Agenda Item 4a

TO: Planning Committee DATE: May 6, 2016

FR: Executive Director

RE: Plan Bay Area 2040: Scenario Evaluation

Background
MTC and ABAG have developed and evaluated three alternative land use and transportation scenarios illustrating the effects that different housing, land use and transportation strategies have on our adopted Plan Bay Area (PBA) 2040 goals and performance targets. This evaluation will inform the development of the region's "preferred scenario," which will incorporate some of the best aspects of the three scenarios and form the framework for PBA 2040.

Alternative Scenarios Descriptions
The three scenarios describe different alternatives for how expected growth in population, jobs and housing units might be distributed, and the types of transportation investments needed to support these growth patterns. While the scenarios vary in terms of the intensity of development patterns and transportation investments, they maintain the same regional forecasts for jobs, population, households and transportation revenues. The scenarios are described in more detail in **Attachment 1**.

Land Use Strategies
ABAG forecasts an additional 1.3 million jobs, 2.4 million people and therefore the need for approximately 820,000 housing units between 2010 and 2040. The scenarios vary in terms of the different combinations of strategies that can be used to accommodate this future growth. The strategies can affect land use patterns by changing a community's capacity for new development or incentivizing a particular type or location of growth. Each scenario builds on the Bay Area's existing land use pattern and transportation network, while also taking into account local plans for growth, historical trends, the results of the most recent PDA assessment. **Attachment 1** also includes the specific strategies included under each scenario.

The differing land use strategies work to vary the intensity and location of the future growth of housing and jobs. The tables in **Attachment 2** highlight the growth distribution within three distinct geographic regions:

- Big 3 (the region's three largest cities – San Jose, San Francisco, and Oakland)
- Bayside (generally cities directly adjacent to San Francisco Bay – e.g., Hayward, San Mateo, and Richmond)
- Inland, Coastal, and Delta (generally cities just outside of Bayside – e.g., Walnut Creek, Dublin, Santa Rosa, Antioch, Brentwood, Dixon)

Transportation Strategies
PBA 2040 forecasts $299 billion of federal, state, regional and local transportation revenues over the 24-year period. Of this amount, approximately $44 billion (15% of total PBA revenues) is assumed to be discretionary. The three scenarios vary in terms of how this $44 billion is distributed across maintenance, system enhancement and major capital projects. This distribution is shown in **Attachment 3**.

Each of the scenarios assumes a varying distribution of funding for major projects versus maintenance and to roads versus public transit. In the Main Streets scenario (scenario 1), over half of all discretionary investments are directed towards state of good repair, fully funding state highway pavement needs and moving the region much closer to a state of good repair on local streets. Major projects are more focused on highway improvements – which feature lower operating and maintenance costs than public transit – and thus constitute a smaller share of the distribution. In Connected Neighborhoods (scenario 2) and Big Cities (scenario 3), there are significantly greater needs for transit frequency increases and new core capacity transit lines, resulting a smaller share of funding going towards maintenance (in particular, highway and local streets maintenance).

The three scenarios maintain a consistent level of investment in system enhancements, comprising several discretionary funding sources including One Bay Area Grant, Regional Transportation Improvement Program and other sources for active transportation and goods movement. MTC and the congestion management agencies are working to develop more specific projects and program categories for the preferred scenario.

Attachment 4 describes the types of major projects included under each scenario. These comprise capacity-adding projects above $100 million analyzed in the PBA 2040 project performance assessment. While major projects only comprise 24 to 38 percent of total transportation investment across the three scenarios, these investments typically have the most pronounced impact on a scenario alternative's performance.

Performance Targets Overview

After six months of public engagement and deliberation, MTC and ABAG adopted goals and performance targets in fall 2015, establishing the foundation of PBA 2040. Each of the 13 performance targets compares baseline conditions with conditions in the future to understand better whether the region is expected to move in the right direction or the wrong direction under each scenario. Oftentimes, the targets are aspirational in nature, making them quite difficult to achieve. For example, a given scenario may implement a suite of policy measures to address a particular issue, but available tools and funding remain too constrained to move the needle in the right direction. Results[1] for the performance targets for all seven goals are included in **Attachment 5**.

Only two targets are mandatory for the region to achieve under Senate Bill 375 – Climate Protection and Adequate Housing. The remaining 11 targets are voluntary, meaning that the adopted PBA does not have to achieve them. That said, the targets provide a useful reference point for policymakers and the public to consider when weighing the pros and cons of each scenario. As these are draft scenarios, there will be future opportunities to refine the strategies incorporated into a preferred scenario – and perhaps move closer to achieving some of the performance targets.

Key Findings from Performance Targets Results

- **While all three scenarios achieve the greenhouse gas target, lower levels of driving in Connected Neighborhoods and Big Cities result in stronger performance.** Compared to the more dispersed land use pattern in Main Streets, these two scenarios have higher non-auto mode shares that yield additional greenhouse gas benefits and build upon the foundation of the Climate Initiative Program (which is included in all three scenarios).

[1] Note that scenario performance target results shown in the attachment remain in draft form. Select target results reflect year 2035 performance, while the final target results available later this year will reflect the adopted horizon year of 2040.

- **The region's ambitious public health target remains stubbornly out of reach across all scenarios.** Much higher levels of walking and bicycling, combined with significant reductions in traffic collisions, would be needed to improve residents' health outcomes. Slightly stronger performance in Connected Neighborhoods and Big Cities indicates that a denser land use pattern better supports active transportation, and therefore public health outcomes, in the region.

- **Strict urban growth boundaries are effective in focusing growth within the existing urban footprint.** Connected Neighborhoods and Big Cities nearly achieve the Open Space and Agricultural Preservation target due to their inclusion of strict urban growth boundaries, while No Project and Main Streets fare worse on the target.

- **Significant housing affordability challenges exist in all three scenarios.** Challenges related to affordability and displacement risk increase in all three scenarios, with No Project and Big Cities resulting in the greatest adverse impacts. Despite various housing and land use strategies included across all the scenarios to make the region more affordable, housing costs continue to rise, reflecting an increasingly expensive Bay Area housing market.

- **Goods movement will benefit from regional transportation investments and smart land use decisions.** Main Streets' investments in regional express lanes helps to reduce congestion on major truck corridors. Alternatively, Connected Neighborhoods and Big Cities succeed in improving goods movement by focusing growth in the urban core and encouraging use of non-auto modes through new transportation options.

- **Increasing funding to "Fix It First" leads to much smoother streets and more reliable transit.** Main Streets' funding brings state highway pavement to ideal conditions while improving local streets as well, saving residents a significant amount of money each year. Big Cities achieves the greatest reduction in transit system breakdowns, thanks to its higher funding level for transit maintenance compared to the other scenarios.

Other Policies and Strategies
PBA 2040's scenario process uses only a small set of land use and transportation strategies to show different options for future land use patterns and the transportation investments and policies needed to support these distributions of future housing and employment growth. The combinations of strategies in the scenarios are included to enable a discussion about regional priorities, and do not represent all of the potential public policy interventions that regional, state, or local governments could use to accomplish the Plan's goals. For instance, the specific structure of many potential state and local tax and regulatory policies falls largely outside the analytic scope of the scenario process, and requires a separate, more robust public policy analysis to determine costs and benefits. Once the preferred scenario is adopted, the final PBA 2040 document will describe a wider range of policies to support the Plan's goals.

Environmental Assessment
A programmatic Environmental Impact Report (EIR) will be prepared for PBA 2040, with the adoption of the preferred scenario as the basis for the California Environmental Quality Act (CEQA) "project." This environmental assessment fulfills the requirements of the CEQA and is designed to inform decision-makers, responsible and trustee agencies, and Bay Area residents of the range of potential environmental impacts that could result from implementation of the proposed Plan. This EIR will also analyze a range of reasonable alternatives to the proposed project that could feasibly attain most of PBA 2040's basic project objectives and would avoid or substantially lessen any of the significant environmental impacts. The three scenarios, as previously discussed, will be the basis for the initial CEQA alternatives.

Agency and public comments on the scope of the environmental analysis and project alternatives will be solicited through the Notice of Preparation to be issued in mid May 2016, for a 30-day review period and at three regional scoping meetings to be held starting in late May and into early June 2016.

Next Steps

This release marks the beginning of a public process to review and comment on the alternative scenarios. MTC and ABAG will hold a series of public workshops in late May and into mid-June to discuss tradeoffs and gauge support among the land use scenarios and supportive transportation programs and projects. Input received will help us develop the region's draft preferred scenario (land use distribution and transportation investment strategy) for adoption by MTC and ABAG in September 2016. The draft preferred scenario will be subject to environmental review and other analyses throughout the remainder of 2016. PBA 2040 is slated for final adoption in summer 2017.

Steve Heminger

Attachments:

- **Attachment 1:** Scenario Descriptions and Strategies
- **Attachment 2:** Household Growth by Scenario; Employment Growth by Scenario; and Growth in PDAs by Scenario Tables
- **Attachment 3:** Summary of Discretionary Investments by Project Type by Scenario
- **Attachment 4:** Major Transportation Investments by Scenario
- **Attachment 5:** Goals and Performance Targets & Draft Targets Evaluation Scorecard
- **Attachment 6:** Presentation

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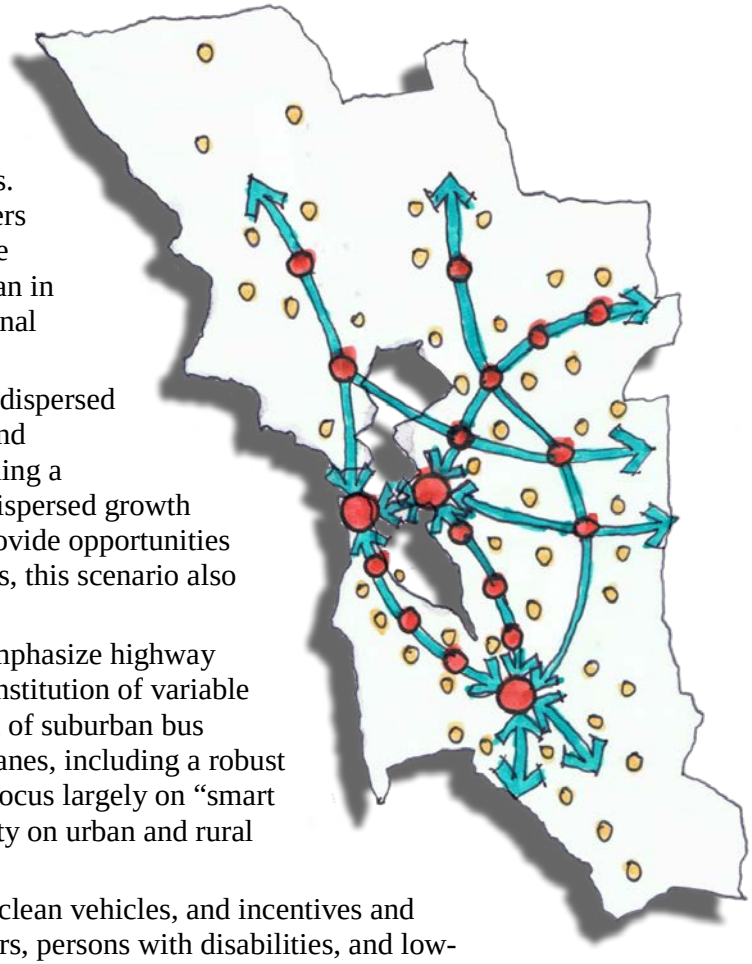
Plan BayArea 2040 Scenario #1: Main Streets

Description

Scenario 1 targets future population and employment growth to the downtowns of every city in the Bay Area to foster a region of moderately-sized, integrated town centers. This scenario emphasizes a dispersed distribution of households and jobs and limited growth in San Jose, San Francisco, and Oakland. As a result, a number of the region's cities would experience significant growth and different types of development compared to existing patterns. As in the other scenarios, most growth will be in locally-identified PDAs, but this scenario offers the most dispersed growth pattern, meaning that cities outside the region's core are likely to see higher levels of growth. Within cities, more growth will be accommodated outside of PDAs than in other scenarios, with an emphasis on high opportunity areas that have higher levels of educational opportunities, economic mobility, and neighborhood services.



To accommodate this growth, investments, including resources for affordable housing, will be dispersed across PDAs, Transit Priority Areas (TPAs), other transit-proximate locations outside PDAs, and underutilized transportation corridors across the region. This scenario comes closest to resembling a traditional suburban pattern, with an increase in greenfield development to accommodate the dispersed growth pattern. While an emphasis on multi-family and mixed-use development in downtowns will provide opportunities for households of all incomes to live near a mix of jobs, shopping, services, and other amenities, this scenario also assumes that many people will drive significant distances by automobile to get to work.

To support this scenario's dispersed growth pattern, transportation investment priorities will emphasize highway strategies, including the expansion of high-occupancy toll lanes on all regional highways, the institution of variable pricing, and highway widening at key bottlenecks. The scenario will also emphasize expansion of suburban bus service. Bicycle and pedestrian infrastructure will create a network of regional trails and bike lanes, including a robust regional network of bike sharing. To support industry and goods movement, the scenario will focus largely on "smart operations and deliveries"— technology and operations to reduce congestion and increase safety on urban and rural roads.

To reach our climate goals, this scenario sees heavy investments in technology advancements, clean vehicles, and incentives and pursues near-zero and zero emissions strategies wherever feasible. The mobility needs of seniors, persons with disabilities, and low-income communities will be addressed most centrally by "mobility management" solutions to link individuals to travel options that meet their specific needs, as well as the provision of demand-responsive strategies by the public, non-profit, and private sectors.

Land Use Strategies

In this scenario, land use strategies emphasize a more dispersed growth pattern. Compared to the other scenarios, cities outside the region's core are likely to see higher levels of growth and, within cities, more growth will be accommodated outside PDAs, with an emphasis on high opportunity areas. Specific strategies include:

- Zoning: upzoning of select suburban areas to increase residential and commercial development capacity.

- Open space: allows urban growth boundaries to expand faster than expected (by 565 square miles) compared to past trends to accommodate more dispersed growth.
- Reduce parking minimums: in PDAs along regional rail transit (such as BART, Caltrain, Amtrak, Altamont Corridor Express, and SMART).
- Affordable housing: encourages more affordable housing choices through the following strategies:
    - Inclusionary zoning- assumes a low level of inclusionary units (deed-restricted) with a proportion of 5% in high-opportunity jurisdictions.
    - Assesses fees on commercial development in high VMT areas to subsidize deed-restricted housing.
    - Assumes imposition of other tax policies to subsidize over $500 million annually of affordable units in PDAs.

Transportation Strategies

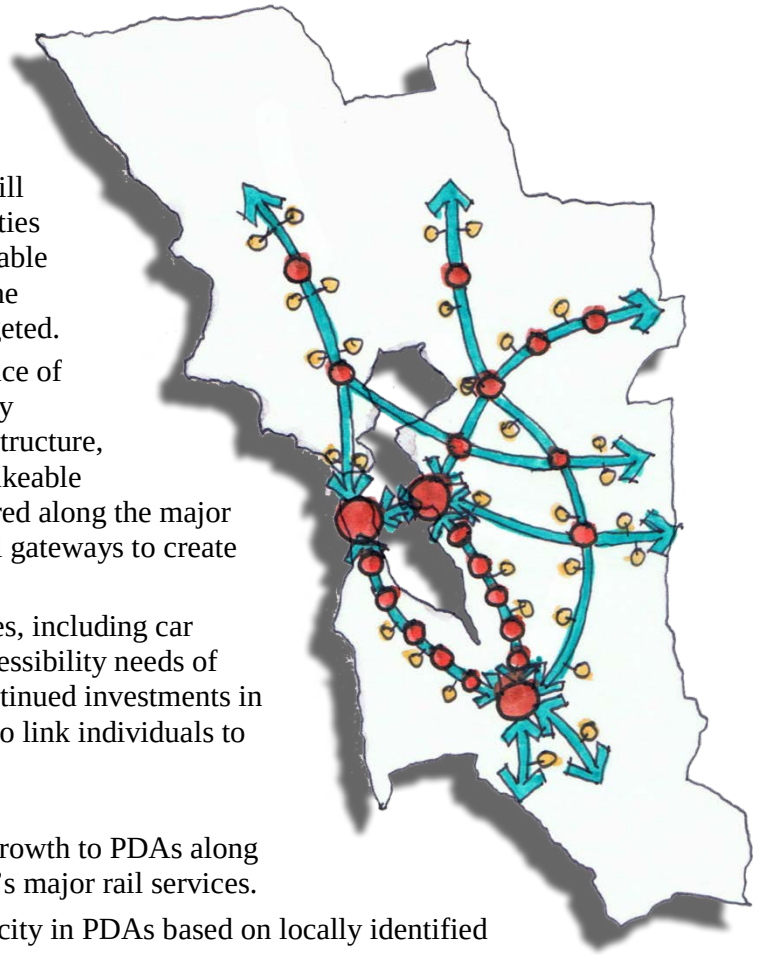
Investments to increase the frequency of suburban bus operations, manage travel demand, and expand the capacity of our highway network will be critical to enable this pattern of growth. Since job growth is more dispersed throughout the region, major public transit expansions or extensions such as fixed-guideway extensions and core capacity enhancements will be a lower priority. Strategies include the following (see **Attachment 2** for specific major investments):

- Transit service expansion: Pursue strategic transit investments, especially bus improvements, to provide access to increasingly dispersed job centers.
- Express lanes: Leverage technological advances to use roadway capacity more efficiently, while emphasizing freeway-focused pricing like Express Lanes / Managed Lanes as complementary strategies.
- Highway capacity: Invest in strategic highway capacity increases to accommodate this scenario's growth pattern.
- State of good repair: Emphasize investment into both state of good repair (particularly for highways and local streets across all nine counties).
- Climate Strategies: includes technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Plan BayArea 2040 Scenario #2: Connected Neighborhoods

Description

Scenario 2 targets future population and employment growth to locally-identified PDAs along major corridors, with an emphasis on growth in medium-sized cities with access to the region's major rail services, such as BART and Caltrain. Outside the PDAs, this scenario sees modest infill development, especially in high opportunity areas. As these communities grow over the next 25 years, compact development and strategic transportation investments will provide residents and workers access to a mix of housing, jobs, shopping, services, and amenities in proximity to transit traditionally offered by more urban environments. Resources for affordable housing will be dispersed across the Bay Area, with some concentration in PDAs to support the development of affordable housing where the most population and employment growth is targeted.



To support this scenario's growth pattern, transportation investments will prioritize maintenance of existing infrastructure. The region's transit system will be modernized and expanded along key corridors to improve commutes and add capacity. Investments in bicycle and pedestrian infrastructure, including the regional bike sharing network, will support the creation of more walkable and bikeable downtowns. To support industry and goods movement, particularly the industrial lands clustered along the major corridors, this scenario will support environmentally sustainable investments at our key global gateways to create local jobs, protect the community, and attract international commerce.

To protect the climate, this scenario prioritizes a number of innovative transportation initiatives, including car sharing and near-zero and zero emission goods movement technologies. The mobility and accessibility needs of seniors, persons with disabilities, and low-income communities will be addressed through continued investments in transit operations, transit capital, and a continued focus on "mobility management" solutions to link individuals to travel options that meet their specific needs.

Land Use Strategies

In this scenario, land use strategies target capacity increases for population and employment growth to PDAs along major corridors, with an emphasis on growth in medium-sized cities with access to the region's major rail services.

- Zoning: Encourage new housing development by increasing residential development capacity in PDAs based on locally identified PDA place type.
- Development cap: Raises SF office cap to 1.5 million.
- Open space: Protect the region's natural resources by avoiding development on adopted PCAs and accommodating all new growth within existing urban growth boundaries or urban limit lines, using city boundaries as a limit when a jurisdiction has no expansion limit.
- Reduce parking minimums: in PDAs with high levels of transit access along El Camino Real and East Bay corridors.
- Affordable housing: Encourage more affordable housing choices through inclusionary zoning- Assumes a moderate level of inclusionary units (deed-restricted) with a proportion of 10% for jurisdictions with PDAs.

Transportation Investments

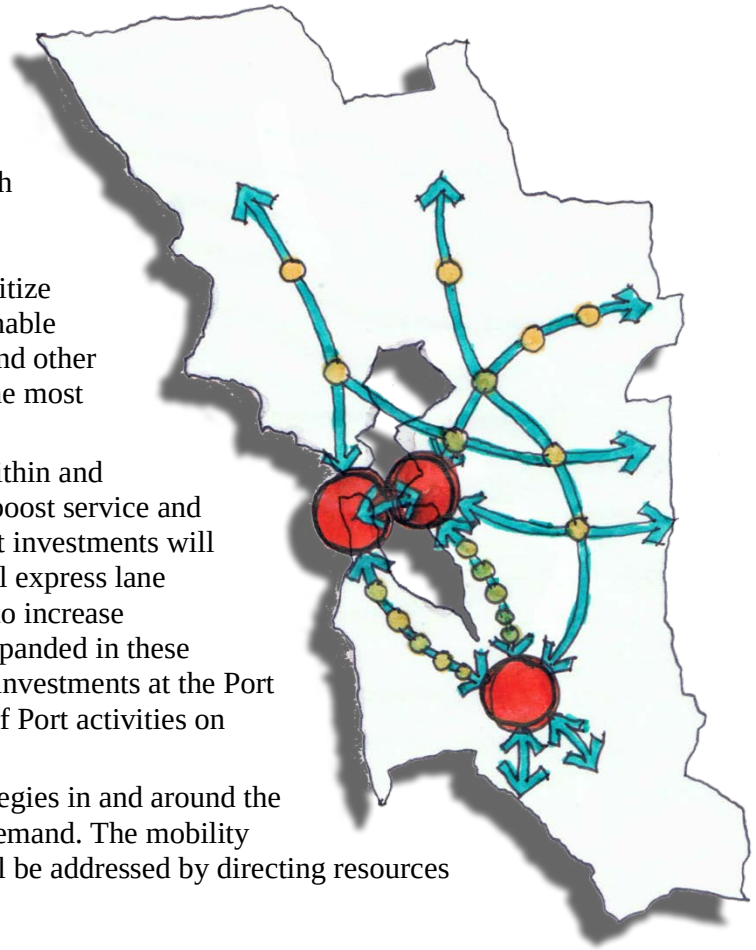
Urban growth patterns will require increased investment in our regional rail systems like BART and Caltrain, as well as the expansion of express bus services, including bus rapid transit (BRT) to connect inner-ring suburban communities to major job centers. At the same time, a smaller share of suburban and exurban residents will continue to drive, necessitating sustained investment in freeways and arterials. Strategies include the following (see **Attachment 2** for specific major investments):

- Transit efficiency: Prioritize transit efficiency investments to improve frequencies and reduce travel times on core transit lines across the region.
- Highway efficiency: Focus on a limited set of high performing highway efficiency investments, including strategic highway capacity improvements to address bottlenecks and provide reliever routes to freeways within the urban core.
- Transit expansion: Fund the most cost-effective transit expansion projects that support the region's highest-growth PDAs.
- State of good repair: Balance state of good repair needs with expansion and efficiency priorities for all modes; identify opportunities to align state of good repair to support PDA growth by repaving streets and upgrading buses that serve these communities.
- Climate Strategies: includes technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Plan BayArea 2040 Scenario #3: Big Cities

Description

Scenario 3 concentrates future population and employment growth in the locally-identified PDAs and TPAs within the Bay Area's three largest cities: San Jose, San Francisco, and Oakland. Neighboring cities that are already well-connected to these three cities by transit will see moderate to substandard increases in population and employment growth, particularly in their locally-identified PDAs and high opportunity areas. The amount of growth outside these areas is minimal, with limited infill development in PDAs and no greenfield development. Growth in the three biggest cities will require substantial investment to support transformational changes to accommodate households of all incomes. This scenario will prioritize strategies to make these existing urban neighborhoods even more compact and vibrant, and enable residents and workers to easily take transit, bike or walk to clusters of jobs, stores, services, and other amenities. Resources for affordable housing will likewise be directed to the cities taking on the most growth.



To support this scenario's big city-focused growth pattern, the transportation infrastructure within and directly serving the region's core will be maintained to a state of good repair, modernized to boost service and improve commutes and capacity, and expanded to meet increased demand. While these transit investments will take priority, the roadway network will also require significant investments, such as a regional express lane network to prioritize direct access to the three biggest cities and regional express bus service to increase connections to the region's core. Bicycle and pedestrian infrastructure will be dramatically expanded in these cities, including a robust network of bike sharing. To support industry and goods movement, investments at the Port of Oakland will be ramped up quickly to enable more efficiency and to mitigate the impacts of Port activities on nearby communities.

To reach our climate goals, this scenario will focus technological and financial incentive strategies in and around the three biggest cities, which will accommodate a significant increase in population and travel demand. The mobility and accessibility needs of seniors, persons with disabilities, and low-income communities will be addressed by directing resources for a robust increase in transit operations and capital within the region's core.

Land Use Strategies

In this scenario, it is assumed that most of the region's population and employment growth will be located in San Francisco, San Jose, and Oakland—with the remainder primarily in cities directly proximate to the three biggest cities and areas well served by transit. Capacity for growth in these cities is emphasized in PDAs, TPAs, and other areas that are well served by transit.

- Zoning: Increases development capacity in areas with high transit access (with an emphasis on San Jose, San Francisco, Oakland, and their neighbors) by increasing residential densities in key PDAs, TPAs, and select opportunity sites.
- Development caps: Assumes elimination of caps on office development in San Francisco.

- Open space: Protect the region's natural resources by avoiding development on adopted PCAs and accommodating all new growth within existing urban growth boundaries or urban limit lines, using city boundaries as a limit when a jurisdiction has no expansion limit.
- Reduce parking minimums: in three big cities and neighboring communities.
- Affordable housing: Encourage more affordable housing choices through the following strategies:
    - Inclusionary zoning: Assumes a moderate level of inclusionary units (deed-restricted) with a proportion of 10% for jurisdictions with PDAs.
    - Assesses fees on residential development in high VMT areas to subsidize deed-restricted housing in low VMT areas.
- Other tax policy: encourages compact development through modifications to property tax assessment in three biggest cities.

Transportation Strategies

In order to make this high-density growth pattern feasible without significantly worsening traffic congestion or overloading existing transit systems, transit capacity improvements and demand management strategies will be prioritized to accommodate travel to, from, and within the core cities. Strategies include the following (see **Attachment 2** for specific major investments):

- Core capacity and connectivity: Pursue expansion of the South Bay transit system to support high-density development across Silicon Valley, while at the same time prioritizing investment in core capacity projects in San Francisco and Oakland to enable high-density development.
- Transit enhancements and expansion: Link regional rail systems into the heart of the Bay Area's two largest cities – San Francisco and San Jose – while boosting service frequencies to support increasingly-urban commute patterns.
- Congestion pricing: Support urban development in San Francisco by implementing cordon pricing and leveraging motorists' tolls to pay for robust and time-competitive transit services.
- State of good repair: Align operating and maintenance funds to prioritize investments into high-growth cities and high-ridership systems;
- Climate Strategies: includes technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Table 1. Household Growth by Scenario

Geographic Region	2040 Share of Total Households			% share of Household Growth		
	Main Streets	Connected Neighborhoods	Big Cities	Main Streets	Connected Neighborhoods	Big Cities
Big 3	41%	41%	48%	43%	44%	72%
Bayside	26	26	25	21	22	17
Inland, Coastal, Delta	33	33	28	35	35	11

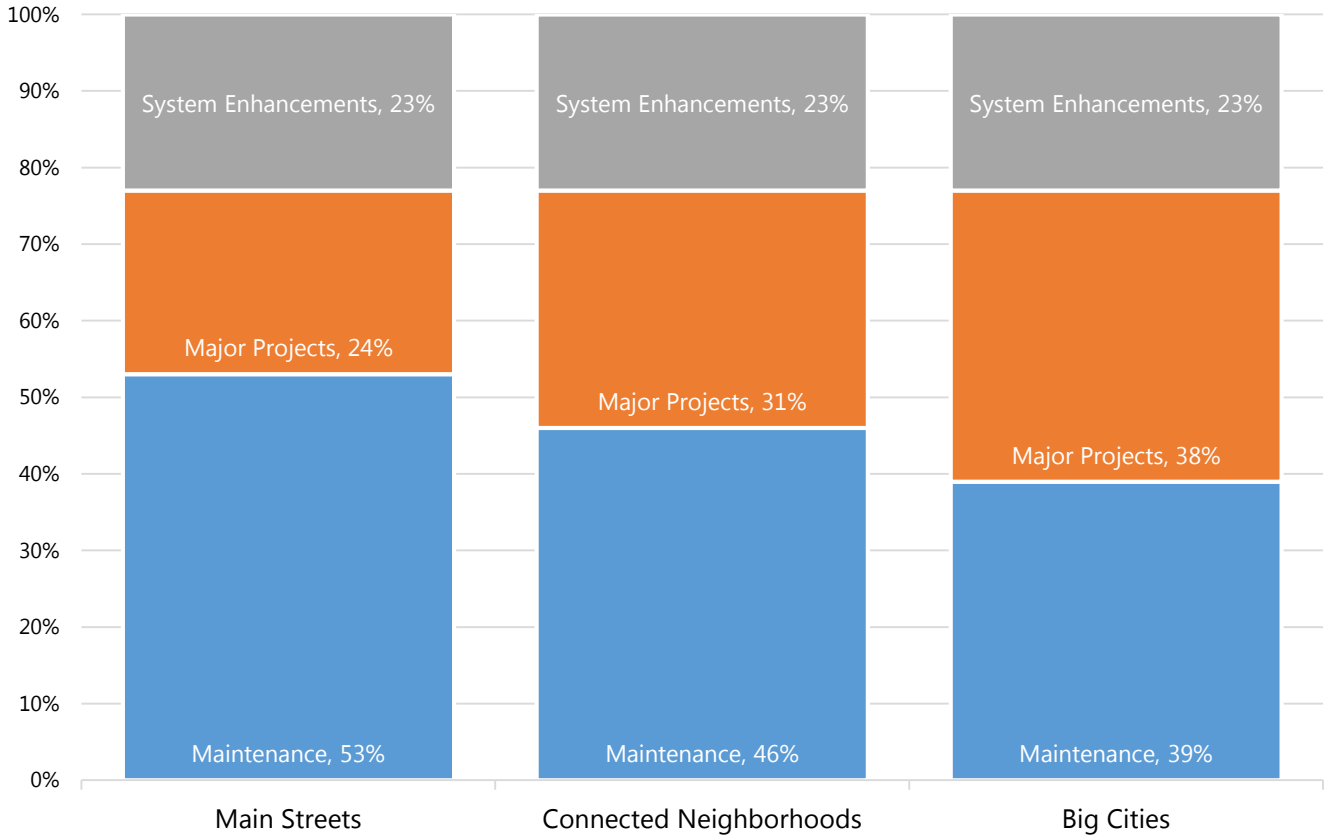
Table 2. Employment Growth by Scenario

Geographic Region	2040 Share of Total Jobs			% share of Job Growth		
	Main Streets	Connected Neighborhoods	Big Cities	Main Streets	Connected Neighborhoods	Big Cities
Big 3	46%	46%	47%	45%	45%	46%
Bayside	26	27	26	25	26	25
Inland, Coastal, Delta	28	27	27	30	29	29

Table 3. Growth in PDAs by Scenario

	Main Streets	Connected Neighborhoods	Big Cities
Household % of growth	54%	69%	55%
Employment % of growth	40	41	43

Summary of Discretionary Investments by Project Type by Scenario



Plan BayArea 2040 Major Projects by Scenario

The table below describes how major transportation projects are organized across the three scenarios. This list reflects the majority of projects analyzed in the Plan Bay Area 2040 project performance assessment, which is only a portion of total transportation investment in each scenario. In July, the Commission will consider a draft preferred scenario with a recommended list of investments.

	Class	System	ID	Name	Scenario 1	Scenario 2	Scenario 3
1	Highways	Exurban/Interregional Expansion	411	SR-4 Auxiliary Lanes - Phases 1 + 2 (Concord to Pittsburg)	1		
2	Highways	Exurban/Interregional Expansion	404	SR-4 Widening (Antioch to Discovery Bay)	1		
3	Highways	Exurban/Interregional Expansion	401	TriLink Tollway + Expressways (Brentwood to Tracy/Altamont Pass)	1		
4	Highways	Interchange Expansion	406	I-680/SR-4 Interchange Improvements	1		
5	Highways	Interchange Expansion	409	I-680/SR-4 Interchange Improvements + HOV Direct Connector	1		
6	Highways	Interchange Expansion	601	I-80/I-680/SR-12 Interchange Improvements	1		
7	Highways	Intraregional Expansion (Bottlenecks/Relievers)	519	Lawrence Freeway	1		
8	Highways	Intraregional Expansion (Bottlenecks/Relievers)	211	SR-262 Widening (I-680 to I-880)	1	2	
9	Highways	Intraregional Expansion (Bottlenecks/Relievers)	209	SR-84 Widening + I-680/SR-84 Interchange Improvements (Livermore to I-680)	1	2	
10	Highways	Intraregional Expansion (Bottlenecks/Relievers)	901	US-101 Marin-Sonoma Narrows HOV Lanes – Phase 2	1	2	
11	Other	Express Lanes	1302	MTC Express Lane Network	1		
12	Other	Express Lanes	502	VTA Express Lane Network	1		
13	Other	Express Lanes	201	ACTC Express Lane Network	1		
14	Other	Express Lanes	101	US-101 Express Lanes (San Francisco + San Mateo Counties)	1		
15	Other	ITS	210	I-580 ITS Improvements	1		
16	Other	ITS	1301	Columbus Day Initiative	1	2	3-mod
17	Other	Other	202	East-West Connector (Fremont to Union City)	1		
18	Other	Other	605	Jepson Parkway (Fairfield to Vacaville)	1		
19	Other	Pricing	306	Downtown San Francisco Congestion Pricing (Toll + Transit Improvements)		2	3
20	Other	Pricing	302	Treasure Island Congestion Pricing (Toll + Transit Improvements)		2	3
21	Local Transit	AC Transit	206	AC Transit Service Frequency Improvements		2	3
22	Local Transit	AC Transit	207	San Pablo BRT (San Pablo to Oakland)		2	3
23	Local Transit	Muni	301	Geary BRT	1	2	3
24	Local Transit	Muni	311	Muni Forward Program	1	2	3
25	Local Transit	Muni	304	Southeast Waterfront Transportation Improvements (Hunters Point Transit Center + New Express Bus Services)			3
26	Local Transit	Muni	303	Better Market Street		2	3
27	Local Transit	Muni	312	19th Avenue Subway (West Portal to Parkmerced)			3
28	Local Transit	Muni	104	Geneva-Harney BRT + Corridor Improvements			3
29	Local Transit	Muni	313	Muni Service Frequency Improvements			3
30	Local Transit	Other Local	903	Sonoma County Service Frequency Improvements	1	2	

31	Local Transit	Other Local	204	Broadway Streetcar			3
32	Local Transit	VTA	505	Capitol Expressway LRT – Phase 2 (Alum Rock to Eastridge)		2	3
33	Local Transit	VTA	522	VTA Service Frequency Improvements (10-Minute Frequencies)		2	3
34	Local Transit	VTA	506	El Camino Real BRT (Palo Alto to San Jose)		2	3
35	Local Transit	VTA	507	Vasona LRT – Phase 2 (Winchester to Vasona Junction)			3
36	Local Transit	VTA	510	Downtown San Jose Subway (Japantown to Convention Center)			3
37	Local Transit	VTA	513	North Bayshore LRT (NASA/Bayshore to Google)			3
38	Local Transit	VTA	504	Stevens Creek LRT			3
39	Local Transit	VTA	515	Tasman West LRT Realignment (Fair Oaks to Mountain View)			3
40	Local Transit	VTA	516	VTA Express Bus Frequency Improvements			3
41	Regional Transit	BART	501	BART to Silicon Valley – Phase 2 (Berryessa to Santa Clara)		2	3
42	Regional Transit	BART	1001	BART Metro Program (Service Frequency Increase + Bay Fair Operational Improvements + SFO Airport Express Train)		2	3
43	Regional Transit	BART	203	Irvington BART Infill Station		2	3
44	Regional Transit	Caltrain	1102	Caltrain Modernization - Phase 1 + Phase 2 (Electrification + Service Frequency Increase + Capacity Expansion)		2	3
45	Regional Transit	Caltrain	1101	Caltrain Modernization - Phase 1 (Electrification + Service Frequency Increase)		2	3
46	Regional Transit	Caltrain	307	Caltrain Modernization - Phase 1 (Electrification + Service Frequency Increase) + Caltrain to Transbay Transit Center		2	3
47	Regional Transit	Ferry	1206	Alameda Point-San Francisco Ferry			3
48	Regional Transit	Ferry	1202	Oakland-Alameda-San Francisco Ferry Frequency Improvements			3
49	Regional Transit	Ferry	1203	Vallejo-San Francisco + Richmond-San Francisco Ferry Frequency Improvements		2	3
50	Regional Transit	Ferry	1204	Berkeley-San Francisco Ferry			3
51	Regional Transit	Regional Express Bus	9999	Suburban Local Bus Service Frequency Improvements (concept)	1	2	
52	Regional Transit	Regional Express Bus	604	Solano County Express Bus Network	1		
53	Regional Transit	Regional Express Bus	308	San Francisco Express Bus Network			3
54	Regional Transit	Regional Express Bus	205	Express Bus Bay Bridge Contraflow Lane			3
55	Regional Transit	Regional Express Bus	801	Golden Gate Transit Frequency Improvements			3

Draft Performance Target Results

Goal		Target*	%	No Project	Main Streets	Connected Neighbor-hoods	Big Cities
Climate Protection	1	Reduce per-capita CO2 emissions	-15%	-3%	-15%	-18%	-20%
Adequate Housing	2	House the region's population	100%	100%	100%	100%	100%
Healthy and Safe Communities	3	Reduce adverse health impacts	-10%	-0%	-0%	-1%	-1%
Open Space and Agricultural Preservation	4	Direct development within urban footprint	100%	71%	71%	100%	100%
Equitable Access	5	Decrease H+T share for lower-income households	-10%	+15%	+13%	+13%	+13%
	6	Increase share of affordable housing	+15%	-0%	-0%	+1%	+0%
	7	Do not increase share of households at risk of displacement	+0%	+20%	+9%	+8%	+15%
Economic Vitality	8	Increase share of jobs accessible in congested conditions	+20%	-3%	-1%	-1%	-1%
	9	Increase jobs in middle-wage industries	+38%	+43%	+43%	+43%	+43%
	10	Reduce per-capita delay on freight network	-20%	+27%	-24%	-21%	-38%
Transportation System Effectiveness	11	Increase non-auto mode share	+10%	+1%	+2%	+3%	+3%
	12	Reduce vehicle O&M costs due to pavement conditions	-100%	+57%	-65%	-7%	+20%
	13	Reduce per-rider transit delay due to aged infrastructure	-100%	-56%	-76%	-77%	-83%

Notes: *Complete target language as adopted by the Commission and ABAG Executive Board can be found at http://planbayarea.org/the-plan/plan-details/goals-and-targets.html; target language shown above is summarized for brevity. Please note that scenario performance results remain in draft form until all scenarios are run for analysis year 2040 later this year.

Symbols used in summary tables:

- Performance moving in wrong direction from target
- Performance moving in right direction, but falls well short of target
- Target achieved

Plan BayArea 2040




Scenario Evaluation

Planning Committee

Ken Kirkey, Planning Director, MTC
May 13, 2016

METROPOLITAN TRANSPORTATION COMMISSION

Association of Bay Area Governments

3 SCENARIOS

Plan BayArea 2040

Main Streets

Connected Neighborhoods

Big Cities

TRANSPORTATION STRATEGIES

Plan BayArea 2040

by Mode and Purpose

		Main Streets	Connected Neighborhoods	Big Cities
Streets & Highways	State of Good Repair	●●●	●●	●
	Efficiency	●●●	●●●	●●
	Expansion / Extension	●●●	●●	●
Public Transit	State of Good Repair	●●●	●●	●
	Efficiency / Operations	●●	●●●	●●●
	Expansion / Extension	●	●●	●●●
	Bicycle / Pedestrian	●●	●●	●●
	Climate Strategies	●●●	●●●	●●●

LAND USE STRATEGIES

Plan BayArea 2040

Land Use Strategy	 Main Streets	 Connected Neighborhoods	 Big Cities
Upzoning	Select suburban areas	PDAs	Big 3 & neighbors
Open space/UGB expansion	Modest	None	None
Reduce parking minimums	PDAs along regional rail	PDAs along corridors	Big 3 & neighbors
Inclusionary zoning	High-opportunity areas	Jurisdictions with PDAs	Big 3
Fees/subsidies for deed-restricted units in low-VMT areas	Yes- fee on new commercial in high VMT areas	None	Yes- fee on new residential in high VMT areas
Other tax policies	Assume new taxes/fees providing over $500M annual for affordable housing	None	Assume revenue-neutral property tax assessment modification in Big 3 cities

TRANSPORTATION INVESTMENTS

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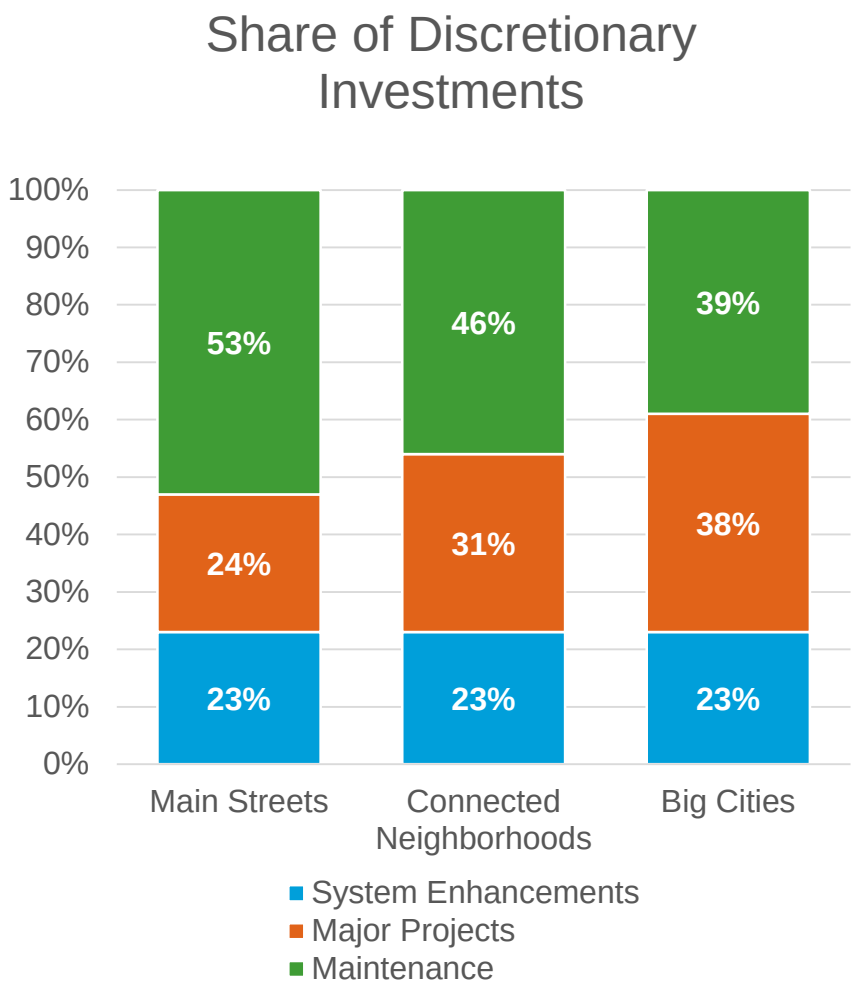
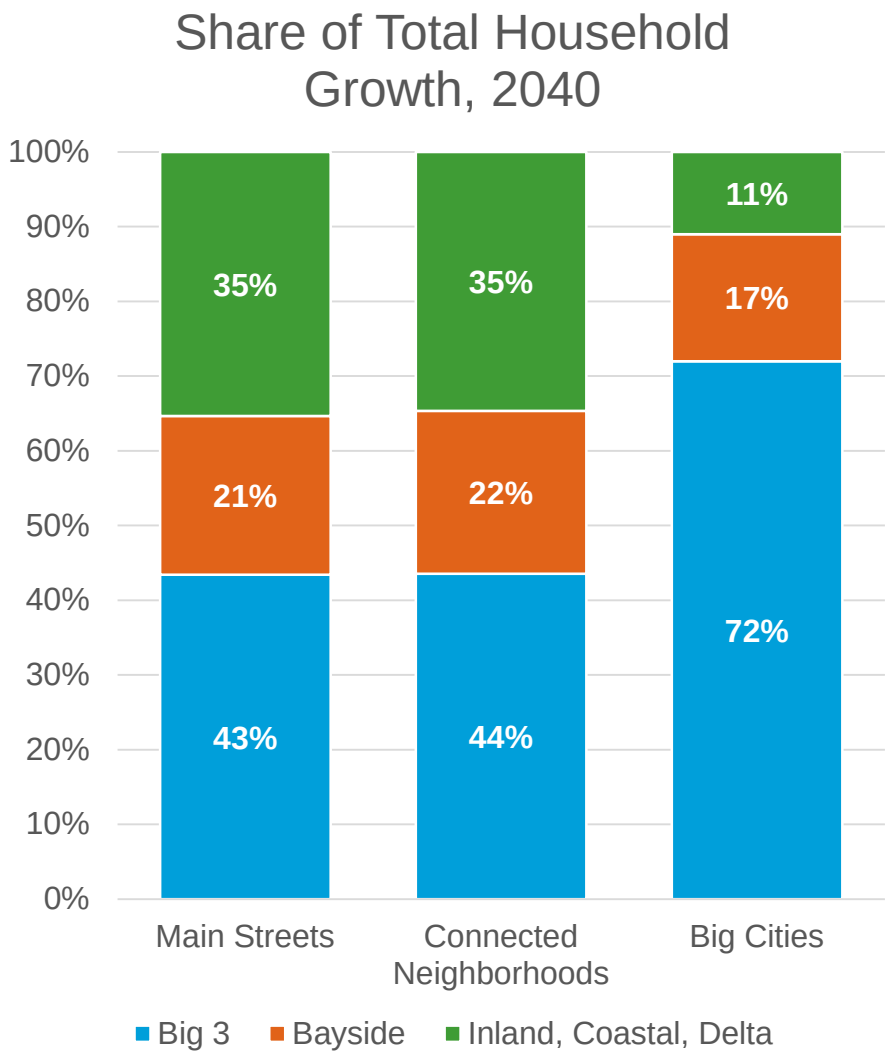


- Main Streets- over half the investment on state of good repair. More limited investment on major projects, especially highway capacity and express lanes
- Big Cities- makes largest investment in major capital projects, especially core capacity transit expansion
- Connected Neighborhoods- balanced focus on transit and highway efficiency improvements and state of good repair

LAND USE DISTRIBUTIONS

Plan BayArea 2040



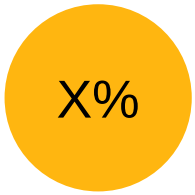
- Main Streets- over a third of housing growth in inland, coastal, delta areas. Places most growth in high VMT parts of region, relative to other scenarios
- Big Cities- places most growth in big 3 cities and neighbors
- Connected Neighborhoods- places most growth in PDAs compared to other scenarios.

TARGETS RESULTS

Plan BayArea 2040

Symbols used in summary tables shown below:

performance moving in wrong direction from target



performance moving in right direction, but falls well short of target achievement

target achieved

Note that scenario performance results against performance targets remain in draft form until all scenarios are run for year 2040 later this year.

TARGETS - SUMMARY

Plan BayArea 2040

Goal		TARGET		No Project	Scenario 1	Scenario 2	Scenario 3
Climate Projection	1	Reduce per-capita CO_2 emissions*	-15%	-3%	-15%	-18%	-20%
Adequate Housing	2	House the region's population	100%	100%	100%	100%	100%
Healthy and Safe Communities	3	Reduce adverse health impacts	-10%	-0%	-0%	-1%	-1%
Open Space and Agricultural Preservation	4	Direct development within urban footprint	100%	71%	77%	100%	100%
Equitable Access	5	Decrease H+T share for lower-income households	-10%	+15%	+13%	+13%	+13%

* = *includes Climate Initiatives in all three scenarios (-11.2% per-capita GHG reduction)*

TARGETS - SUMMARY

Plan BayArea 2040

Goal		TARGET		No Project	Scenario 1	Scenario 2	Scenario 3
Equitable Access	**6**	Increase share of affordable housing	+15%	-0%	-0%	+1%	+0%
Equitable Access	**7**	Do not increase share of households at risk of displacement	+0%	+20%	+9%	+8%	+15%
Economic Vitality	**8**	Increase share of jobs accessible in congested conditions	+20%	-3%	-1%	-1%	-1%
Economic Vitality	**9**	Increase jobs in middle-wage industries	+38%	+43%	+43%	+43%	+43%
Economic Vitality	**10**	Reduce per-capita delay on freight network	-20%	+27%	-24%	-21%	-38%

TARGETS - SUMMARY

Plan BayArea 2040

	Goal		TARGET		No Project	Scenario 1	Scenario 2	Scenario 3
	Transportation System Effectiveness	**11**	Increase non-auto mode share	+10%	**+1%**	**+2%**	**+3%**	**+3%**
	Transportation System Effectiveness	**12**	Reduce vehicle O&M costs due to pavement conditions	-100%	**+57%**	**-65%**	**-7%**	**+20%**
	Transportation System Effectiveness	**13**	Reduce per-rider transit delay due to aged infrastructure	-100%	**-56%**	**-76%**	**-77%**	**-83%**

TARGETS- PRIMARY TAKEAWAYS

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- All three scenarios achieve the greenhouse gas target
- The public health target remains out of reach in all scenarios
- Strict urban growth boundaries are effective to focus growth within existing urban footprint
- Significant equity challenges exist in all three scenarios
- Goods movement will benefit from regional investment and smart land use decisions
- Increasing funding to “fix it first” leads to smoother streets and more reliable transit

WHAT WOULD IT TAKE?

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What would it take to achieve more of the targets?

- Health: much more aggressive bike/ped investments to increase physical activity; wide-scale deployment of autonomous vehicles to reduce crashes (off-model/safety benefits)
- Equity: focus growth in communities with minimal lower-income population today (including industrial or commercial lands); significant increase of housing subsidies in PDAs/TPAs/HOAs (rental subsidies; additional deed-restricted unit production); understand and test the impacts of additional anti-displacement policies

WHAT WOULD IT TAKE?

Plan BayArea 2040

What would it take to achieve more of the targets?

- Access to Jobs/Non-Auto Mode Share: transformative transportation investments (freeway widening to achieve congestion relief across the region; high-speed transit expansion across the region); much more aggressive bike/ped investments (off-model)

- State of Good Repair: greater funding for local streets and roads to bring all streets to at least fair conditions; greater funding for transit assets to replace assets besides vehicles and guideways

NEXT STEPS

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- Open Houses / Public Workshops
- Develop the Preferred Scenario
- Environmental Assessment (EIR)
  - Issue Notice of Preparation (NOP) in mid May
  - 3 scoping sessions beginning in late May and into early June

SCENARIO DEVELOPMENT PROCESS

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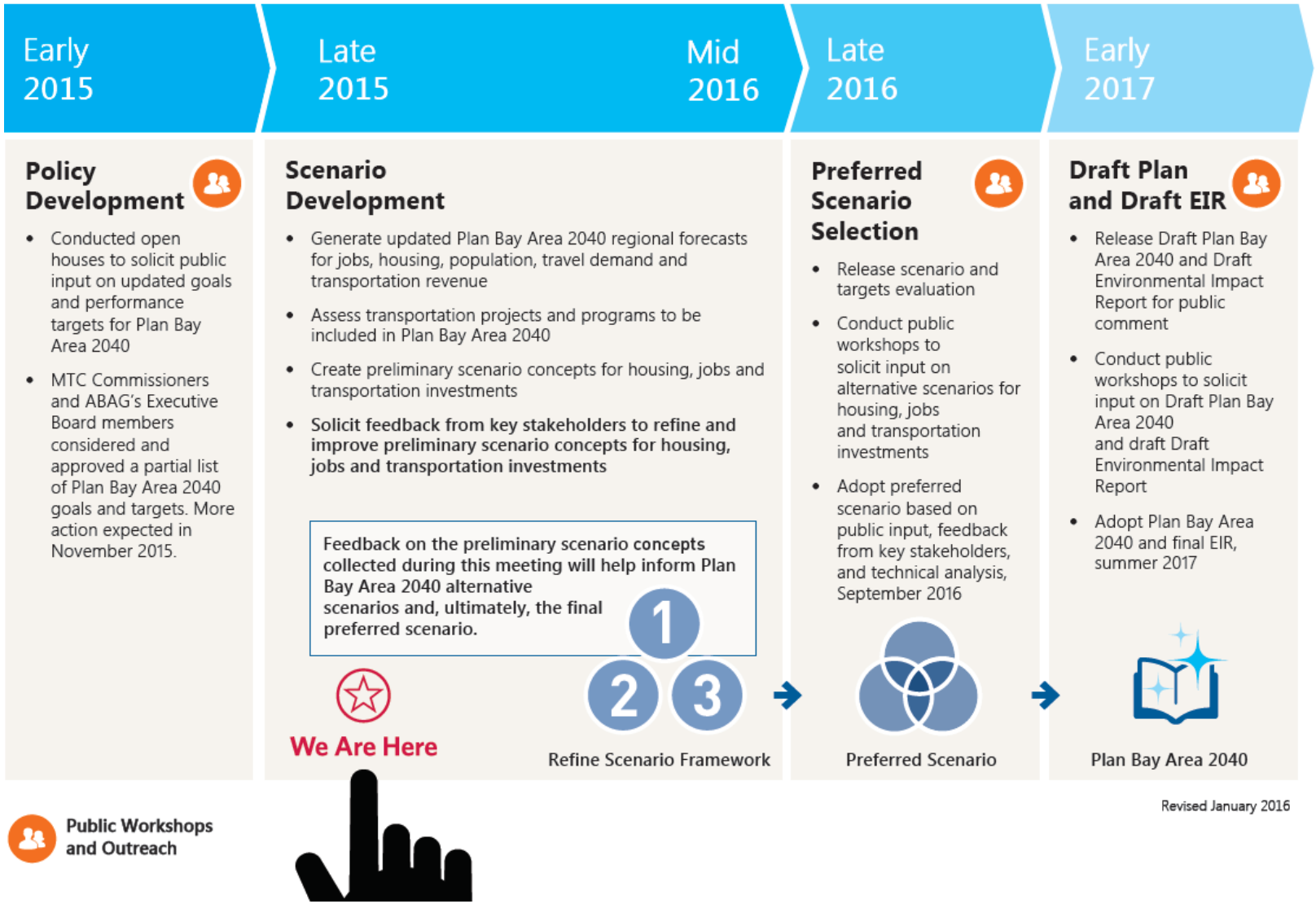


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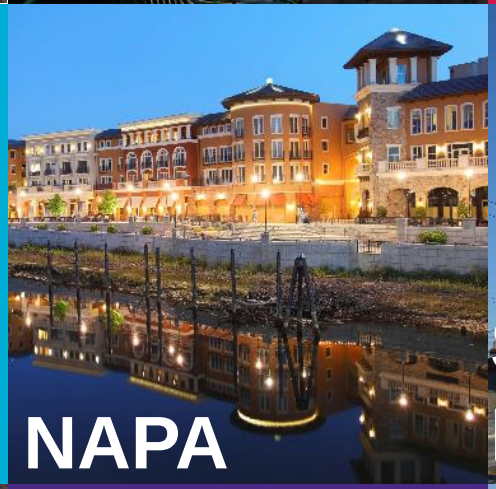
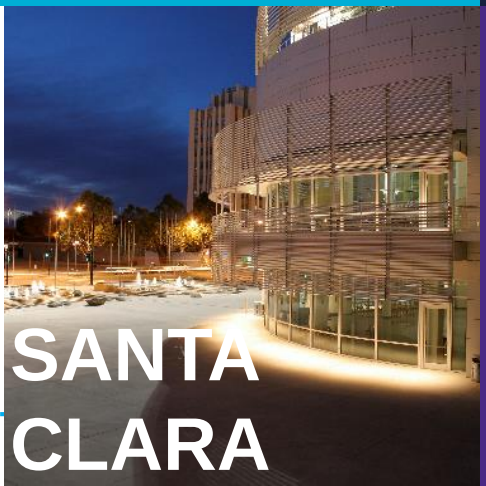

NAPA


SAN
FRANCISCO


MAIN STREET
SAN
MATEO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STAY INVOLVED

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Thank You

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