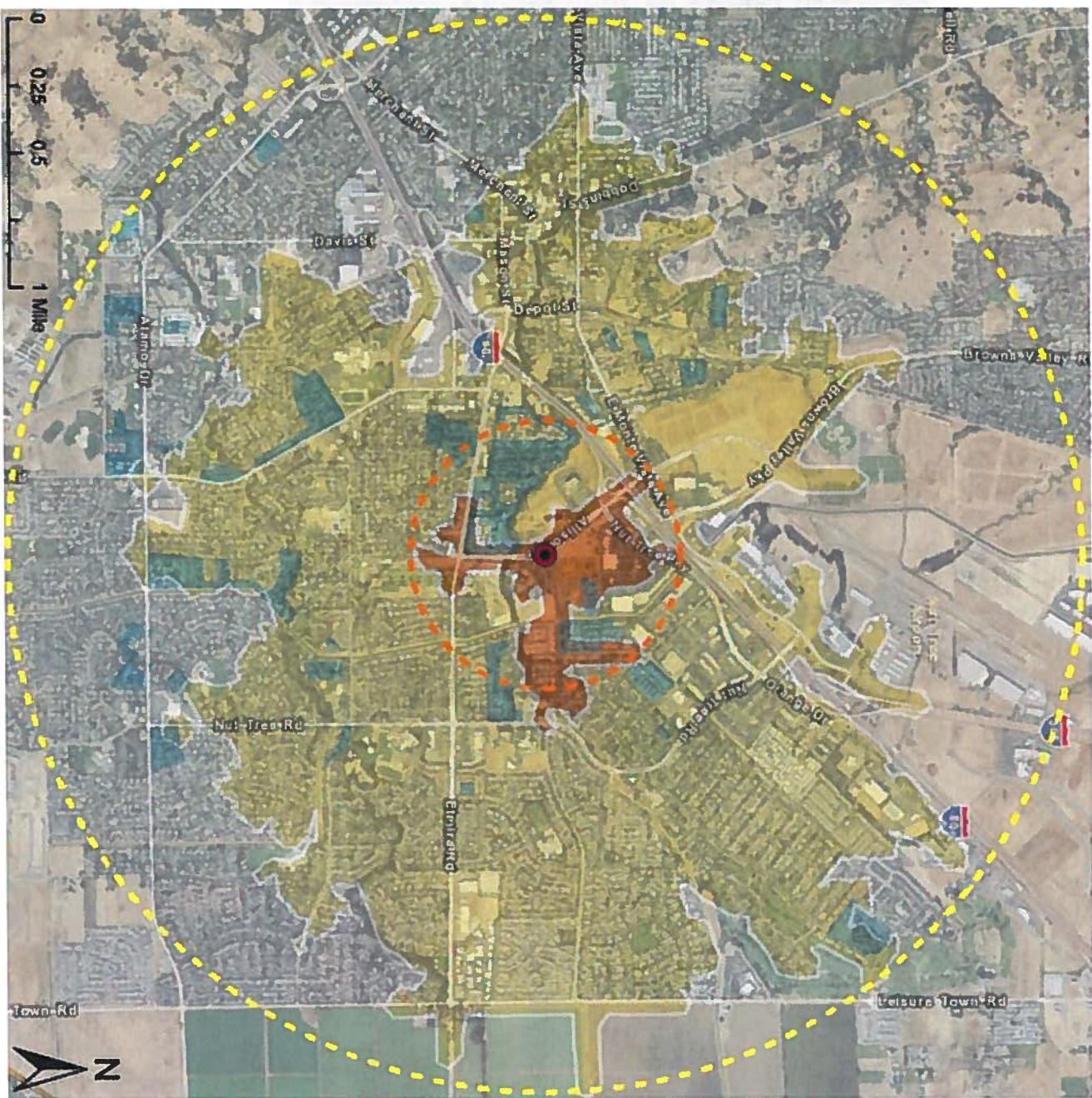
Project Size:	
Current Spaces	640
Spaces To Be Built	600
Removed Spaces	240
Net New Spaces	360
Project Cost (for parking):	
Total	\$16 M
\$/Space	\$26,667
\$/Net Space	\$44,444
Cost/Trip (Month)	\$151
Cost/Trip (Day)	\$6.96
Population Within:	
1/2 Mile Walk	1,532
1/2 Mile Radius	3,707
2 Mile Bike	16,652
2 Mile Radius	33,237
Housing Density	> 10 DU/Acre

Vacaville Intermodal Station

- ▶ Location: I-80 and Allison Drive
- ▶ Agency: City of Vacaville
- ▶ Project Status: Existing surface park and ride; garage planned
- ▶ Funding:
 - ▶ \$10 Million programmed in TIP
- ▶ Primary Service:
 - ▶ Vacaville City Coach, Yolo-Solano Transit, Solano Exp to Fairfield, Davis, Sacramento, Walnut Creek, and Pleasant Hill
- ▶ Station area access:
 - ▶ Higher density housing to west and east lacks direct access to station
- ▶ Potential for reduced parking:
 - ▶ Shared parking limited—station is $> \frac{1}{2}$ mile from nearest parking
 - ▶ Improved bike/ped connectivity to denser housing in north and west could increase non-auto mode share



Vacaville Intermodal Station



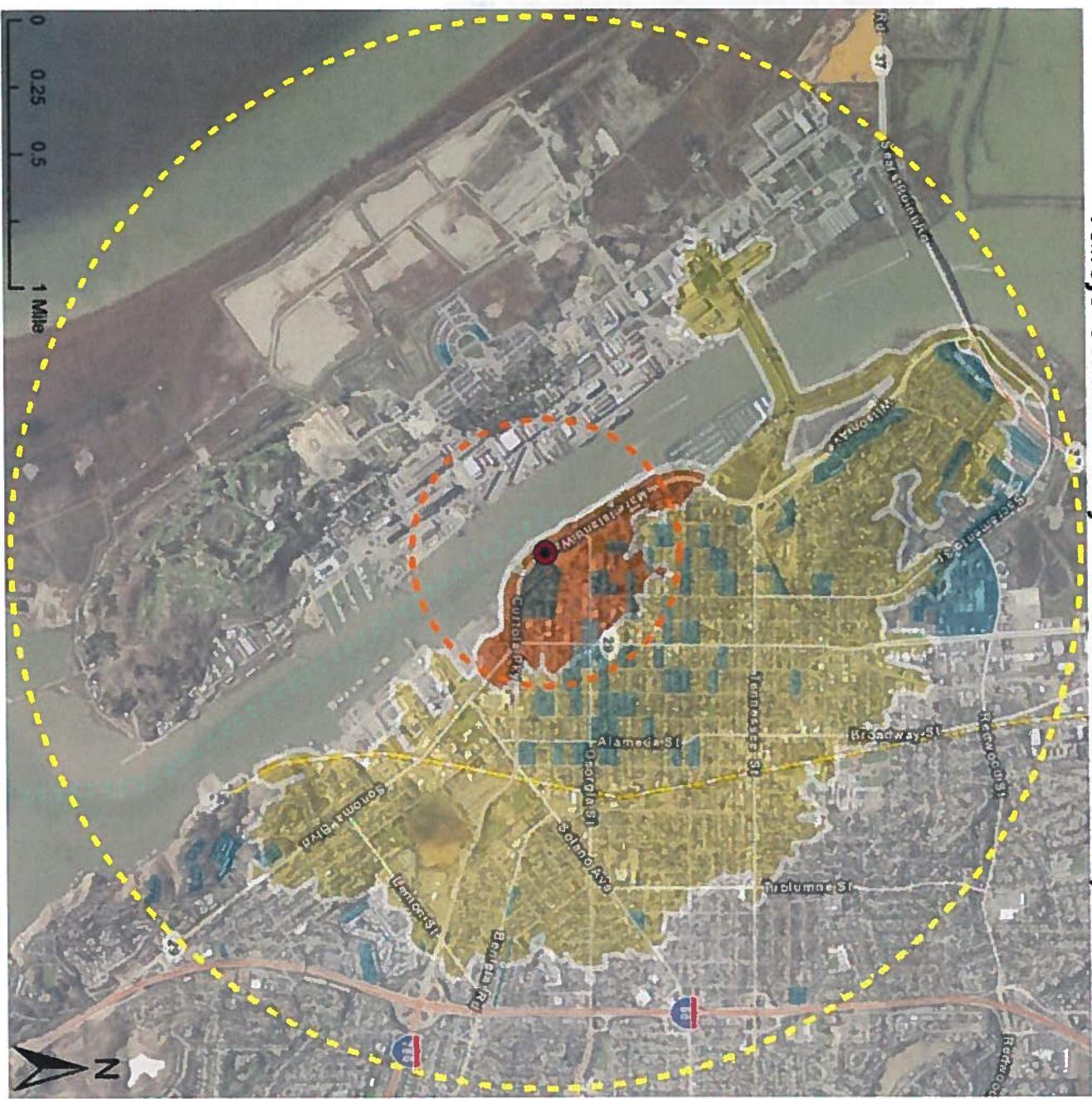
Project Size:	
Current Spaces	245
Spaces To Be Built	400
Removed Spaces	0
Net New Spaces	400
Project Cost (for parking):	
Total	\$10 M
\$/Space	\$25,000
\$/Net Space	\$25,000
Cost/Trip (Month)	\$105
Cost/Trip (Day)	\$4.84
Population Within:	
1/2 Mile Walk	1,425
1/2 Mile Radius	4,579
2 Mile Bike	33,401
2 Mile Radius	58,635
Housing Density	> 10 DU/Acre

Vallejo Station Ferry and Intermodal Facility



- ▶ Location: Vallejo Ferry Terminal
- ▶ Agency: City of Vallejo
- ▶ Project Status: Near Completion
- ▶ Funding:
 - ▶ \$80 million programmed in TIP
- ▶ Primary Service:
 - ▶ 10,000 bus and ferry boardings/day
- ▶ Station area access:
 - ▶ Street connectivity: high
 - ▶ But, relatively small population within $\frac{1}{2}$ mile of station
- ▶ Potential for reduced parking:
 - ▶ Freeing up space at terminal for additional housing in lieu of parking might be considered

Vallejo Station Ferry and Intermodal Facility



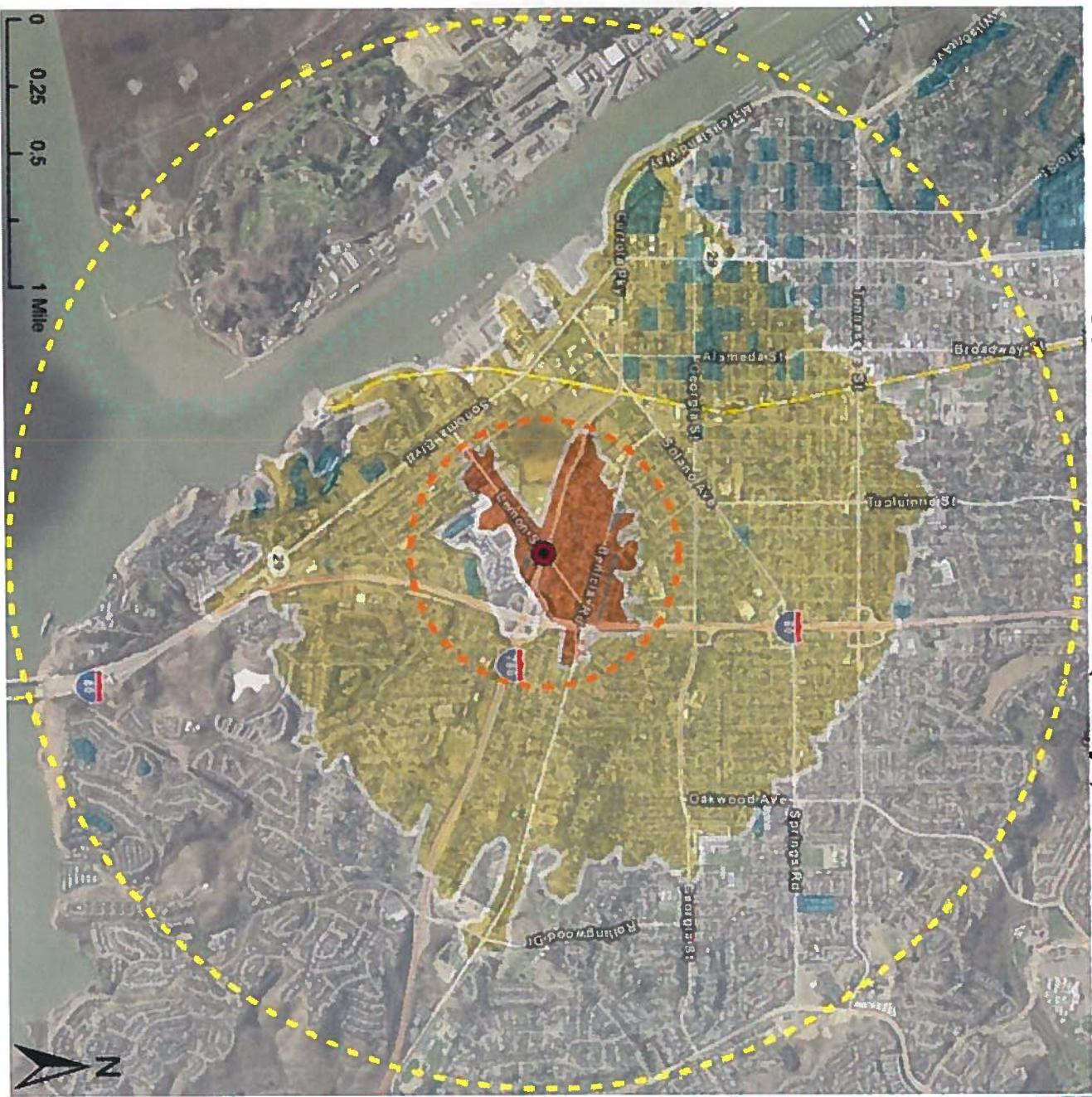
Project Size:	
Current Spaces	1,170
Spaces To Be Built	750
Removed Spaces	320
Net New Spaces	430
Project Cost (for parking):	
Total	\$16.7 M
\$/Space	\$22,205
\$/Net Space	\$38,730
Cost/Trip (Month)	\$138
Cost/Trip (Day)	\$6.34
Population Within:	
1/2 Mile Walk	2,022
1/2 Mile Radius	2,949
2 Mile Bike	20,453
2 Mile Radius	35,534
Housing Density	> 10 DU/Acre

Curtola Transit Center (Vallejo)



- ▶ Location: I-80 and Curtola Pkwy
- ▶ Agency: City of Vallejo
- ▶ Project Status: Planned
- ▶ Phase I: 450 of 1,364 total planned
(structured spaces)
- ▶ Funding:
- ▶ \$55 Million in RTP
- ▶ Primary Service:
- ▶ Vallejo Transit, express bus service to
El Cerrito and Benicia
- ▶ Station area access:
- ▶ Bike/ped access to station limited by
I-80/780 interchange
- ▶ Potential for reduced parking:
- ▶ Shared parking at PG&E lot
- ▶ Coordinate parking with Vallejo Ferry
terminal (~1,300 spaces planned at
each site separated by 1½ miles)

Curtola Transit Center (Vallejo)



Project Size:	
Current Spaces	419
Spaces To Be Built	450
Removed Spaces	241
Net New Spaces	209
Project Cost (for parking):	
Total	\$14.8 M
\$/Space	\$32,778
\$/Net Space	\$70,574
Cost/Trip (Month)	\$214
Cost/Trip (Day)	\$9.83
Population Within:	
½ Mile Walk	2,031
½ Mile Radius	4,954
2 Mile Bike	27,226
2 Mile Radius	57,049
Housing Density	> 10 DU/Acre

Hercules Intermodal Station

- ▶ Location: Bayfront Blvd near Refugio Creek
- ▶ Agency: City of Hercules
- ▶ Project Status: Design
- ▶ Key Stakeholders:
 - △ UPRR, Amtrak, WestCAT
- ▶ Funding:
 - △ \$13.5 Million programmed in TIP
- ▶ Primary Service:
 - △ Plans to integrate ferry, bus, and rail (Amtrak Capitol Corridor)
- ▶ Station area access:
 - △ Few residences within $\frac{1}{2}$ mile walk
- ▶ Potential for reduced parking:
 - △ City is planning for 1,300 homes in station area



Hercules Intermodal Station

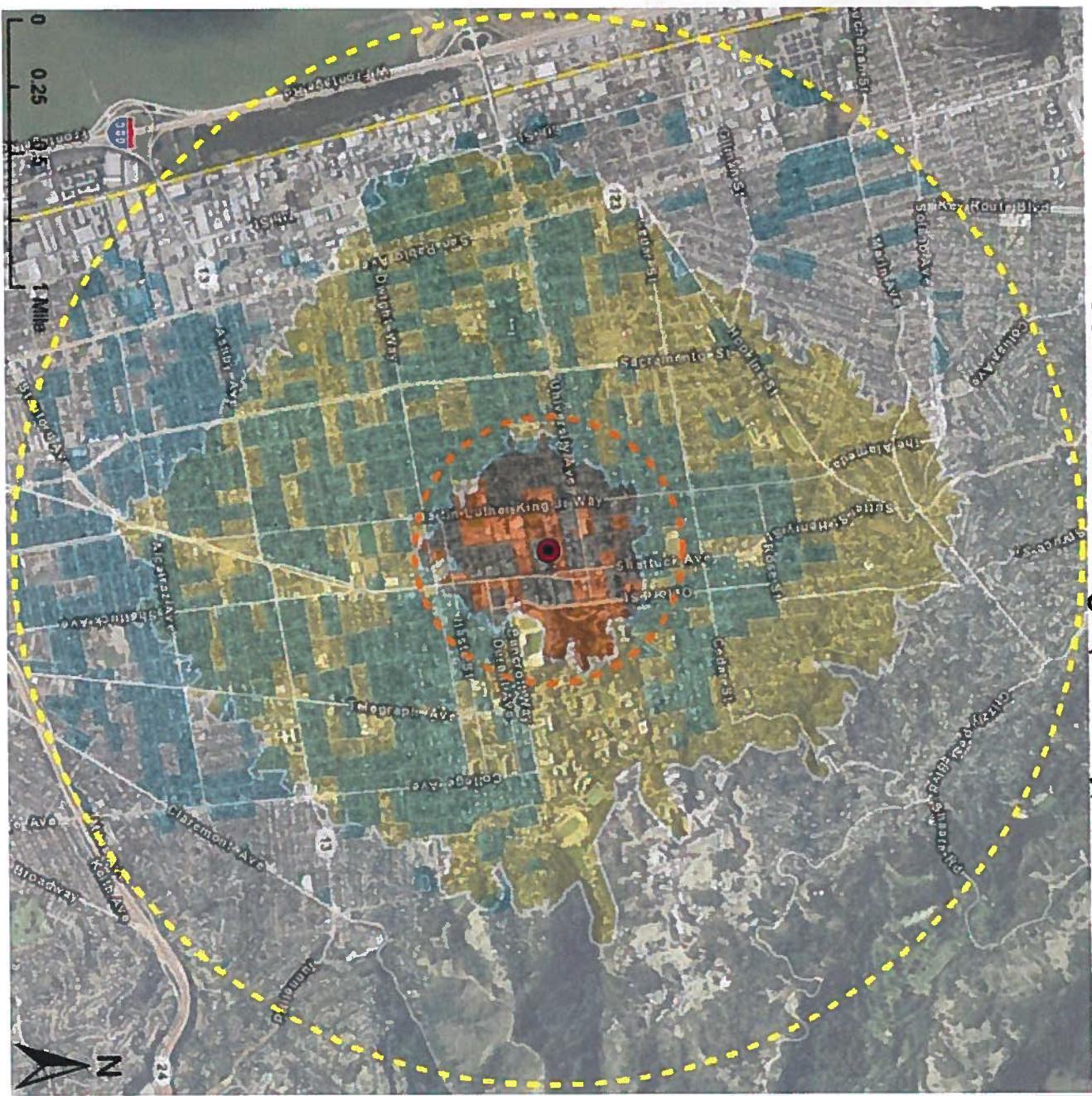


Center Street Garage (Berkeley)

- ▶ Location: Center Street at Shattuck and Milvia
- ▶ Agency: City of Berkeley
- ▶ Project Status: Planned
 - ◀ Existing structure is in need of seismic retrofit
- ▶ Funding:
 - ◀ \$32.5 Million in RTP
- ▶ Primary Usage:
 - ◀ Downtown visitors
- ▶ Cost issues:
 - ◀ Site constraints
 - ◀ Demolition costs
- ▶ Alternatives:
 - ◀ Coordinated management of existing on- and off-street parking resources might obviate need for additional structure at much lower cost



Center Street Garage (Berkeley)



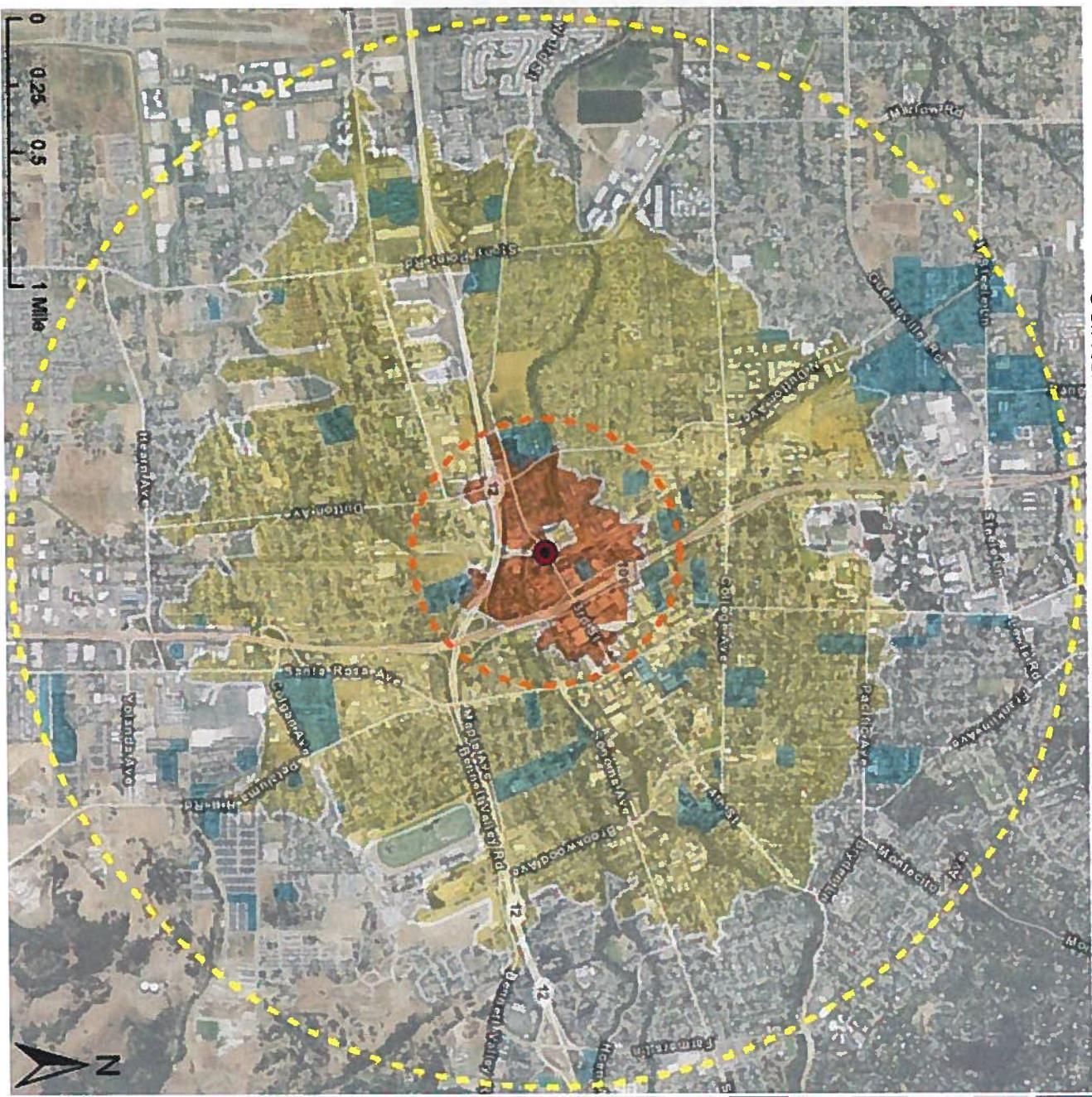
Project Size:	
Current Spaces	421
Spaces To Be Built	462
Removed Spaces	421
Net New Spaces	41
Project Cost (for parking):	
Total	\$18.6 M
\$/Space	\$40,260
\$/Net Space	\$453,659
Cost/Trip (Month)	\$1,126
Cost/Trip (Day)	\$51.76
Population Within:	
1/2 Mile Walk	7,952
1/2 Mile Radius	13,814
2 Mile Bike	86,334
2 Mile Radius	132,766
Housing Density	> 10 DU/Acre

Santa Rosa SMART Station Area

- ▶ Location: Railroad Square District
- ▶ Agency: SMART, City of Santa Rosa
 - ◀ MTC Station Area Planning grant
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ◀ Sonoma-Marin Area Rail Transit District (SMART) commuter stop
- ▶ Station area access:
 - ◀ Street connectivity: moderate
 - ◀ Improved access across CA-12 & US-101 could bring higher density housing to west and south of station within $\frac{1}{2}$ mile walkshed
- ▶ Potential for reduced parking:
 - ◀ Rail and TOD projects plan to share 1200-space parking structure



Santa Rosa SMART Station Area



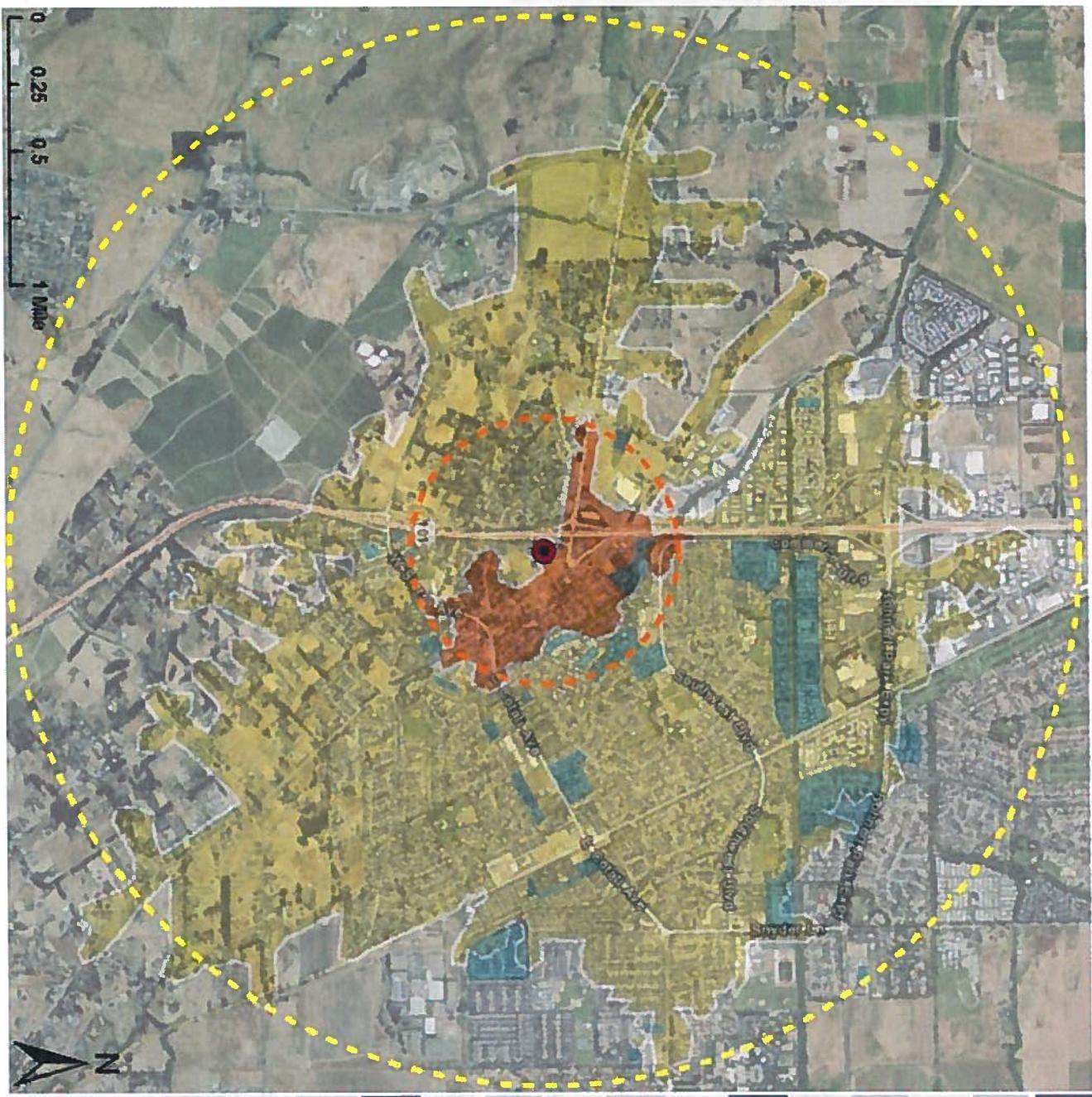
Project Size:	
Current Spaces	0
Spaces To Be Built	1,115
Removed Spaces	0
Net New Spaces	1,115
Project Cost (for parking):	
Total	TBD
\$/Space	TBD
\$/Net Space	TBD
Cost/Trip (Month)	TBD
Cost/Trip (Day)	TBD
Population Within:	
½ Mile Walk	1,779
½ Mile Radius	4,457
2 Mile Bike	41,819
2 Mile Radius	77,668
Housing Density	> 10 DU/Acre

Cotati SMART Station Area

- ▶ Location: East Cotati Ave and Santero Way
- ▶ Agencies: SMART, City of Cotati, Sonoma County Transit
- ▶ MTC Station Area Planning grant
- ▶ Project Status: Planned
- ▶ Primary Service:
- ▶ Sonoma-Marin Area Rail Transit District (SMART) commuter stop
- ▶ Station area access:
- ▶ Limited access across US-101
- ▶ However, high proportion of existing population within walk-and bikeshed



Cotati SMART Station Area



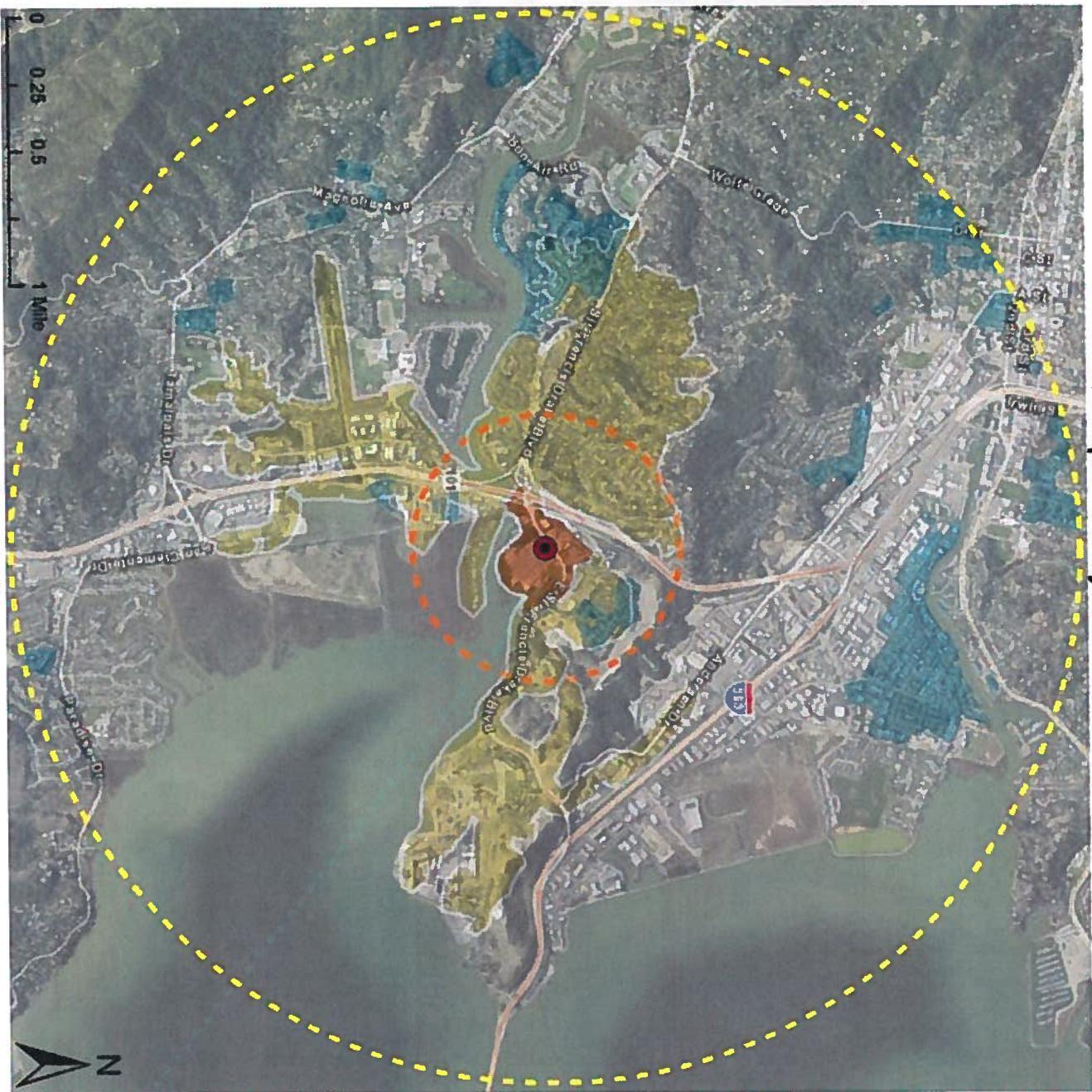
Project Size:	
Current Spaces	0
Spaces To Be Built	TBD
Removed Spaces	TBD
Net New Spaces	TBD
Project Cost (for parking):	
Total	TBD
\$/Space	TBD
\$/Net Space	TBD
Cost/Trip (Month)	TBD
Cost/Trip (Day)	TBD
Population Within:	
1/2 Mile Walk	1,935
1/2 Mile Radius	3,512
2 Mile Bike	29,223
2 Mile Radius	39,781
Housing Density	> 10 DU/Acre

Larkspur Ferry Terminal



- ▶ Location: Sir Francis Drake Blvd and Larkspur Landing Circle
- ▶ Agency: Golden Gate Bridge District
- ▶ Project Status: Planned
- ▶ Funding:
 - ▶ \$37 Million in RTP
- ▶ Primary Service:
 - ▶ Golden Gate Ferry Service, eventual SMART terminus
- ▶ Station area access:
 - ▶ Over 2,000 people live within a $\frac{1}{2}$ mile radius of station, yet virtually 0 are within existing $\frac{1}{2}$ mile watershed
- ▶ Potential for reduced parking
 - ▶ Improved access across US-101 and 580 could bring higher density housing to north and west of station within reach

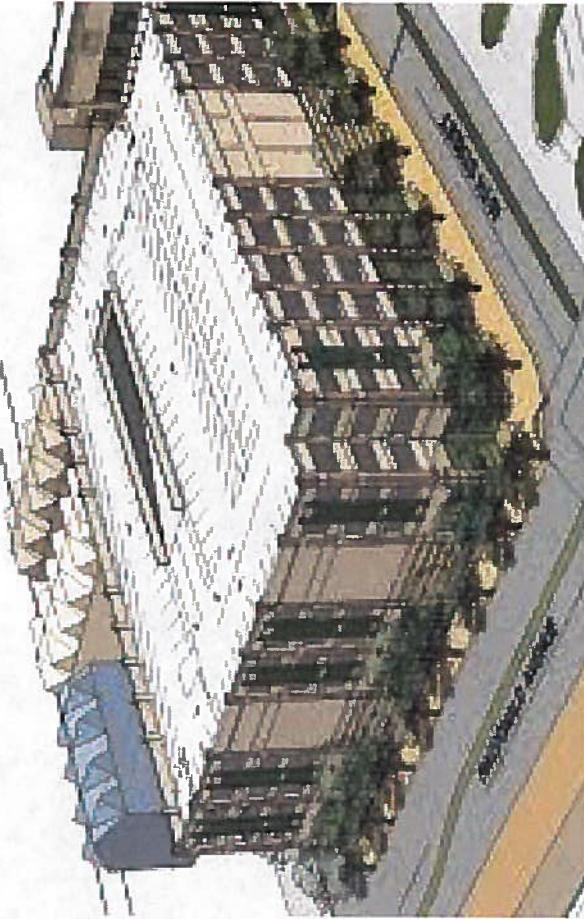
Larkspur Ferry Terminal



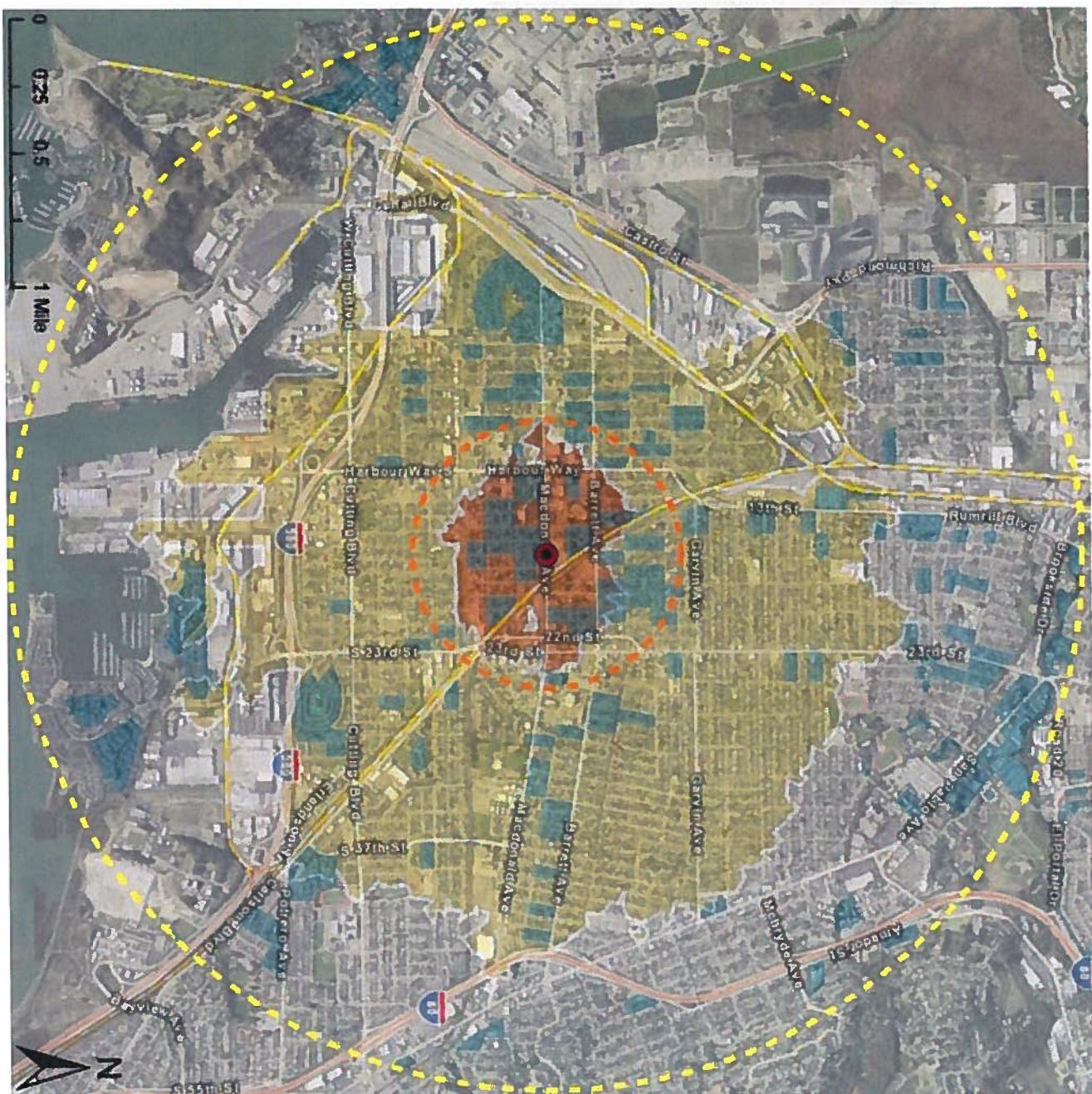
Project Size:	
Current Spaces	1,800
Spaces To Be Built	970
Removed Spaces	400
Net New Spaces	570
Project Cost (for parking):	
Total	\$20 M
\$/Space	\$20,619
\$/Net Space	\$35,088
Cost/Trip (Month)	\$129
Cost/Trip (Day)	\$5.94
Population Within:	
½ Mile Walk	5
½ Mile Radius	2,279
2 Mile Bike	8,510
2 Mile Radius	46,912
Housing Density	> 10 DU/Acre

Richmond BART Station

- ▶ Location: Richmond BART Station
- ▶ Agency: Richmond Redevelopment Agency
- ▶ Project Status: Built
- ▶ Funding:
 - △ \$30 Million in TIP
- ▶ Project Description:
 - △ Structure served as replacement parking for BART lot converted to housing and retail in Transit Village-Metro Walk
- ▶ Parking replacement issues:
 - △ Funding not secured until BART parking replaced at greater than 1:1 BART Facilities Standards (BFS) incur higher cost than private developer
 - △ Cost/day/space of construction (\$6.38) much less than BART parking charges
 - △ BART will not share parking with commercial or residential uses in area

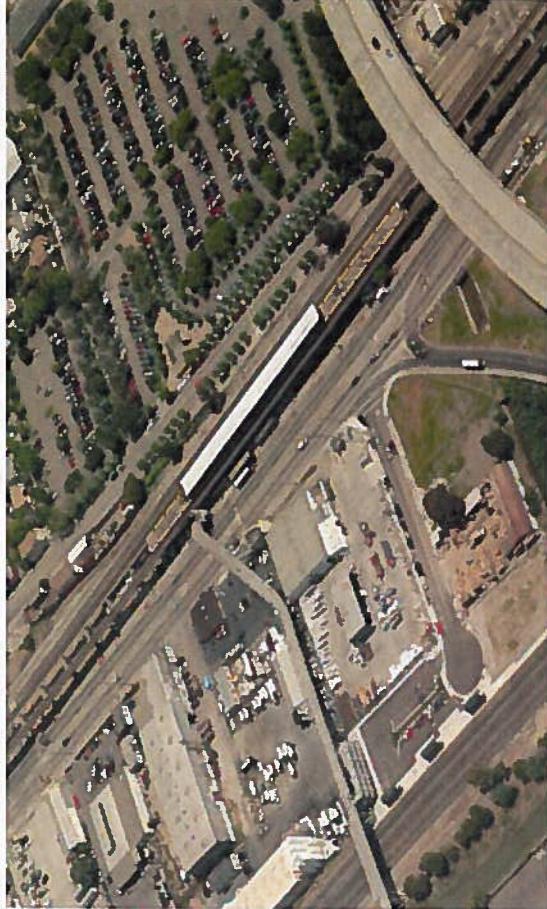


Richmond BART Station Area



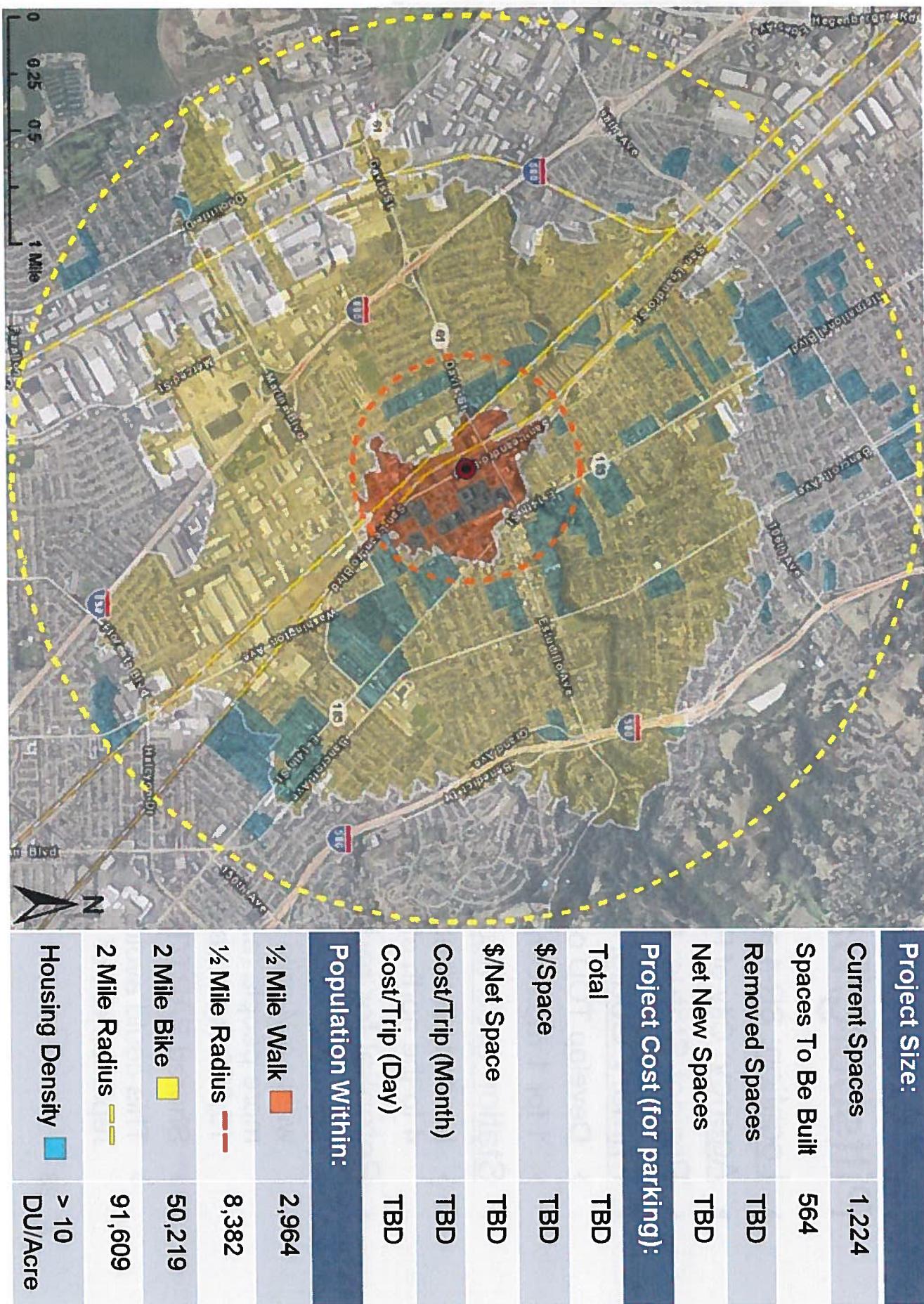
Project Size:	
Current Spaces	771
Spaces To Be Built	678
Removed Spaces	485
Net New Spaces	193
Project Cost (for parking):	
Total	\$26.5 M
\$/Space	\$39,193
\$/Net Space	\$137,492
Cost/Trip (Month)	\$373
Cost/Trip (Day)	\$17.15
Population Within:	
½ Mile Walk	5,222
½ Mile Radius	10,374
2 Mile Bike	51,427
2 Mile Radius	87,350
Housing Density	> 10 DU/Acre

San Leandro BART Station Area



- ▶ Location: San Leandro Blvd & Davis St
- ▶ Agency: City of San Leandro
- ▶ Project Status: Planned
- ▶ Project Description:
 - ▶ Creation of TOD district in downtown San Leandro
 - ▶ Conversion of east BART parking lot to mixed-use development
 - ▶ 567 dedicated BART parking spaces
- ▶ Station area access:
 - ▶ Bike/ped access across BART and freight lines limited
- ▶ Potential for reduced parking
 - ▶ Improved access could connect station area with higher density housing to west and increase bike/ped mode share

San Leandro BART Station Area

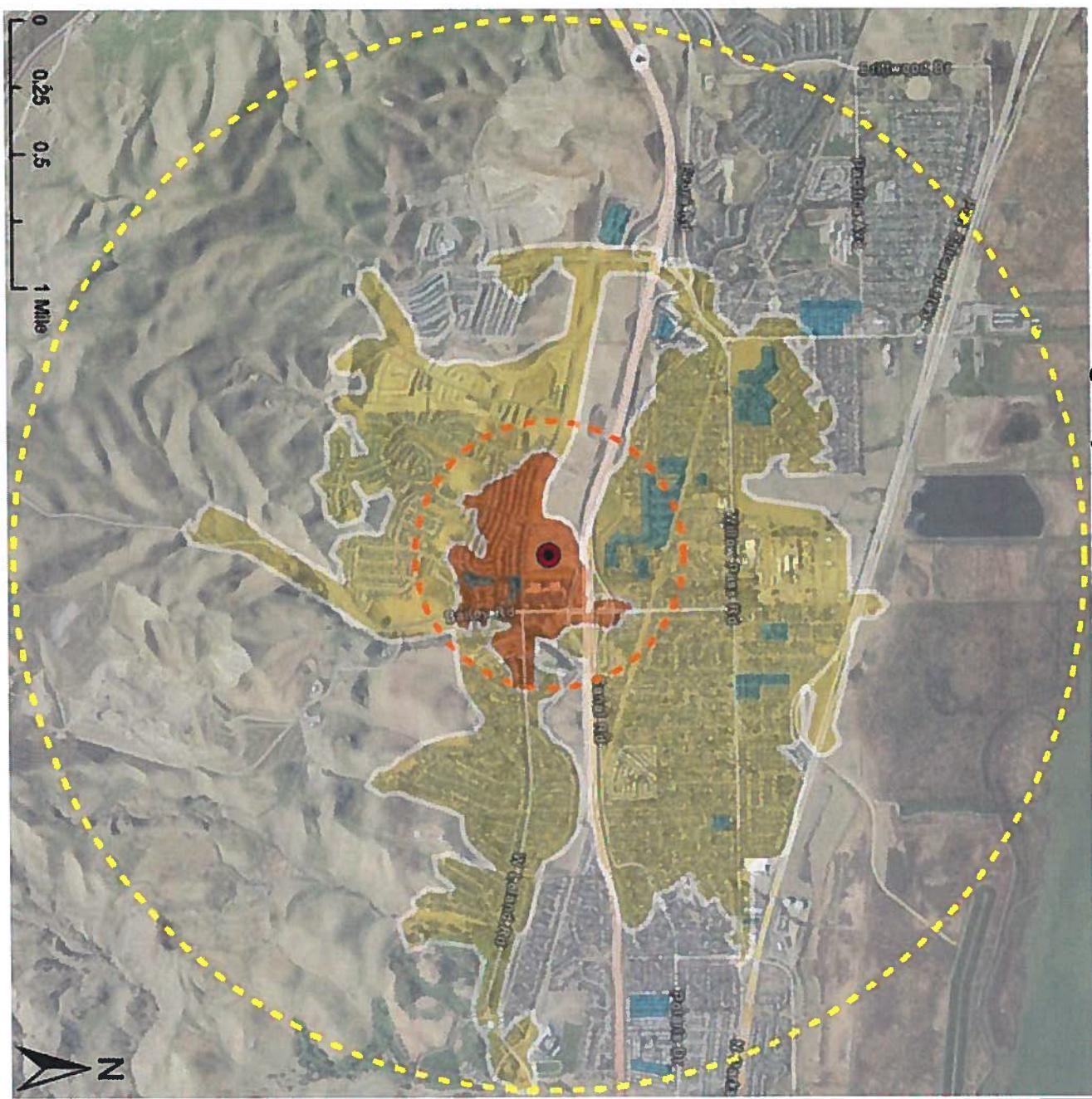


Pittsburg/Bay Point Station Area Plan



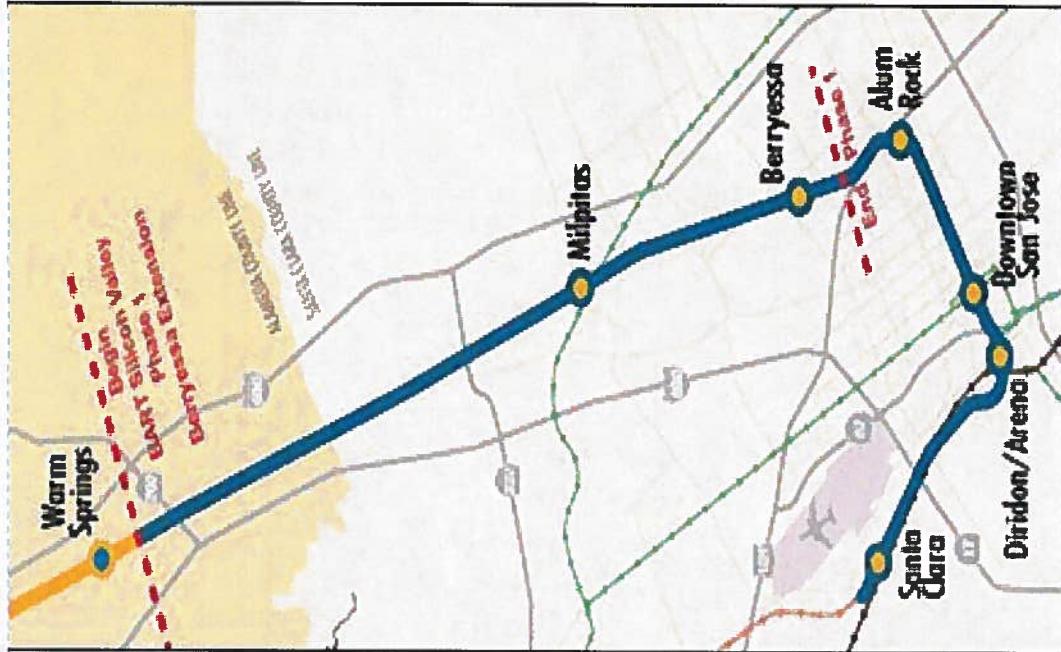
- ▶ Location: SR-4 and Bailey Road
- ▶ Agency: City of Pittsburg
- ▶ Project Status: Planned
- ▶ Primary Goals:
 - ▶ Develop TOD on existing surface lot
 - ▶ 1 for 1 replacement of parking
- ▶ Station area access:
 - ▶ Limited bike/ped access across SR-4 to the north of station
- ▶ Potential for reduced parking
 - ▶ Improved access could bring station within a ½ mile walk of up to 3,000 more people (and a 2 mile bike for 15,000 more people)
 - ▶ Shared BART/TOD parking
 - ▶ This could avoid need for full 1:1 replacement of BART parking

Pittsburg/Bay Point BART Station Area



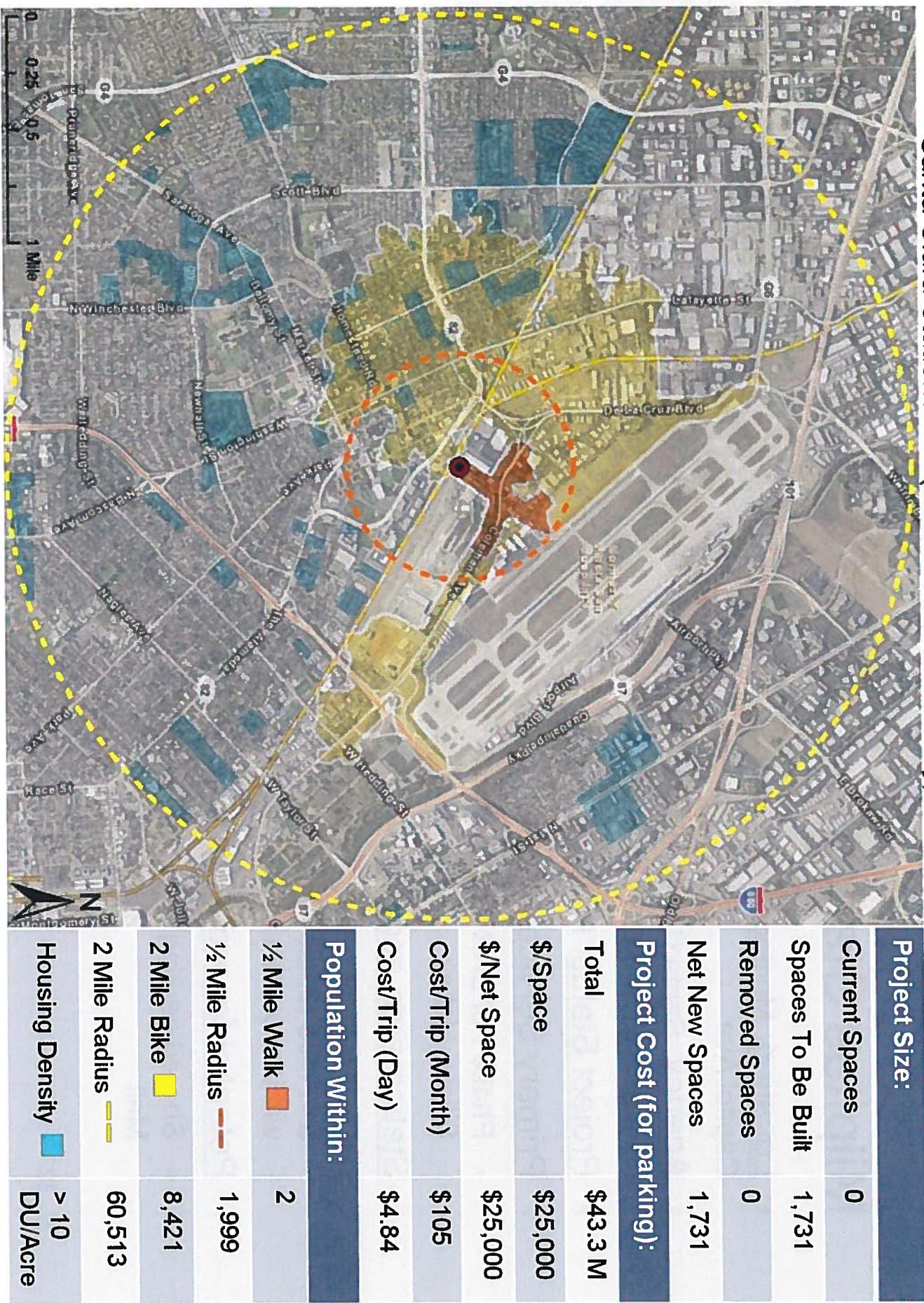
Project Size:	
Current Spaces	2,000
Spaces To Be Built	2,370
Removed Spaces	2,000
Net New Spaces	370
Project Cost (for parking):	
Total	\$43 M
\$/Space	\$18,143
\$/Net Space	\$116,216
Cost/Trip (Month)	\$322
Cost/Trip (Day)	\$14.82
Population Within:	
1/2 Mile Walk	1,682
1/2 Mile Radius	4,320
2 Mile Bike	21,989
2 Mile Radius	36,174
Housing Density	> 10 DU/Acre

Santa Clara (BART to Silicon Valley)



- ▶ Location: Brokaw Road near Coleman Ave
- ▶ Agency: Santa Clara Valley Transportation Authority (VTA)
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ▶ Terminus of proposed BART extension to Silicon Valley
 - ▶ Will link to existing Santa Clara Transit Center, served by Caltrain, ACE, VTA bus lines
- ▶ Station area access:
 - ▶ Virtually no residences within $\frac{1}{2}$ mile walk of station
- ▶ Potential for reduced parking
 - ▶ SAP calls for new east-west connections across tracks to bring more residences within walk and bike-sheds

Santa Clara Station Area (BART to Silicon Valley)

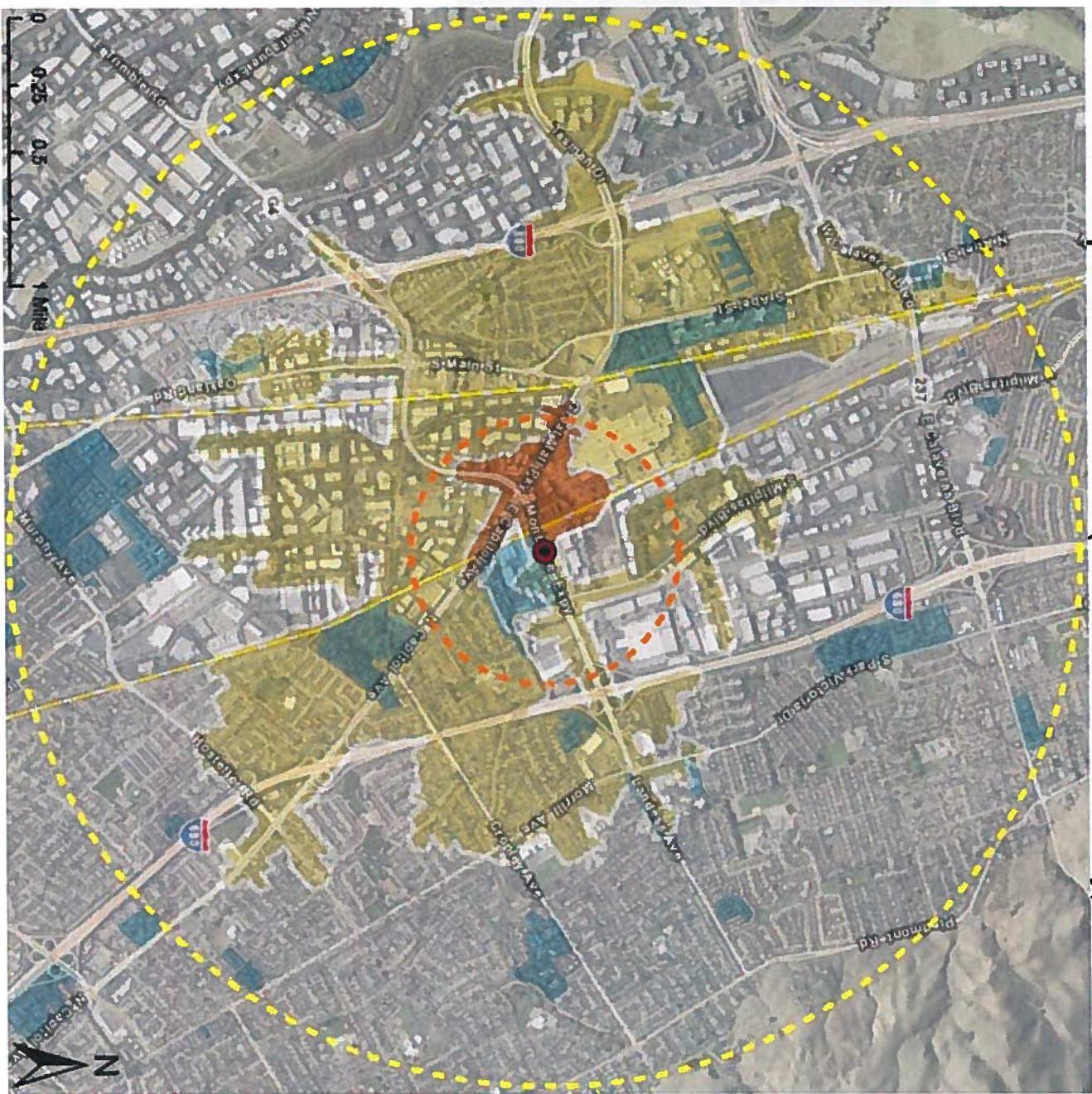


Milpitas Station Area (BART to Silicon Valley)



- ▶ Location: Montague Expwy and Capitol Ave
- ▶ Agency: Santa Clara Valley Transportation Authority (VTA)
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ▶ Phase I of BART extension to Silicon Valley
- ▶ Station area access:
 - ▶ Only 10% of residents living within a ½ mile radius of the station are within a ½ mile walk
- ▶ Potential for reduced parking
 - ▶ Shared parking with Milpitas Great Mall

Milpitas Station Area (BART to Silicon Valley)



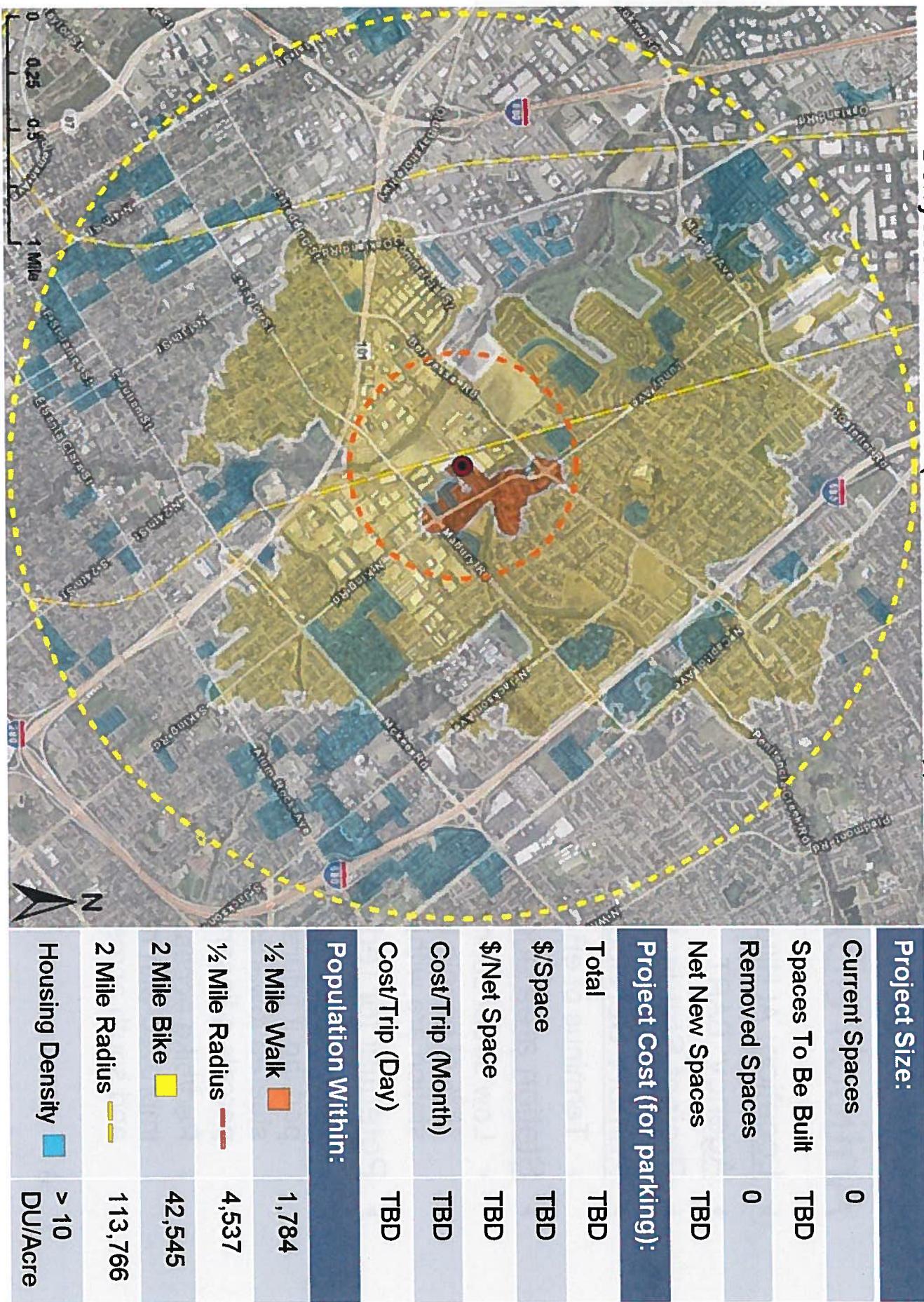
Project Size:	
Current Spaces	0
Spaces To Be Built	1,200
Removed Spaces	0
Net New Spaces	1,200
Project Cost (for parking):	
Total	\$30 M
\$/Space	\$25,000
\$/Net Space	\$25,000
Cost/Trip (Month)	\$105
Cost/Trip (Day)	\$4.84
Population Within:	
½ Mile Walk	214
½ Mile Radius	2,155
2 Mile Bike	26,390
2 Mile Radius	77,693
Housing Density	> 10 DU/Acre

Berryessa Station (BART to Silicon Valley)

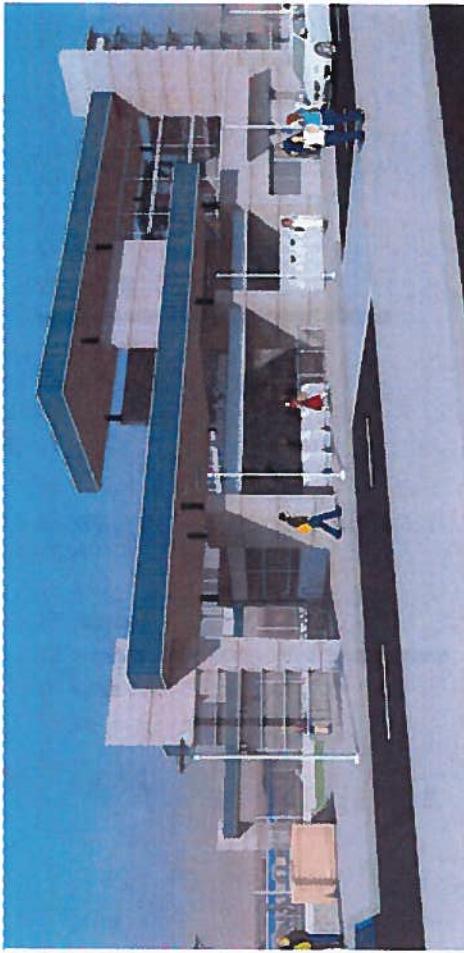


- ▶ Location: Berryessa & Marbury Roads
- ▶ Agency: Santa Clara Valley Transportation Authority (VTA)
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ▶ Phase I of BART extension to Silicon Valley
- ▶ Station area access:
 - ▶ Limited street connectivity misses potential to support ped/bike share
 - ▶ Of stations studied, only downtown Berkeley had more people living within a 2 mile radius, yet bikeshed captures just 37% of Milpitas residents

Berryessa Station Area (BART to Silicon Valley)

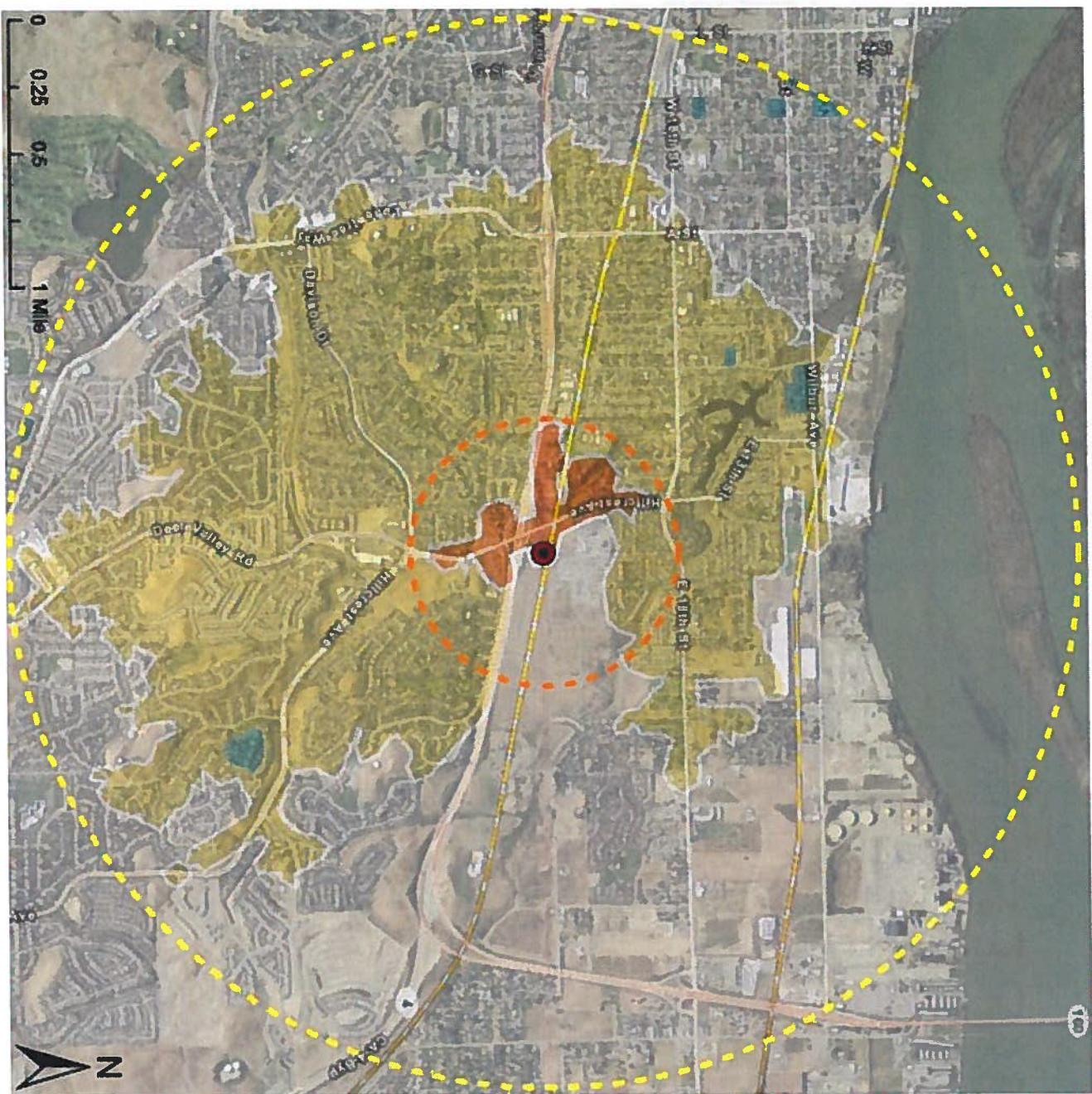


Antioch eBART Station Area



- ▶ Location: At Hillcrest and SR-4
- ▶ Agency: BART
- ▶ Project Status: Funded
- ▶ Primary Service:
 - ◀ Terminus of eBART extension
- ▶ Station area access:
 - ◀ Low street connectivity means just 16% of people living within $\frac{1}{2}$ mile of station are within $\frac{1}{2}$ mile walkshed
- ▶ Potential for reduced parking
 - ◀ Could substitute housing for parking if future development is steered towards vacant land parcels adjacent to station
 - ◀ Ped/bike access could be improved with new paths to east and south across vacant land

Antioch eBART Station Area



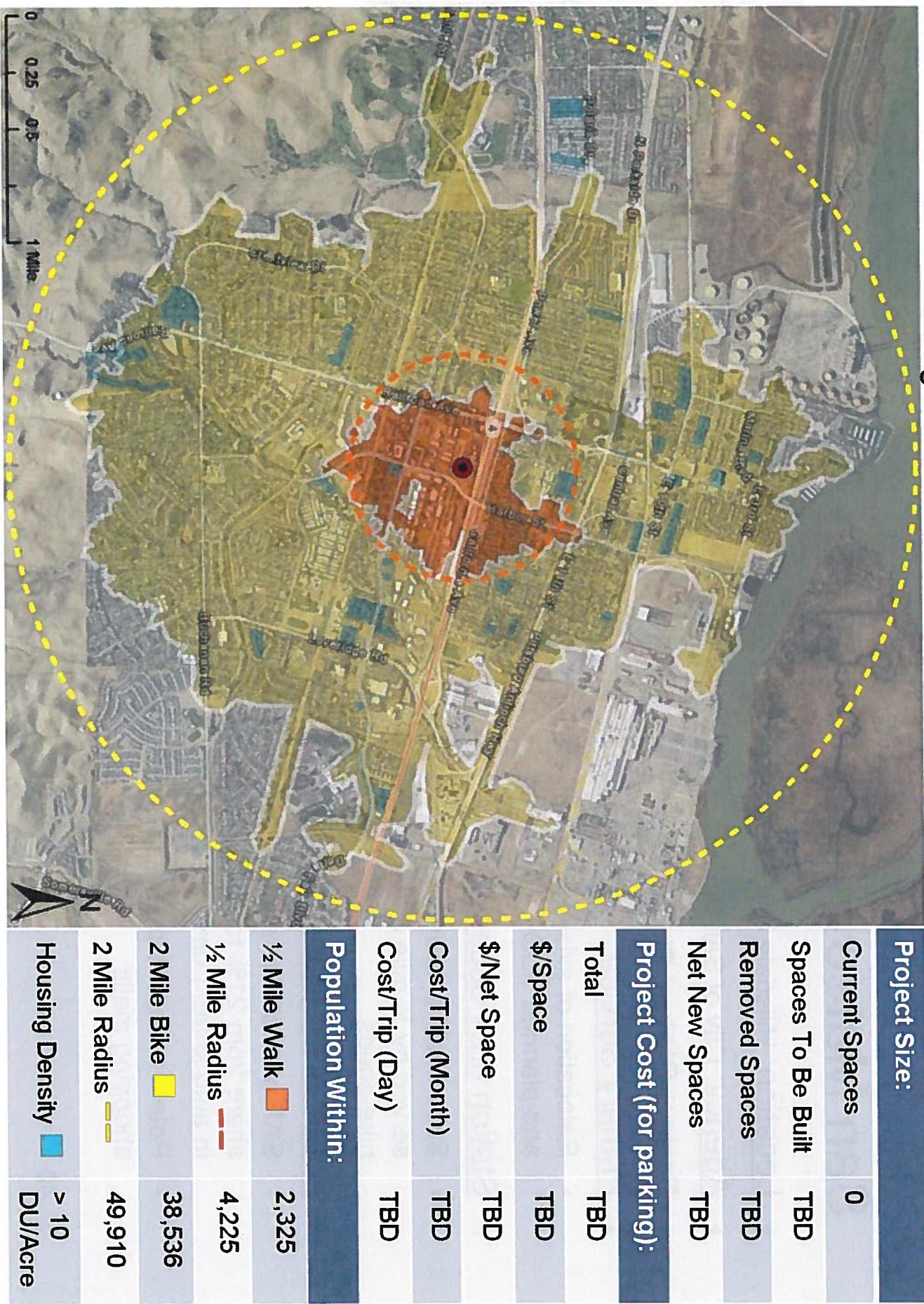
Project Size:	
Current Spaces	0
Spaces To Be Built	1,600
Removed Spaces	0
Net New Spaces	1,600
Project Cost (for parking):	
Total	TBD
\$/Space	TBD
\$/Net Space	TBD
Cost/Trip (Month)	TBD
Cost/Trip (Day)	TBD
Population Within:	
½ Mile Walk	368
1/2 Mile Radius	2,276
2 Mile Bike	26,061
2 Mile Radius	47,883
Housing Density	> 10 DU/Acre

Pittsburg eBART Station Area

- ▶ Location: Railroad Ave and SR-4
- ▶ Agency: To be funded by City of Pittsburg
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ▶ Planned infill station on eBART extension to Antioch
- ▶ Station area access:
 - ▶ Street connectivity: moderate
 - ▶ Substantial proportion of population served by $\frac{1}{2}$ mile and 2 mile walk- and bike-sheds
 - ▶ SAP calls for shared transit parking



Pittsburg eBART Station Area

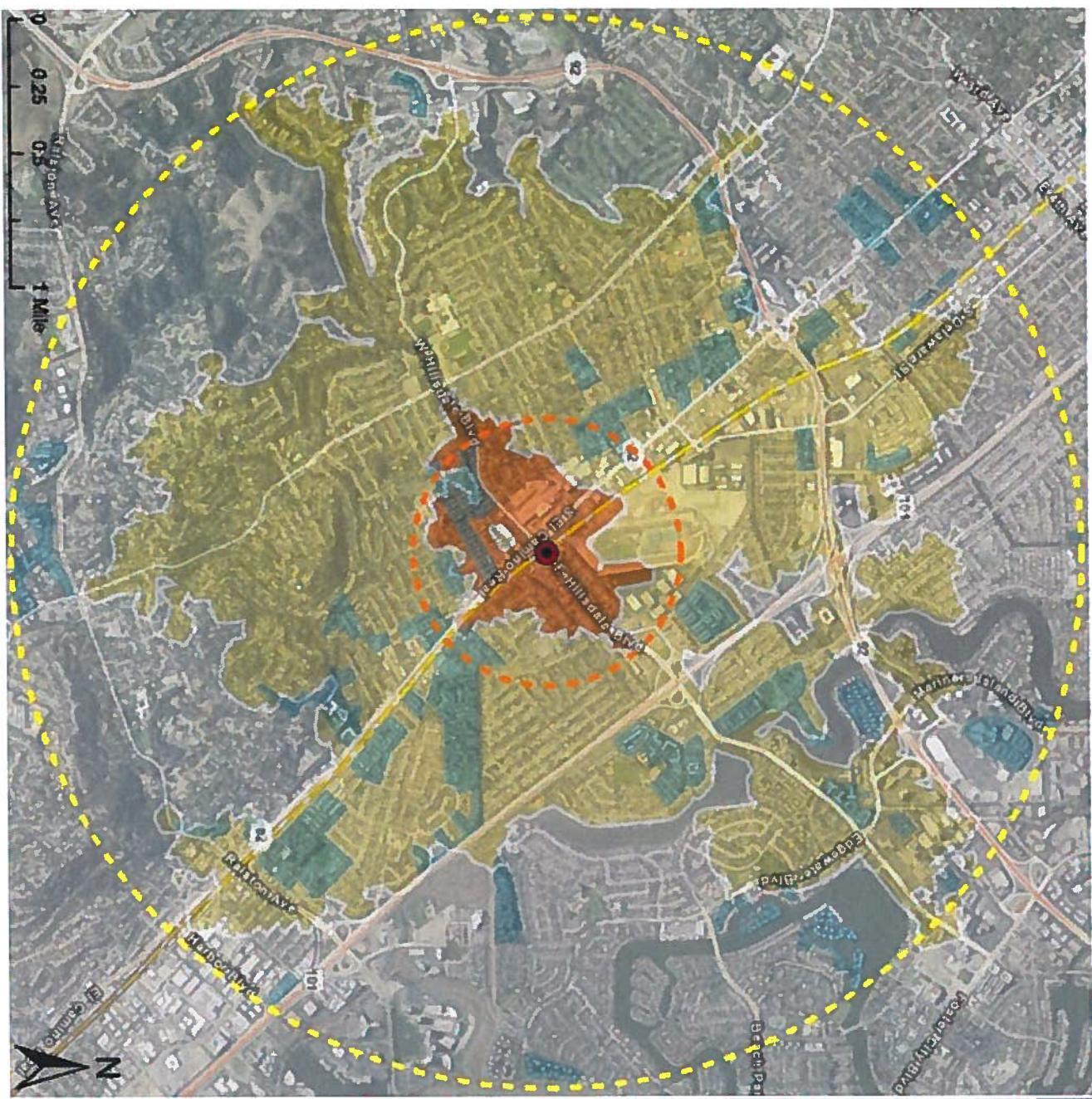


San Mateo Hillsdale Station Area



- ▶ Location: Hillsdale and El Camino Real
- ▶ Agency: City of San Mateo
- ▶ Project Status: Planned
- ▶ Primary Service:
 - ▶ Relocation of existing Caltrain station and planned TOD
- ▶ Station area access:
 - ▶ Substantial proportion of population served by ½ mile and 2 mile walk- and bike-sheds
- ▶ Potential for reduced parking
 - ▶ SAP predicts increase in walk/bike share from 21% to 35% and decrease in auto share from 34% to 14%
 - ▶ Potential shared parking at adjacent shopping malls

San Mateo Hillsdale Caltrain Station Area



Project Size:	
Current Spaces	545
Spaces To Be Built	1,242
Removed Spaces	0
Net New Spaces	1,242
Project Cost (for parking):	
Total	\$31.5 M
\$/Space	\$25,000
\$/Net Space	\$25,000
Cost/Trip (Month)	\$105
Cost/Trip (Day)	\$4.84
Population Within:	
½ Mile Walk	3,633
½ Mile Radius	6,673
2 Mile Bike	51,313
2 Mile Radius	87,675
Housing Density	> 10 DU/Acre

