



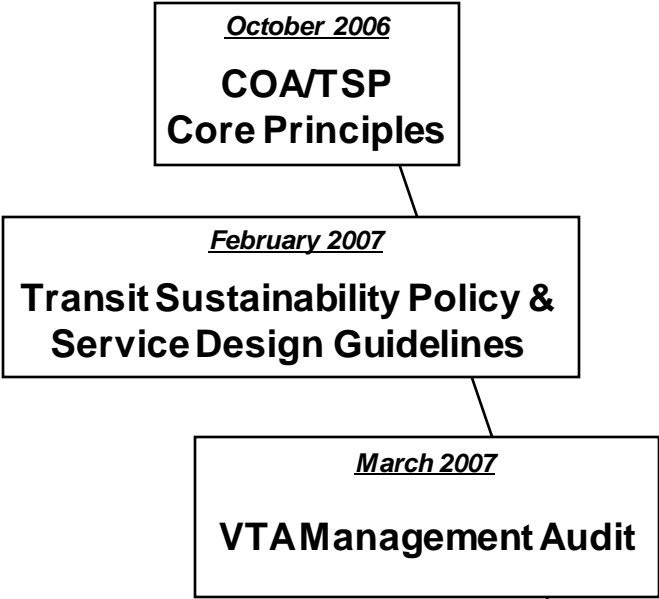
SANTA CLARA

Valley Transportation Authority

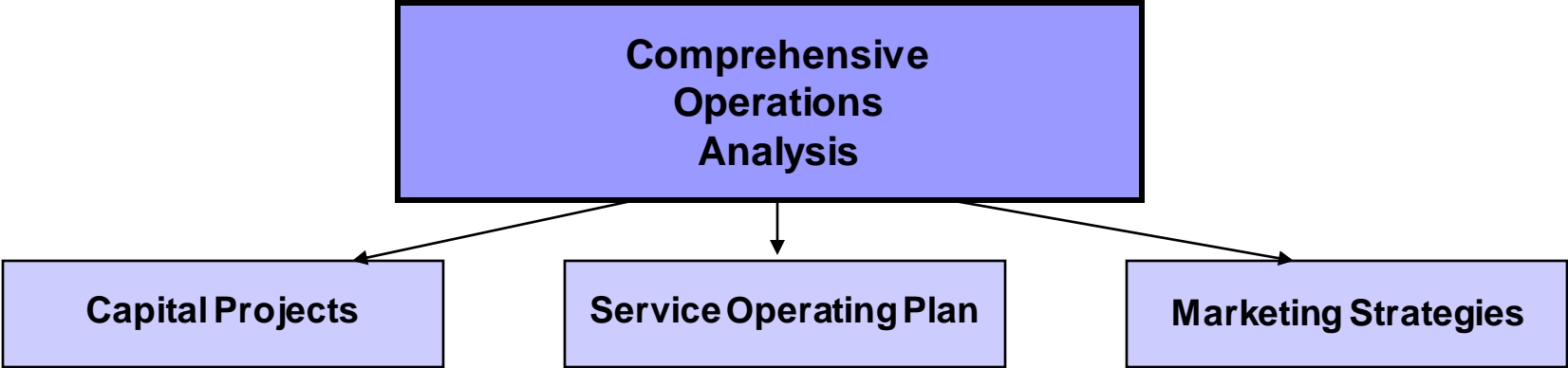
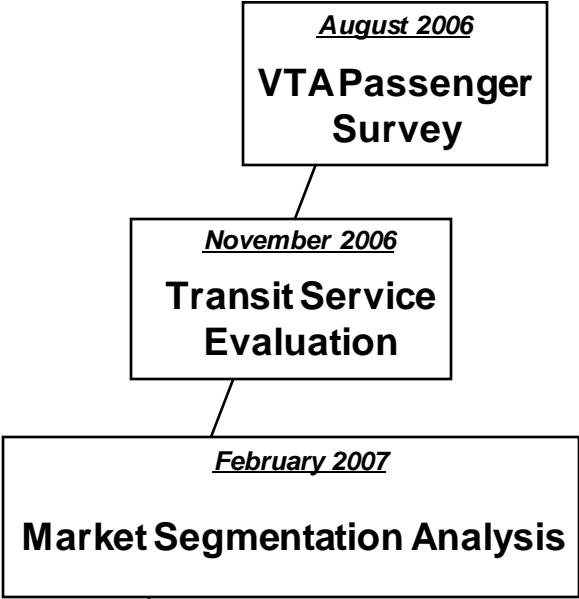
Comprehensive Operations Analysis

Proposed Service Operating Plan
May 2007

Policy Development



Data Collection & Analysis



Comprehensive Operations Analysis

- April 2007 VTA Board – Draft Proposal

- May-June 2007 COA Stakeholder Outreach
 - VTA Advisory & Standing Committees
 - Stakeholder Groups
 - Public Meetings (May 21 – June 6)

- August 2007 VTA Board Action (August 30)

- January 2008 Phase I Service Implementation

Comprehensive Operations Analysis (COA)

Transit Sustainability Policy & Core Principles



1. Improved **Ridership**, Productivity, and Effectiveness
 - *Operate service when and where there is sufficient mass of demand to meet ridership and revenue expectations*
2. Higher **Farebox Recovery**, Less Reliance on Subsidies
 - *Increase transit mode share by focusing resources to target markets where transit can compete effectively.*
3. Greater **Responsiveness to Customers**
 - *Define a core transit network of services that serve a variety of trip purposes, and a market-based network of services that serve specific customer needs.*
4. Effective Use of **Transit Investment and Resources**
 - *Establish performance goals and standards for productivity and effectiveness, and evaluate and adjust service and standards regularly for optimum effectiveness.*

Comprehensive Operations Analysis (COA)

2006 Passenger Survey



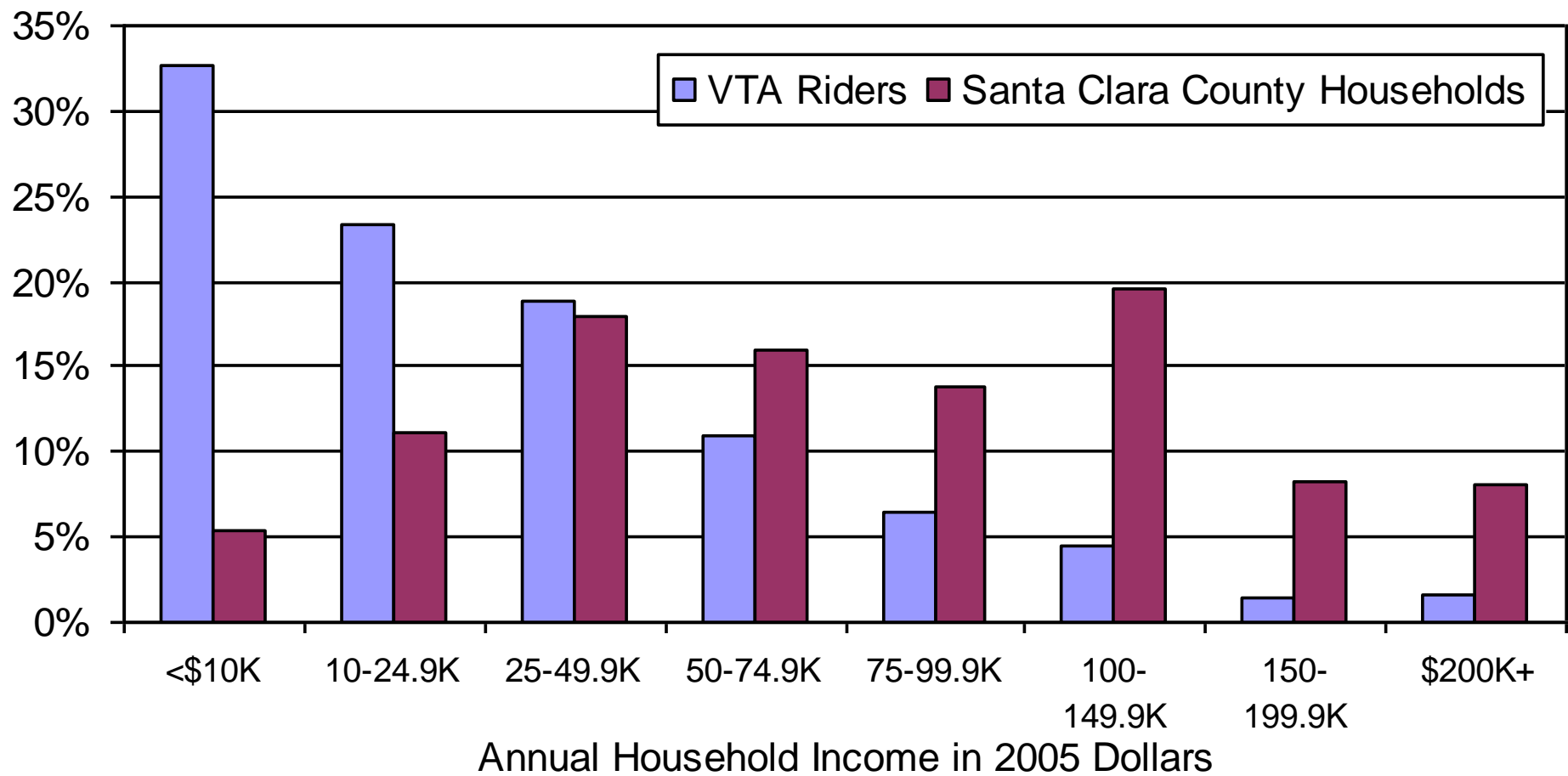


Rider Profile

34 years of age or under.....	59%
Hispanic/Latino	37%
Employed Full-time	38%
Income less than \$25,000	56%
No auto available for trip	65%
Rides 4 days/week or more	75%
Walks to stop.....	71%

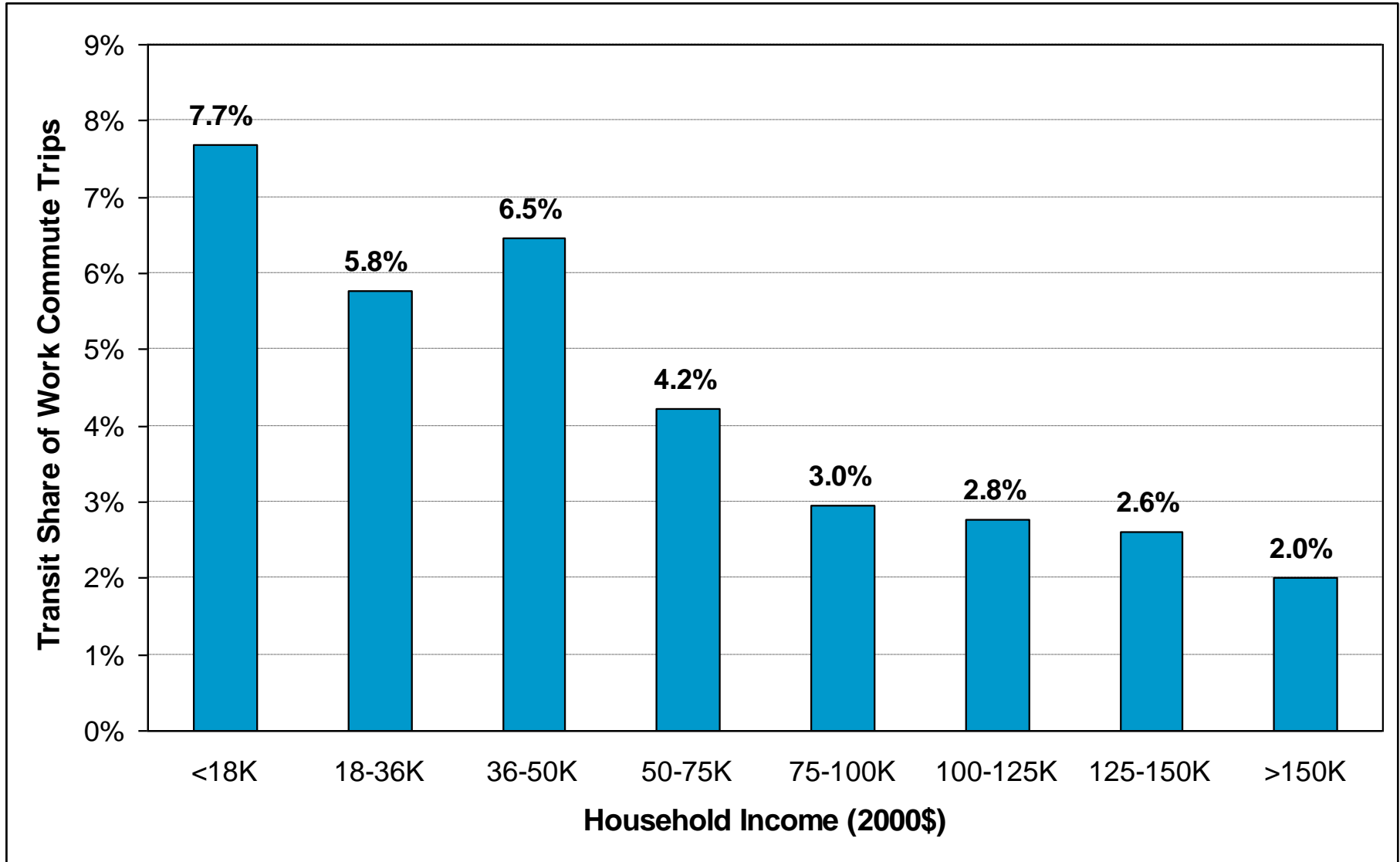


Comparison of Income VTA Passengers vs. Santa Clara County Residents



Source: U.S. Census Bureau, 2004 American Community Survey

Transit Share of Work Trips by Income



Transit share of work commute trips for residents in Santa Clara County

Source: PUMS



















Comprehensive Operations Analysis

Comprehensive Operations Analysis (COA)

Market Segmentation



Six Santa Clara County Customer Segments

Customer Type	Time Sensitivity	Transit Tolerance	Price Sensitivity
Transit Trippers			
Mellow Movers			
LINKs & MINKs			
Boomers & Blazers			
Young & Restless			
Movers & Shakers			

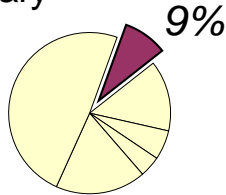
 **Low**

 **Medium**

 **High**

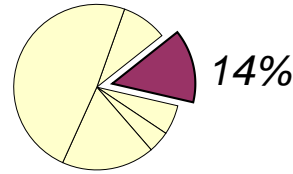
Transit Trippers

- High transit users
- In households with no vehicles available
- Lower income
- Not employed full-time
- High school educated
- English not primary language



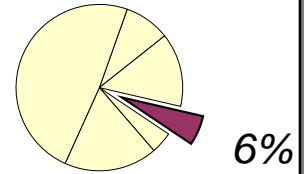
Mellow Movers

- In households with 0-1 vehicles available
- Lower income
- High school educated
- In multi-child households
- English not primary language



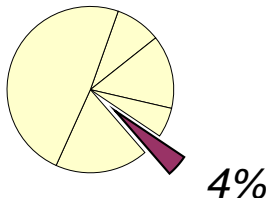
LINKs & MINKs

- High transit users
- Younger
- Lower-middle income
- Unemployed or employed part-time
- In childless households
- Male
- Single



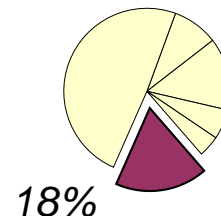
Boomers & Blazers

- Low transit users
- Older
- Retired
- In single person, childless households
- Female



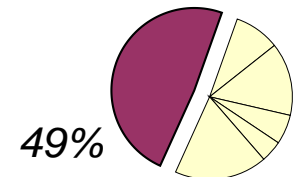
Young & Restless

- Younger
- Students
- Lower-middle income
- Female

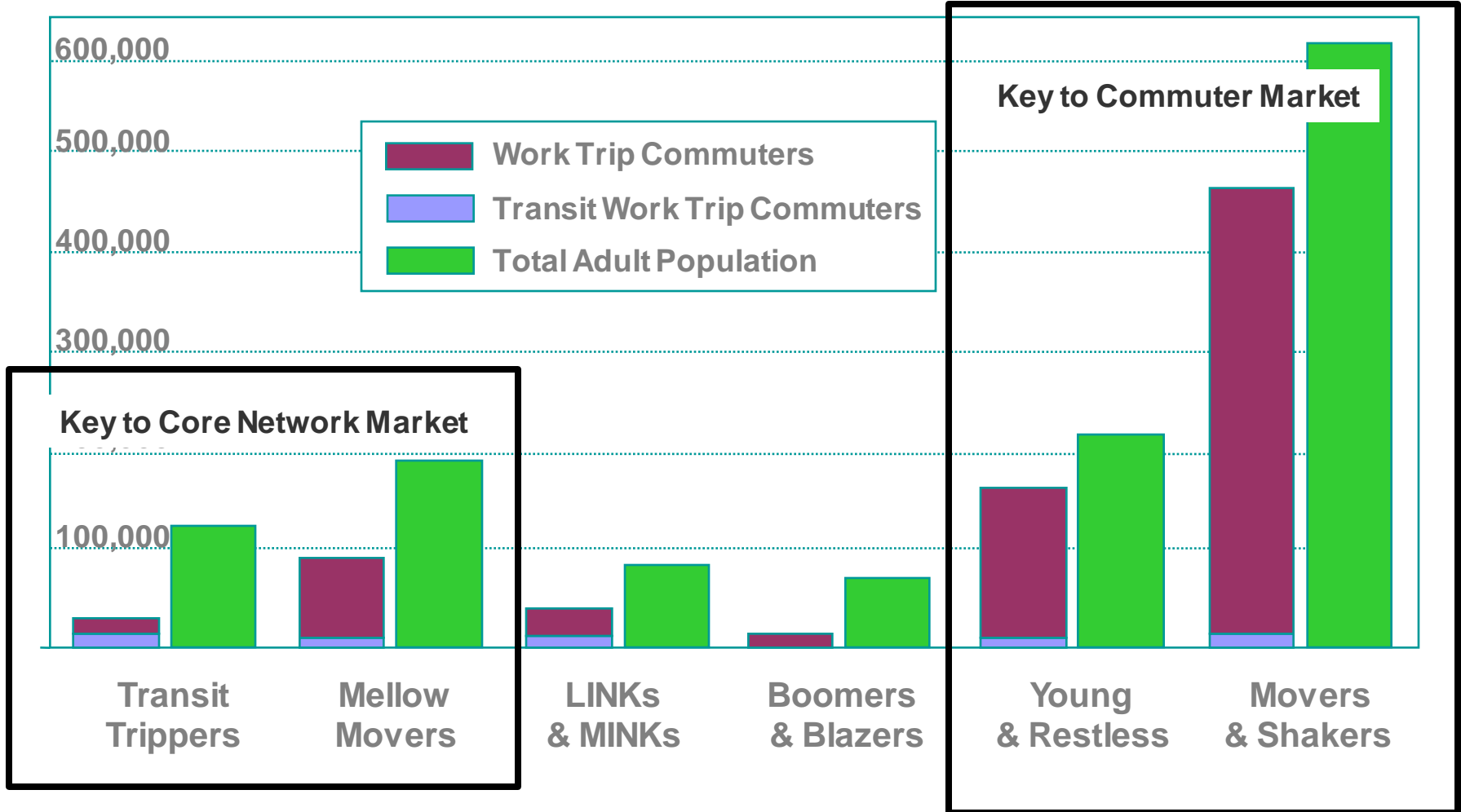


Movers & Shakers

- Low transit users
- Higher income
- Employed full-time
- Highly educated
- Married

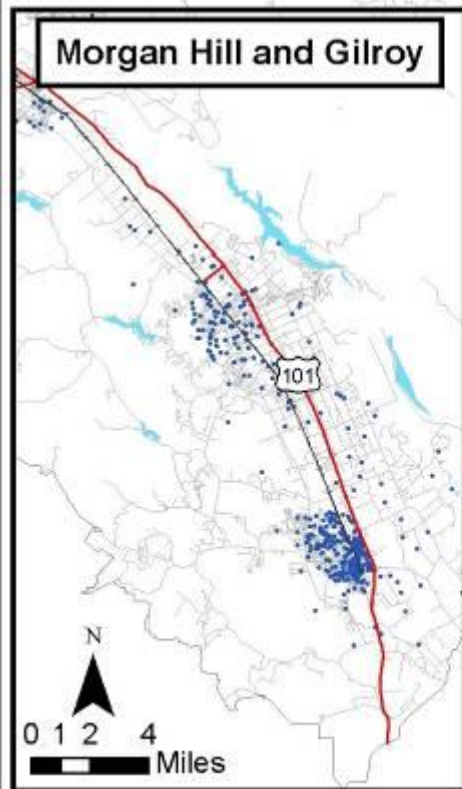


Commuters by Customer Type (2005)



Transit Trippers

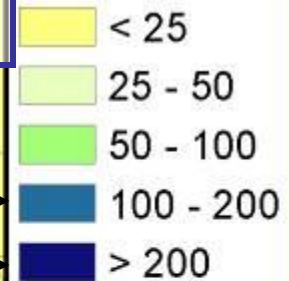
1 Dot = 20 Adults



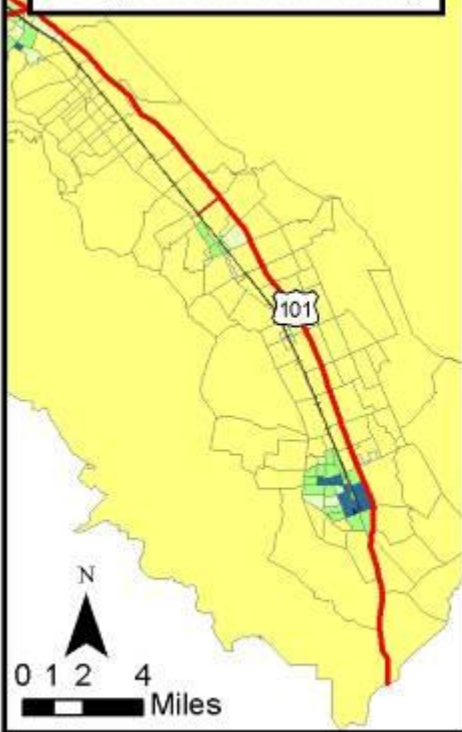
Comprehensive Operations Analysis

Origin Transit Competitiveness Factor

Transit Competitive

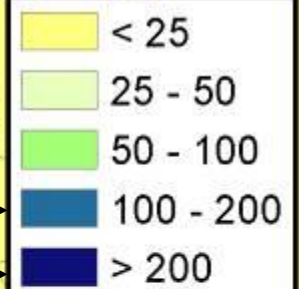


Morgan Hill and Gilroy

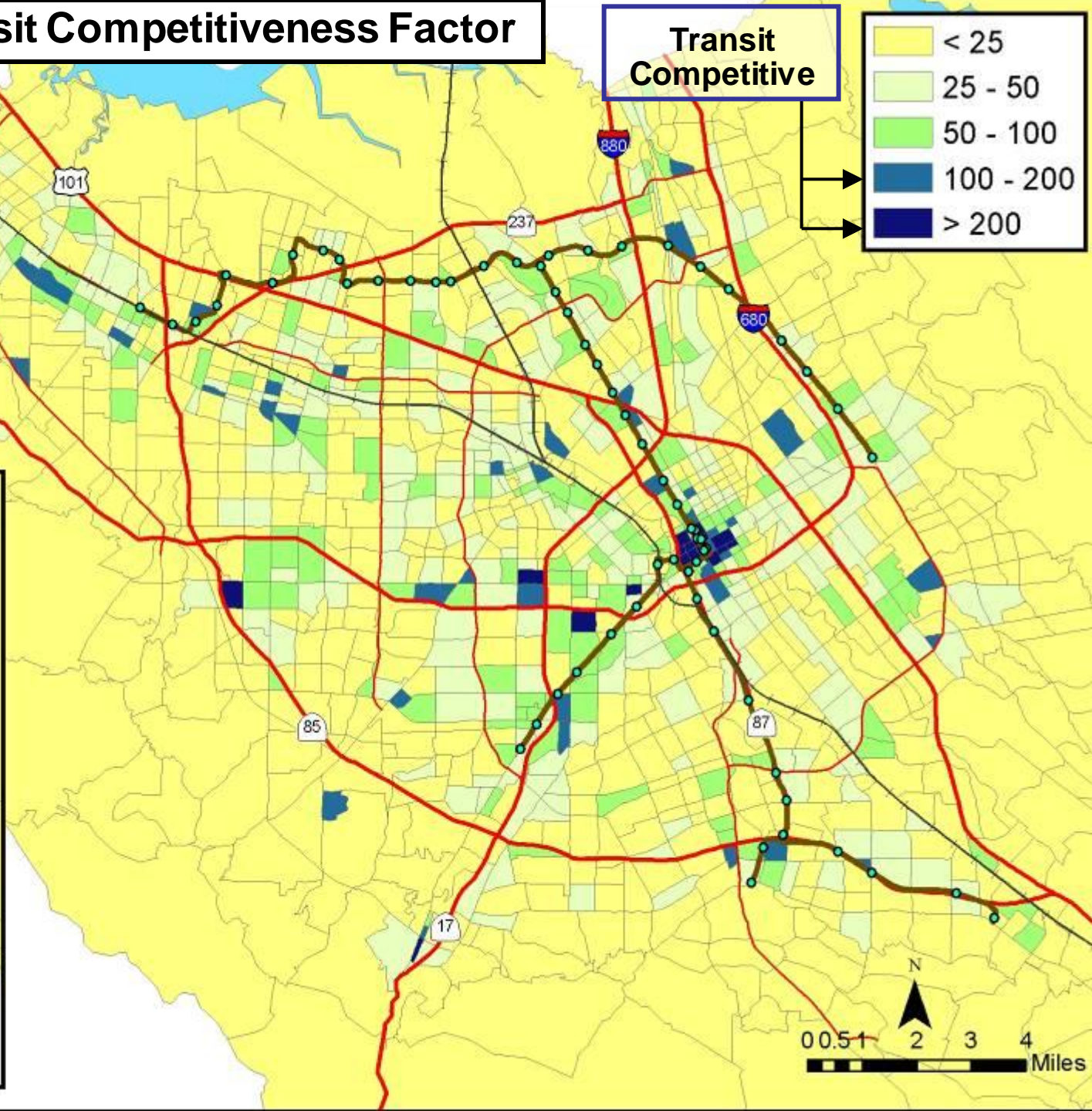
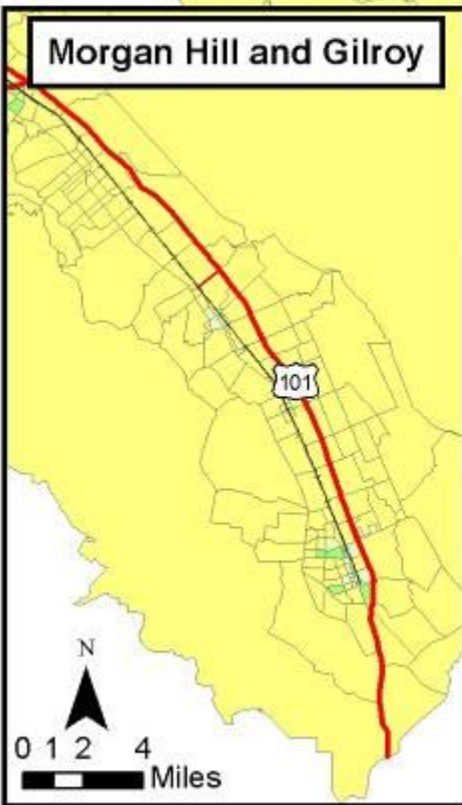


Destination Transit Competitiveness Factor

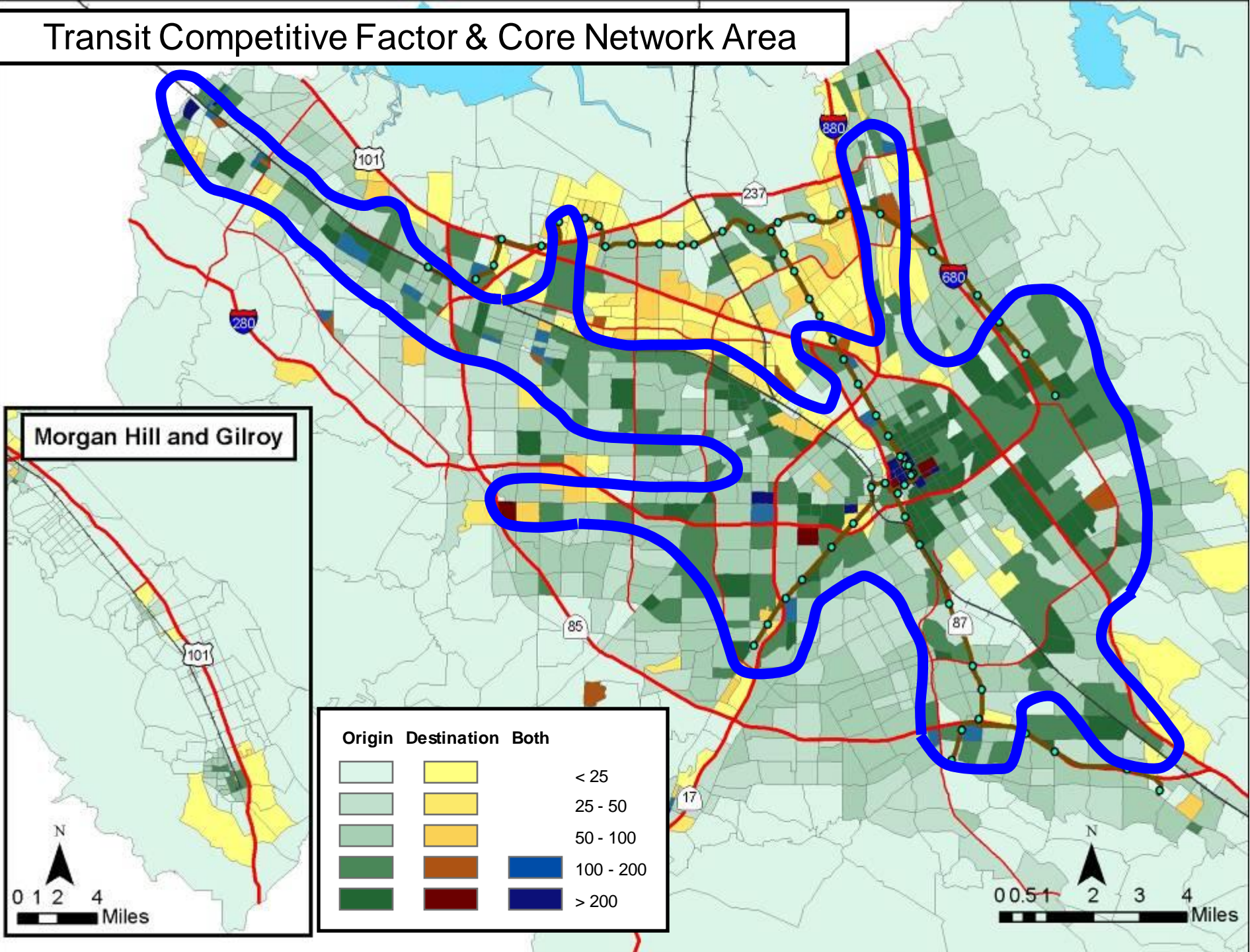
Transit
Competitive



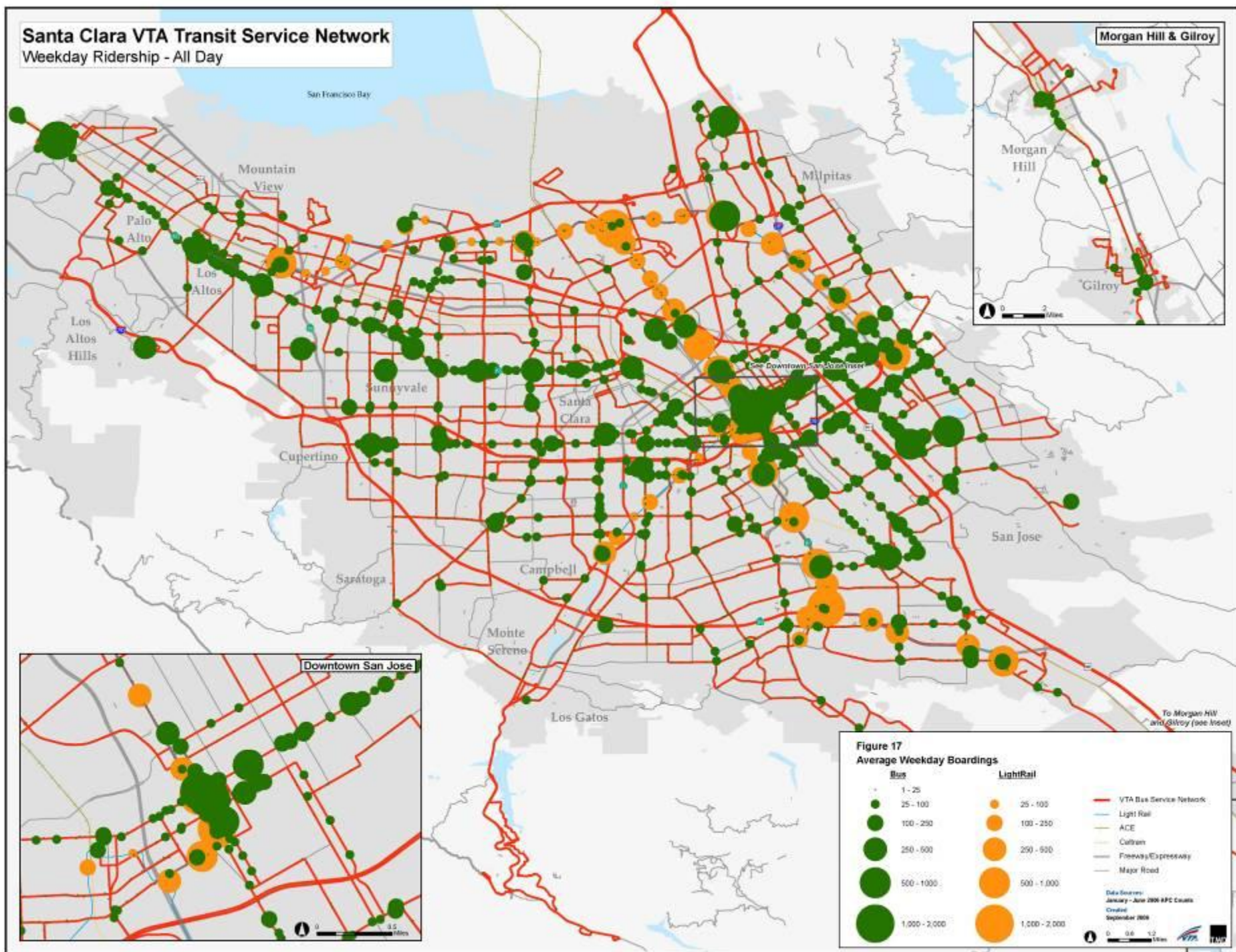
Morgan Hill and Gilroy



Transit Competitive Factor & Core Network Area



Santa Clara VTA Transit Service Network **Weekday Ridership - All Day**



Comprehensive Operations Analysis (COA)

Service Operating Plan Proposal



*The COA research and **stakeholder input** has highlighted challenges facing VTA*

1. Lack of concentrated **transit-competitive** origins and destinations
2. **Core area** is concentrated predominately in Central and East San Jose with a small number of productive structural corridors
3. Need to dramatically improve **Farebox Recovery Ratio**

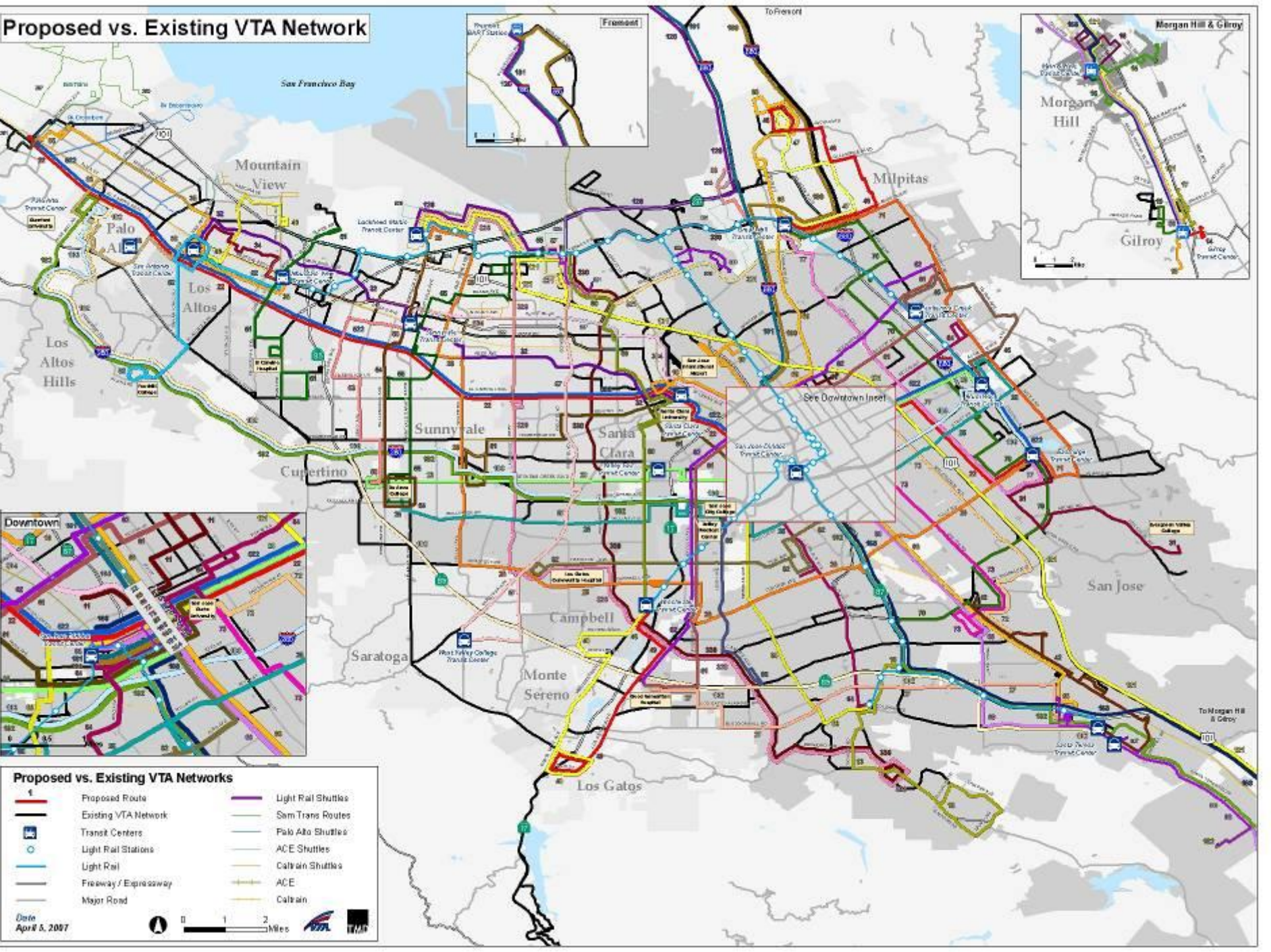
The COA Proposal suggests a net decrease in vehicles but the equivalent operating hours

Service Resource	Existing	Proposed	% change
AM Peak Buses	330	295	-10.6%
PM Peak Buses	350	308	-12.0%
Midday Buses	235	246	4.7%
Sat. Buses	197	195	-1.0%
Sun. Buses	155	164	5.8%

Vehicle count includes three new shuttle routes: DASH, River Oaks & Great America

COA premise: cost neutral. *The COA proposal will invest the same resource level in a more efficient system.*

Proposed vs. Existing VTA Network




Proposed vs. Existing VTA Networks

	Proposed Route		Light Rail Shuttles
	Existing VTA Network		SamTrans Routes
	Transit Centers		Palo Alto Shuttles
	Light Rail Stations		ACE Shuttles
	Light Rail		Caltrain Shuttles
	Freeway/Expressway		ACE
	Major Road		Caltrain

Date: April 3, 2007

0 1 2 Miles



*The COA is organized into **5 Focus Areas** for the purposes of presentation*

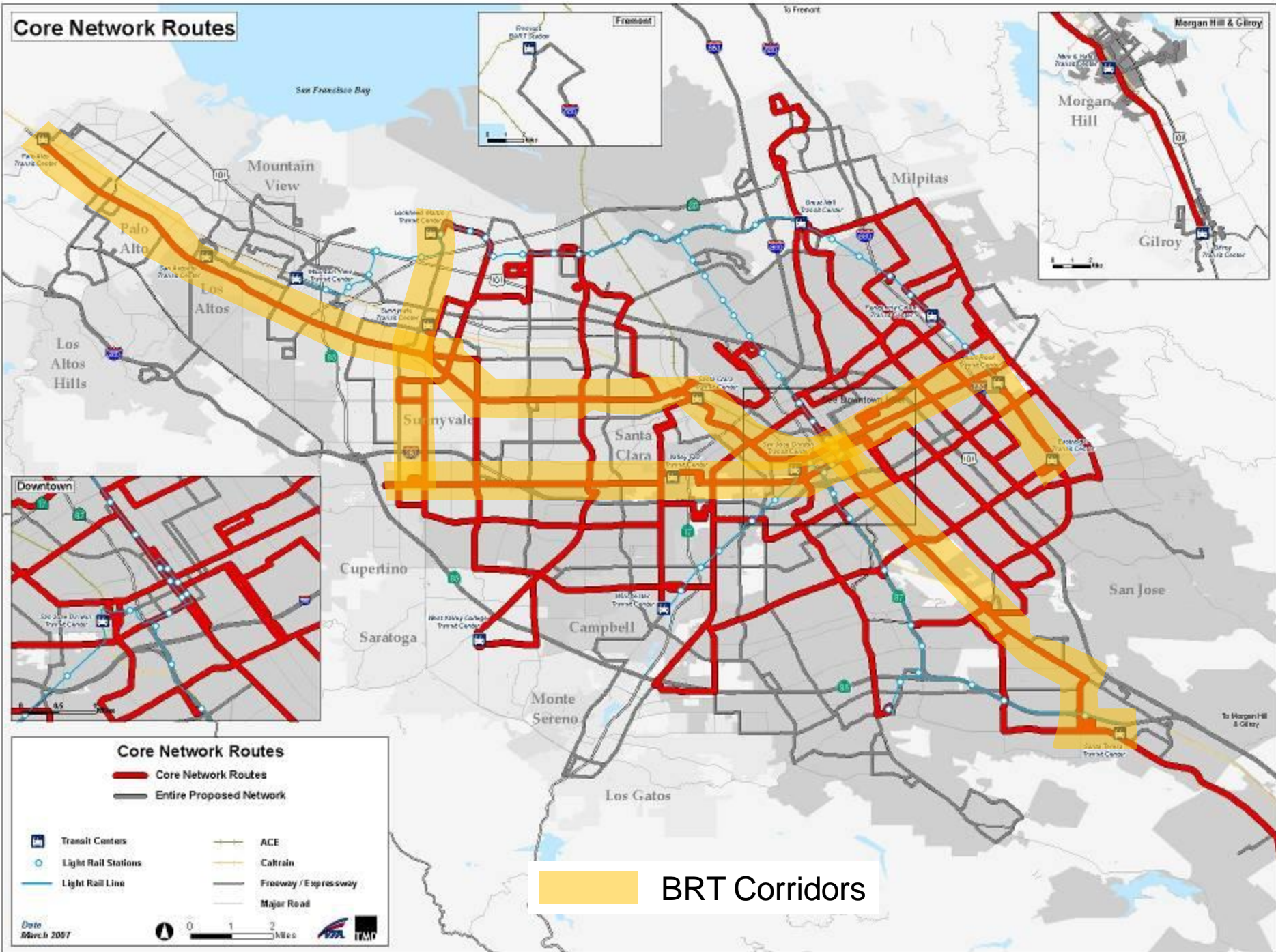
1. Core Network
2. Non Core Services
3. Express/Limited Stop Services
4. Community Bus Program
5. Deletion & Consolidation Candidates

Core Network

- Focus on Transit Trippers and Mellow Movers market segments
 - Maintain 15 minute service or better in the key structural corridors (El Camino-Santa Clara-Alum Rock, Stevens Creek, King, Monterey, and Winchester)
 - Upgrade Midday and weekend frequencies in core network
 - Rationalize routes into high frequency trunks and separate community services where appropriate
 - Introduce new short lines to focus frequency in higher demand core areas
- Pre-cursor service on future Bus Rapid Transit corridors



Core Network Routes

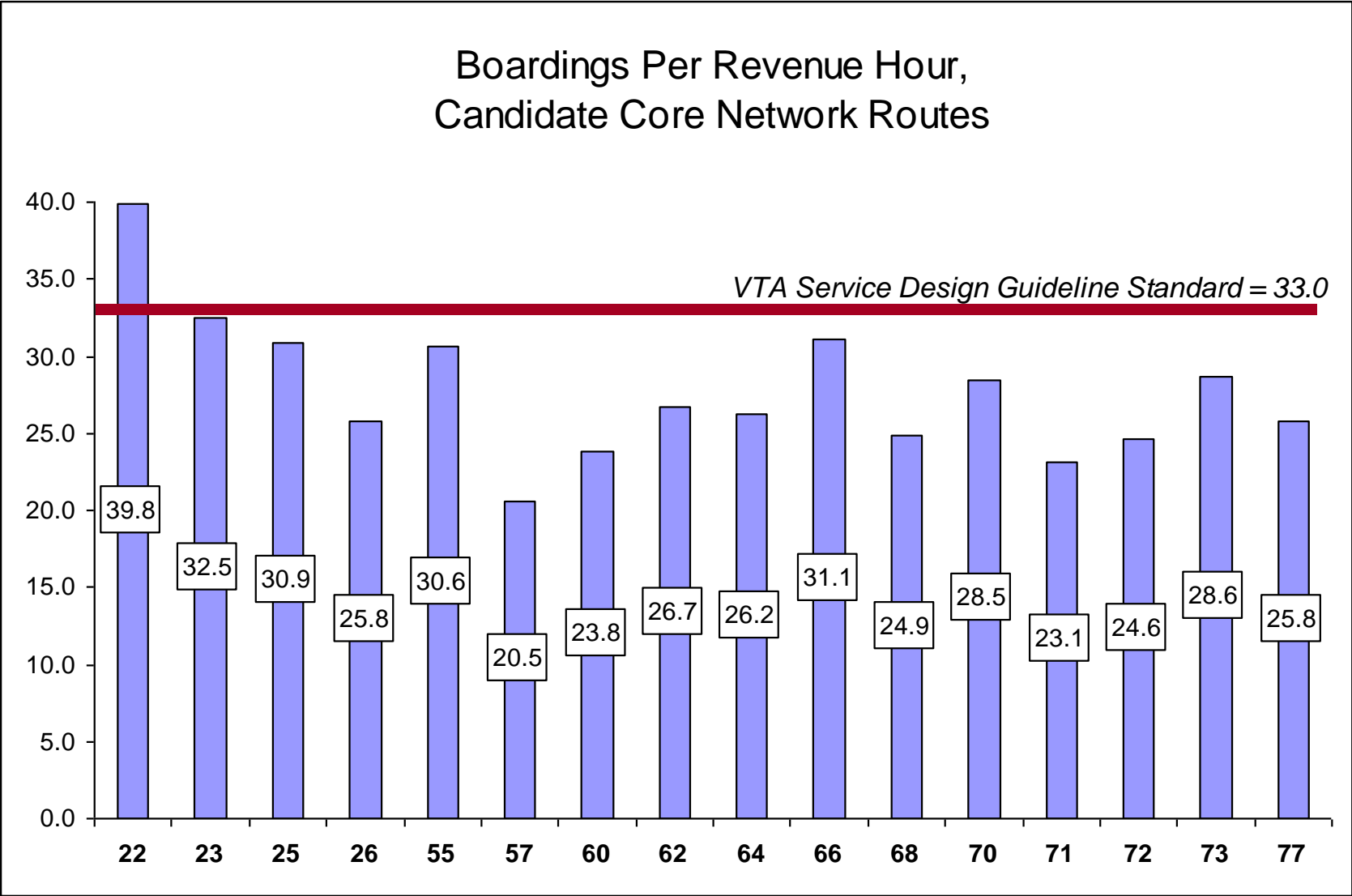


Core Network

No Change
Enhancement
Reduction

Route	Headway (Minutes)				Vehicle Requirements				Notes
	Peak		Midday		Peak		Midday		
	Existing	COA	Existing	COA	Existing	COA	Existing	COA	
10	15	15	15	15	5	4	5	4	Airport Shuttle. Discontinue service to employee lot.
22	12	12	12	12	26	24	24	23	Discontinue Palo Alto-Menlo Park segment - saves vehicles
522	15	15	15	15	16	16	15	15	No change - future enhancements with BRT program
23	15	12	15	12	12	16	12	15	Through route to Alum Rock Avenue, 12-minute headways
25	10/30	10/30	15/30	10/30	19	18	12	17	Improve midday frequencies
26	20	15/30	30	15/30	13	10	7	10	Short line on eastern segment, improved frequencies
55	20	15/30	30	30	9	9	5	4	Routing efficiencies, interlining with 54 for enhanced service
57	30	15	40	30	6	8	4	4	Improve trunk frequencies
60	20	15/30	30	15/30	6	8	5	8	Shortline pattern b/t Santa Clara TC & Winchester LRT
61/62	30	15	20	15	7	10	7	10	Good Sam Hospital - Berryessa. Common Trunk on Taylor/Bascom
64	30	15/30	30	15/30	9	9	8	8	Re-route eastern segment to McKee
66	15	15	30	15/30	15	14	7	11	Southern segment routing efficiencies. Future BRT service.
68	15	15/30	30	30	15	13	9	8	Discontinue Gavilan CC segment. Supplement w/ 168 Express
70	15	15	15	15	14	14	13	13	Minor deviation correction
71	13/20	15	30	30	8	8	5	4	No route change - consistent AM frequencies
72	15	15	15/20	15	10	7	7	7	Interline with 73 in Downtown. All-day 15-minute frequencies
73	15	15	15/20	15	5	7	5	7	Interline with 72 in Downtown. All-day 15-minute frequencies
77	15/30	15	30	15	7	8	3	8	Discontinue routing north of Great Mall.

Core Network Candidates

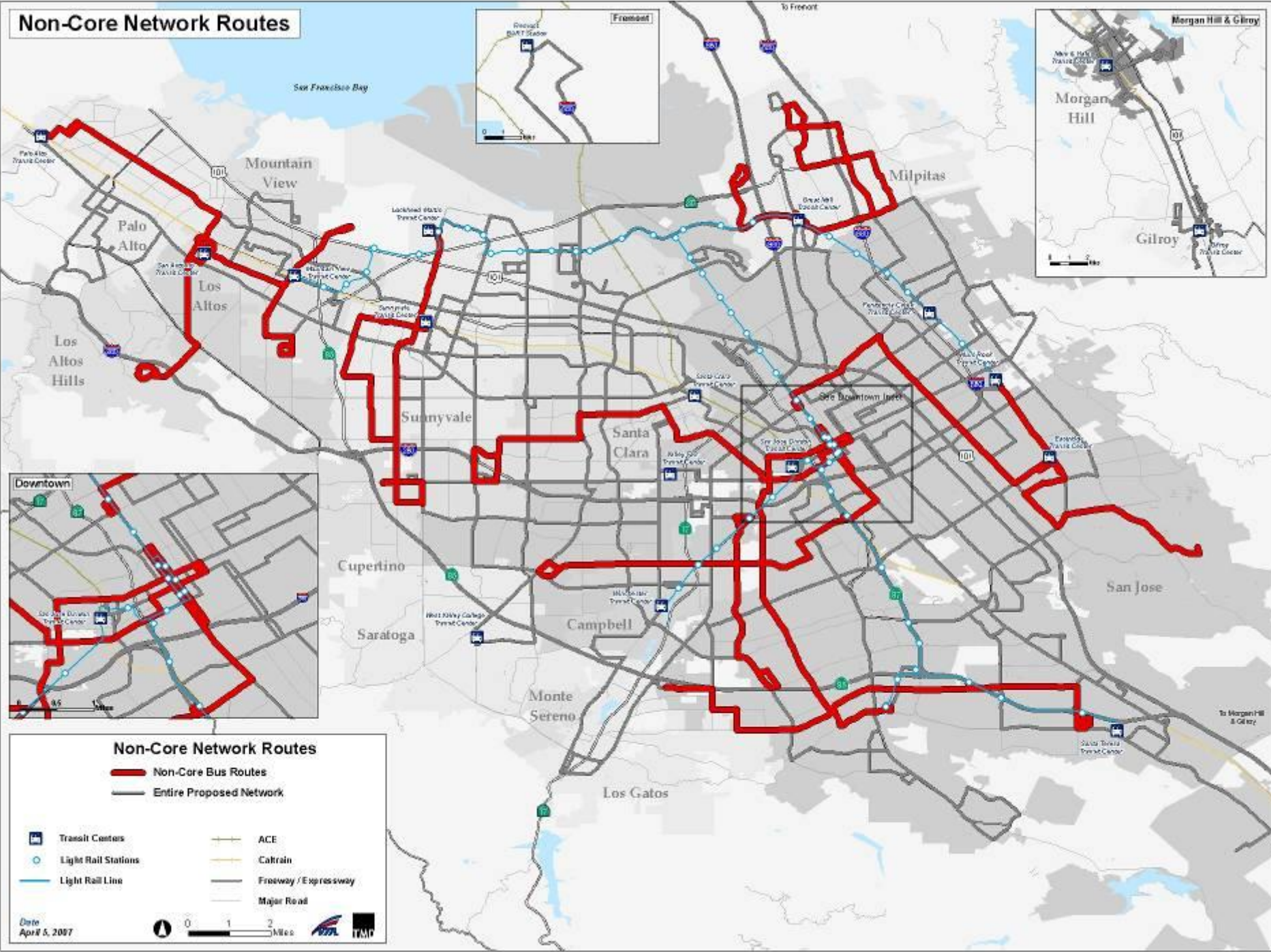


Non Core Routes

- Strong Transit Tripper & Mellow Mover markets with focus on local circulation
- Upgrade midday frequencies to 30-minutes on several lines
- Passenger loads on some trips too high for Community Bus vehicles



Non-Core Network Routes

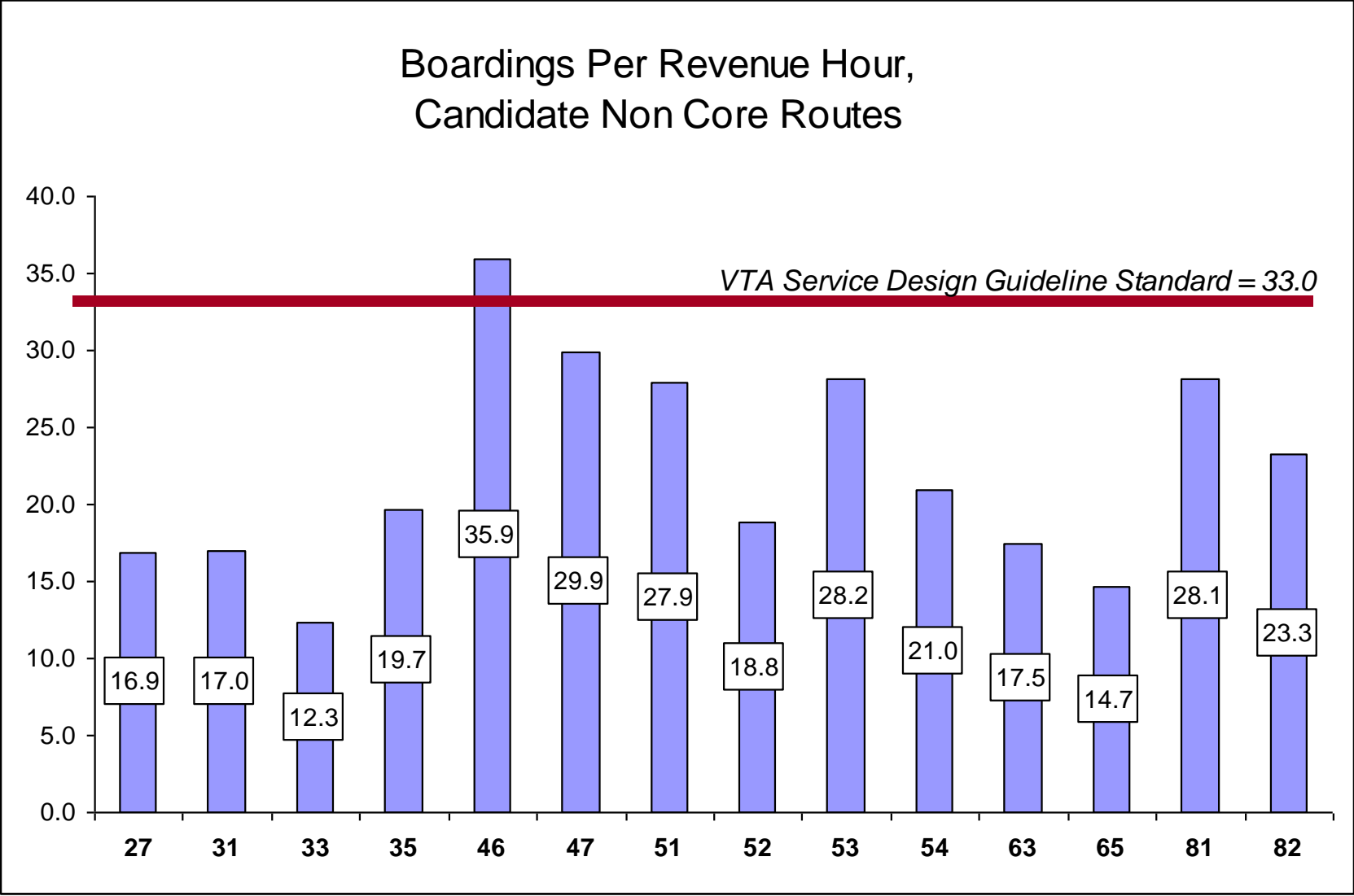


Non-core Routes

No Change
Enhancement
Reduction

Route	Headway (Minutes)				Vehicle Requirements				Notes
	Peak		Midday		Peak		Midday		
	Existing	COA	Existing	COA	Existing	COA	Existing	COA	
27	30	30	45	30	7	4	4	4	Santa Teresa - Good Sam Hospital. Discontinue remainder.
31	15	15	30	30	8	4	4	2	Eastridge - Evergreen. Replace Capitol segment w/ 43 CB.
33	30	30	30	30	2	1	2	1	Great Mall - McCarthy Ranch.
35	30	30	30	30	5	4	5	4	Palo Alto - Mntn View TCs. Discontinue service to Stanford Center
46	30	30	60	30	2	3	1	2	Milpitas City Loop. No change. Interline with 47.
47	30	30	30	30	2	2	2	2	Milpitas City Loop. Streamline northern segment.
51	30	30	60	60	3	2	2	1	Vallco - Moffett. Preserve service to El Camino Hospital & Mntn View HS
52	30	30	30	30	2	3	2	3	Downtown Mntn View - Foothill CC. Replaces 23 Foothill service.
53	60	60	60	60	3	1	1	1	Westgate - Sunnyvale TC. Streamline route to serve De Anza.
54	30	30	45	30	5	3	3	3	West Valley CC - Sunnyvale/Fair Oaks. Mathilda routing.
63	30	30	45	30	4	4	3	4	SJSU - Almaden LRT. Discontinue segments sought of Coleman.
65	30	60	45	60	3	1	2	1	Fruitdale LRT - Camden/Branham. Discontinue 63 segment.
81	30	30	30	30	9	4	9	4	West side only. Operates between Downtown and Vallco.
82	30	30	40	30	4	4	4	4	Westgate - 21st/Mission. Discontinue route north of Downtown.

Non Core Candidates

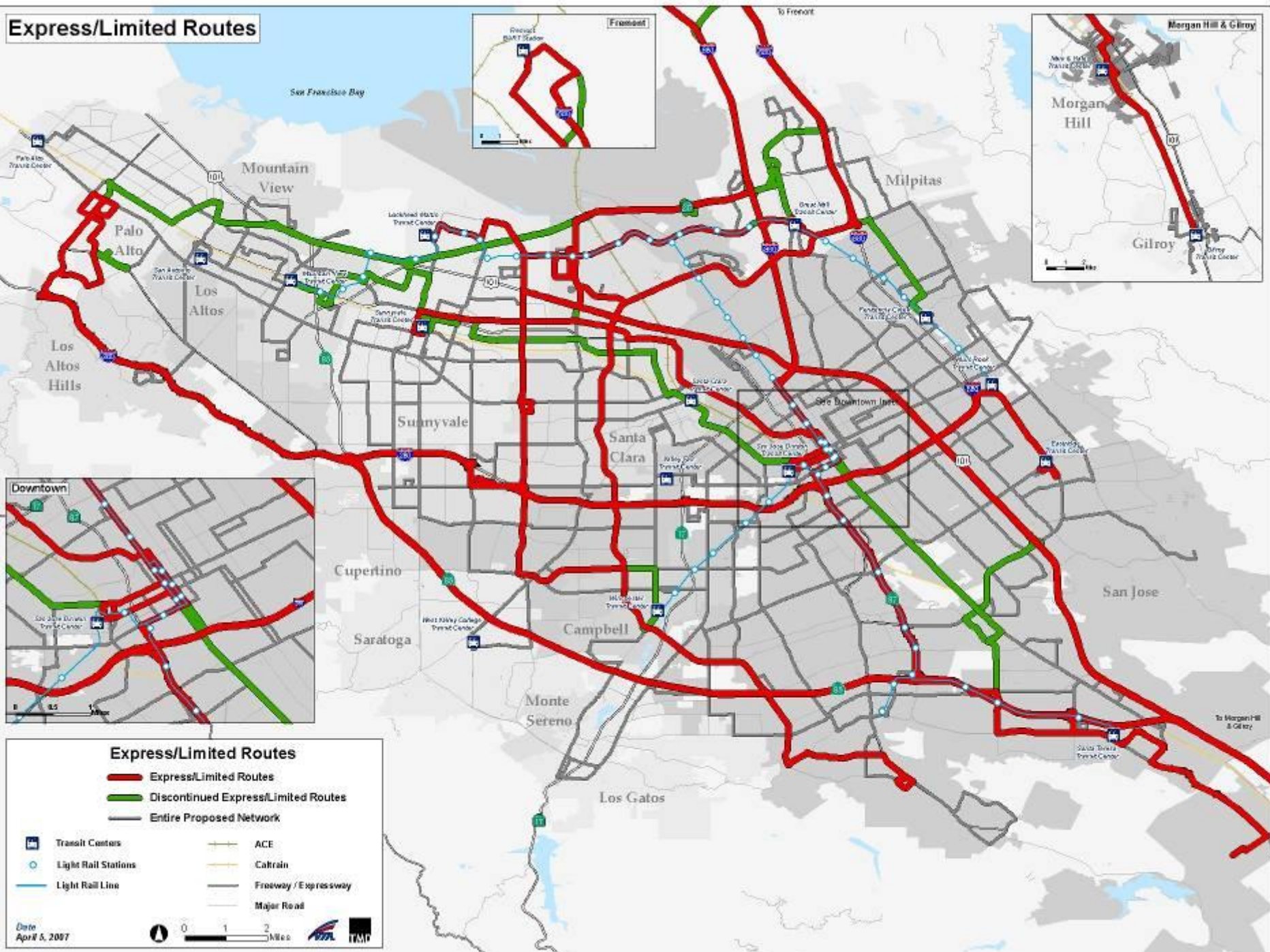


Express/Limited Stop Services

- Strategic investment in select corridors to compete for Movers & Shakers and Young & Restless market segments where destination TCFs are high
 - Improved services in San Jose/Fremont corridor with separate direct weekday peak services to downtown SJ and Great Mall as a prelude to the BART extension
 - South County-Downtown San Jose Express Bus, utilizing HOV lanes



Express/Limited Routes



Express/Limited Stop Services

No Change
Enhancement
Reduction

Route	Headway (Minutes)				Vehicle Requirements				Notes
	Existing	COA	Existing	COA	Existing	COA	Existing	COA	
101	4 Trips	--	--	--	2	0	0	0	Vallco-Palo Alto. 11 passengers. Discontinue.
102	3 Trips	3 trips	--	--	2	3	0	0	South San Jose - Palo Alto. No change.
103	4 Trips	3 trips	--	--	0	3	0	0	Eliminate deviation to Fruitdale LRT, add stop at Vallco.
104	3 Trips	--	--	--	3	0	0	0	East San Jose - Palo Alto. 11 passengers. Discontinue.
120	3 Trips	30	--	--	1	3	0	0	BART - Lockheed. Combine with 140 for increased service.
121	4 Trips	4 trips	--	--	4	3	0	0	Gilroy - Lockheed. Re-align to 101 & Lawrence.
122	1 Trip	--	--	--	1	0	0	0	South San Jose - Lockheed. Discontinue. Now served by 121.
140	5 Trips	--	--	--	4	0	0	0	BART - Sunnyvale Caltrain. Consolidated with new 120.
141	--	--	--	--	0	0	0	0	BART - Great America. Seasonal only. Discontinue.
168	--	30	--	--	0	5	0	0	South County - Downtown. New Express using HOV network.
180	20/15	15	30	15	8	5	5	8	BART - Great Mall - Downtown. Enhanced frequency.
181	--	15	--	--	0	8	0	0	BART - Downtown. Peak Express to Downtown/SJSU.
182	2 Trips	2 trips	--	--	0	0	0	0	Palo Alto - IBM. Reverse express. No change.
304	5 Trips	30	--	--	3	3	0	0	South SJ - Mountain View. Consolidate with 305.
305	3 Trips	--	--	--	3	0	0	0	South SJ - Mountain View. Discontinue. See 304.
321	3 Trips	1 trip	--	--	1	1	0	0	Great Mall - Lockheed. Reduce trips to match demand.
328	1 Trip	1 trip	--	--	1	1	0	0	Almaden Expressway - Lockheed. No change.
330	3 Trips	1 trip	--	--	1	1	0	0	Almaden Expressway - Tasman. Reduce trips to match demand.

Community Bus Program

- Pilot programs in Los Gatos and South County have been successful
 - Conversion of Local Bus
 - New lines serving communities
 - Lines should be viewed as “placeholders” for resources
 - Ultimate routing will be result of community outreach efforts, e.g. South County model
- Service Design Guidelines:

“Community bus service is typically deployed in lower-density residential developments, central business districts, and in providing connections between residential areas and schools, shopping malls, employment centers, and recreational areas.”



Community Bus Routes

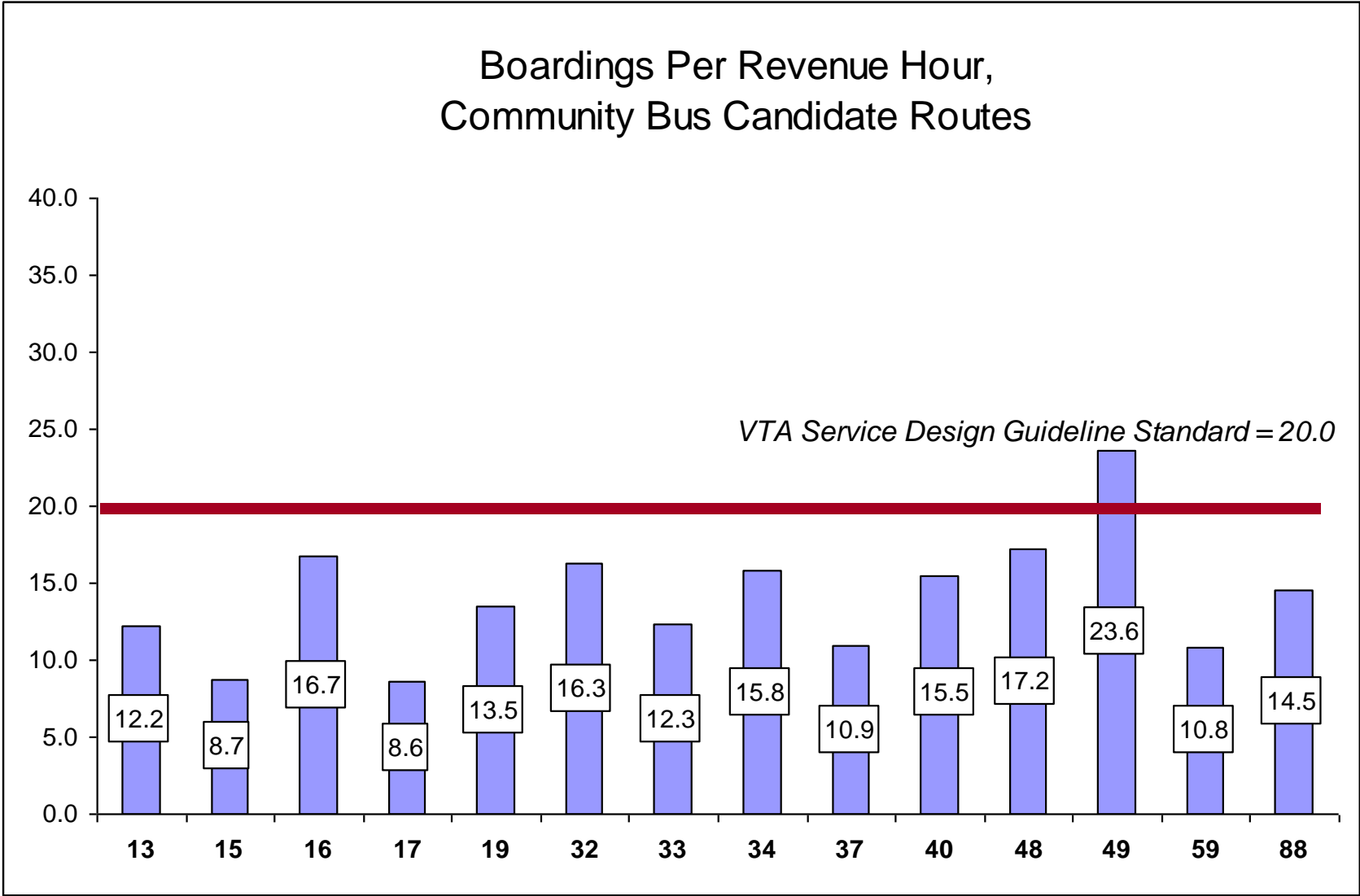


Community Bus Program

No Change
Enhancement
Reduction

Route	Headway (Minutes)				Vehicle Requirements				Notes
	Existing	COA	Existing	COA	Existing	COA	Existing	COA	
11	--	30	--	30	0	2	0	2	New CB. Connects J-town senior housing, LRT, Retail.
13	30	30	30	30	2	2	1	2	Conversion. Replace segments of 63. Modify alignment.
14	--	60	--	60	0	1	0	1	Conversion. Gilroy - Wal-Mart. Split of 17 Line.
15	39/55	60	56	60	0	1	0	1	Conversion. Serving residential areas east of 101.
16	55/60	60	60	60	2	1	1	1	Conversion. Serves mobile home parks & high schools.
17	65/60	60	60	60	1	1	1	1	Conversion. Serves a shortened version of current 17 Line.
18	30/35	30	45	30	0	1	0	1	Conversion. Replaces 68 service b/t Gilroy TC & Gavilan CC.
19	30/35	30	45	30	2	1	1	1	Conversion. Connects residential areas to Gilroy TC.
32	30	30	30	60	6	4	3	2	Conversion. San Antonio TC - Santa Clara TC. Re-align.
34	60	--	60	60	1	0	1	1	Conversion. Midday, weekday service to DT Mountain View.
40	30	30	30	30	2	2	2	2	Conversion. No changes
42	--	60	--	60	0	1	0	1	New CB. Replaces existing 72 service south of Monterey.
43	--	--	--	--	0	0	0	0	New CB. Serves Capitol Expwy in evenings and Sundays.
45	--	30	--	30	0	2	0	2	New CB. Replaces segment of 64 b/t Penitencia & Alum Rock TCs
48	25/30	30	30	30	2	2	2	2	Existing CB. Reduce weekend service frequency
49	30	30	30	30	2	2	2	2	Existing CB. Reduce weekend service frequency
88	60	30	60	60	4	2	2	1	Conversion. Cal Ave Caltrain to VA Hospital. Re-align.
River Oaks	15	15	--	-	1	1	0	0	Conversion. Shuttle Route b/t River Oaks LRT & residential bldgs.
DASH	10	10	10	10	3	3	3	3	Conversion. Downtown San Jose circulator.
Great America	15	15	15	15	1	1	1	1	Conversion. Service to Great America theme park.

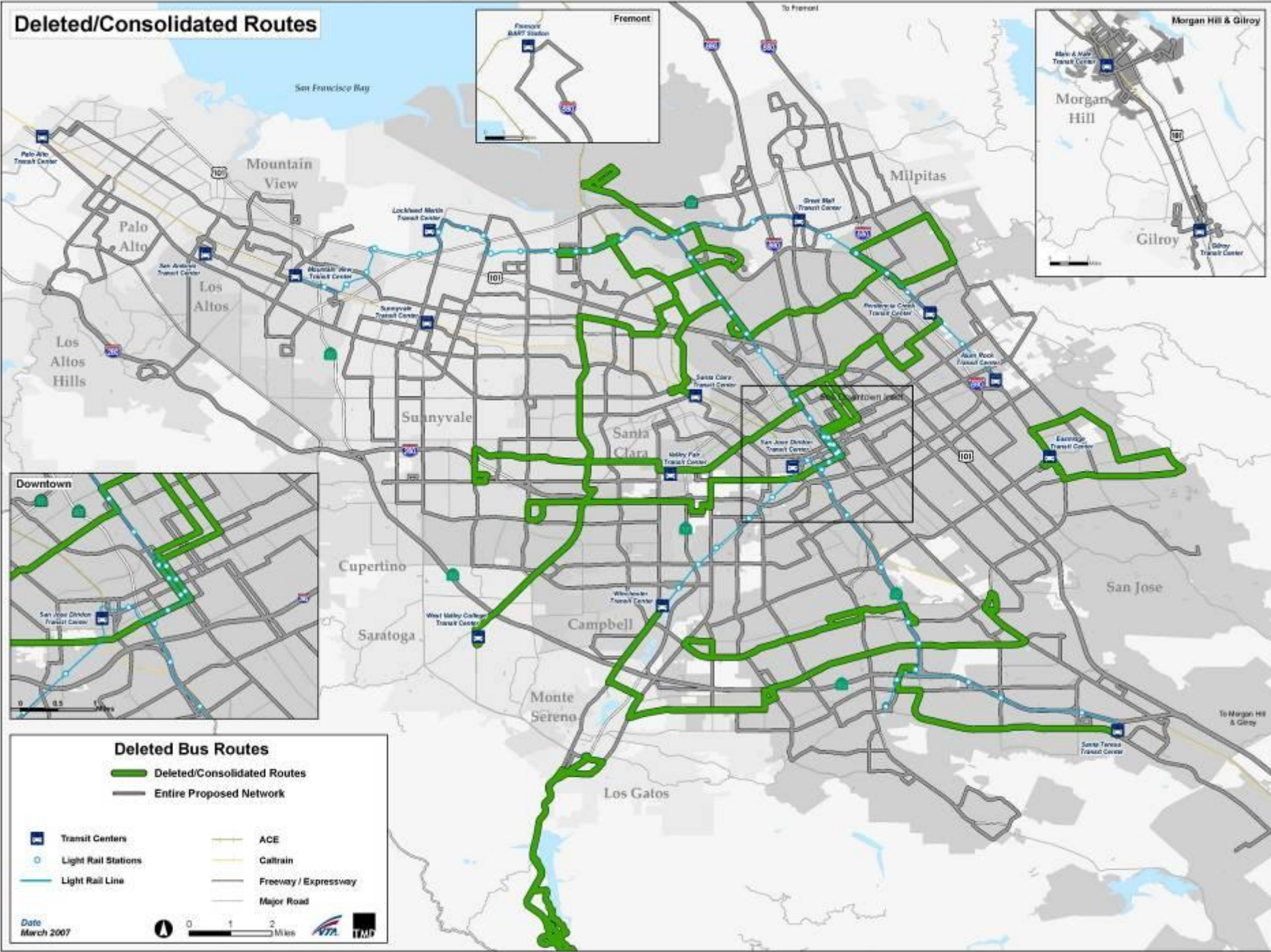
Community Bus Candidates



Candidate Deletion and Consolidation Routes

- Efficiency improvements in several routes eliminate duplication or competing service
 - Rationalize route network north of El Camino west of Lawrence Expressway, focusing on improving service on key north/south routes
- Poor performing routes are deleted to allow for re-investment elsewhere in the system
 - Discontinue fixed-route service in Saratoga, Norwood-Quimby area, and in portions of North San Jose.
 - Combined parts of Routes 32 and 34 in Sunnyvale and Mountain View.

Deleted/Consolidated Routes



Deleted Bus Routes

- Deleted/Consolidated Routes
- Entire Proposed Network



Transit Centers

Light Rail Stations

Light Rail Line

ACE

Caltrain

Freeway / Expressway

Major Road

Date
March 2007

0 1 2 Miles



1. Improved Ridership, Productivity, and Effectiveness
2. Higher Farebox Recovery, Less Reliance on Subsidies
3. Greater Responsiveness to Customers
4. More Effective Transit Investment and Use of Resources



SANTA CLARA

Valley Transportation Authority

Comprehensive Operations Analysis

Questions and Comments?