

Meeting Agenda

Regional Advisory Working Group

Tuesday, January 7, 2020

9:30 AM

Yerba Buena - 1st Floor

This meeting is scheduled to be webcast live on the Metropolitan Transportation Commission's Website: <http://mtc.ca.gov/whats-happening/meetings>

This meeting can also be accessed via Zoom Meeting:
Launch Link: <https://bayareametro.zoom.us/j/448015093>
One tap mobile: +14086380968,,448015093# US (San Jose)
Dial-in Number: +1 408 638 0968 US (San Jose)
Meeting ID: 448 015 093

9:30 a.m.

1. Welcome, Introductions

Matt Maloney

9:35 a.m.

2. [19-1379](#) Plan Bay Area 2050: Draft Regional Growth Forecast

Presentation on the draft Regional Growth Forecast of total jobs, population, households, and housing units for Plan Bay Area 2050.

Action: Information

Presenter: Bobby Lu and Lisa Zorn

Attachments: [02_PBA50_Draft Regional Forecast.pdf](#)

10:00 a.m.

3. [19-1380](#) Plan Bay Area 2050: Transportation Element Next Steps

Information on the approach to move forward with the transportation investment strategy and complementary strategies for the Draft Blueprint.

Action: Information

Presenter: Adam Noelting and Raleigh McCoy

Attachments: [03_PBA2050-Transportation Element Next Steps.pdf](#)

10:30 a.m.

4. Next Steps / Other Business / Public Comments

10:35 a.m.

5. Adjournment / Next Meeting

The next meeting of the Regional Advisory Working Group will be Tuesday, February 11, 2020 at 9:30 a.m. at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.

Public Comment: The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

Meeting Conduct: If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Committee may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

Record of Meeting: Committee meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site (mtc.ca.gov) for public review for at least one year.

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Acceso y el Titulo VI: La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Attachments are sent to Committee members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Committee. Actions recommended by staff are subject to change by the Committee.

Metropolitan Transportation Commission

Legislation Details (With Text)

File #:	19-1379	Version:	1	Name:	
Type:	Report	Status:		Informational	
File created:	11/21/2019	In control:		Regional Advisory Working Group	
On agenda:	1/7/2020	Final action:			
Title:	Plan Bay Area 2050: Draft Regional Growth Forecast				

Presentation on the draft Regional Growth Forecast of total jobs, population, households, and housing units for Plan Bay Area 2050.

Sponsors:**Indexes:****Code sections:****Attachments:** [02_PBA50_Draft Regional Forecast.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Plan Bay Area 2050: Draft Regional Growth Forecast

Presentation on the draft Regional Growth Forecast of total jobs, population, households, and housing units for Plan Bay Area 2050.

Presenter:

Bobby Lu and Lisa Zorn

Recommended Action:

Information

Attachments:

Metropolitan Transportation Commission and the Association of Bay Area Governments Regional Advisory Working Group

January 7, 2020

Agenda Item 2

Plan Bay Area 2050: Draft Regional Growth Forecast

Subject: Presentation on the draft Regional Growth Forecast of total jobs, population, households, and housing units for *Plan Bay Area 2050*.

Background: In preparation for crafting the growth pattern for *Plan Bay Area 2050*, it is necessary to first understand how much the region will likely grow over the next 30 years. The Regional Growth Forecast estimates of jobs, population, and households will serve as a key input to the UrbanSim 2.0 land use model, which will identify likely locations for future growth based on the ultimate Plan's strategies. This presentation will focus on the draft range of Regional Growth Forecasts, and the underlying assumptions for creating the range. MTC/ABAG staff are developing the Regional Growth Forecast based on the methodology adopted by the ABAG Board in September 2019.

Issues: **What's the draft range of regional growth forecasts?**
For Plan Bay Area 2050, MTC/ABAG staff have worked on an upgraded methodology that is designed to integrate the effects of housing, economic, and other critical strategies that are part of the broader Plan Blueprint. Such strategies are expected to influence the level of growth in the region, while also affecting affordability, equity, economic mobility, and other critical outcomes. The draft Regional Growth Forecast range includes a Base Case forecast which can be described as "business as usual", with few changes from today's policies. We are also providing an Upper Range forecast, which reflects a significant drop in the relative price of housing between the Bay Area and the nation; this shift would be the net result of implementing a suite of potential strategies that would increase housing supply at all income levels.

Between 2015 and 2050, the Base Case forecast projects regional employment to grow by 1.1 million to **5.1 million** jobs. Population is forecasted to grow by 2.0 million people to **9.7 million**. This population will comprise over **3.6 million** households, for an increase of nearly 950,000 households from 2015. The Upper Range forecast, which assumes integration of successful housing strategies that would effectively lower the region's relative housing price, projects that the region would grow to **5.2 million** jobs, and **10.2 million people** comprising **4.0 million** households.

What tools were used and how were underlying assumptions determined?
The Regional Growth Forecast makes use of the Regional Economic Modeling Inc. (REMI) Bay Area model version 2.3. Additional analysis of household, income and in-commute patterns are done using analytic techniques created in-house. A technical advisory committee of economic, demographic, real estate, and model experts provides feedback on the Regional Growth Forecast methodology. Economists and demographers from the California Department of Finance are consulted.

Next Steps: This early presentation of the draft range of the Regional Growth Forecast gives staff time to incorporate suggestions and address concerns. Upcoming refinements will work to align the Regional Growth Forecast with the specific strategies integrated into the Draft Blueprint for Plan Bay Area 2050. Staff will refine the assumptions and work on improving the methodology, with a final Regional Growth Forecast anticipated in April 2020.

Attachments: Attachment A: Plan Bay Area 2050: Draft Regional Growth Forecast Memo
Attachment B: Presentation

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M E M O R A N D U M



Agenda Item 2 - Attachment A

TO: Regional Advisory Working Group
FR: Bobby Lu, Lisa Zorn and Paul Fassinger
RE: Plan Bay Area 2050: Draft Regional Growth Forecast

DATE: January 7, 2020

Summary

The Regional Growth Forecast is an important element of the Plan Bay Area 2050 long-range planning process. The forecast identifies how much the Bay Area might grow between the Plan baseline year (2015) and the Plan horizon year (2050), including population, jobs, households, and associated housing units. The forecast also includes characteristics of that growth, including employment by sector, population by age and ethnic characteristics, and the demographic characteristics and income distribution of households. The Regional Growth Forecast will be used during the Blueprint planning phase to identify the total amount of growth, which will then be distributed to local areas using the UrbanSim 2.0 land use model based on strategies integrated into the Plan.

After integrating feedback from the public, key stakeholders, and a technical advisory committee¹, the ABAG Executive Board approved the Regional Growth Forecast Methodology in September 2019. Staff has continued to work with the technical advisory committee on implementation of the forecast methodology; this memorandum summarizes the Draft Regional Growth Forecast which was informed by their input.

Staff continues to seek further input through spring 2020, at which point the Regional Growth Forecast will be finalized. This memo describes a draft range for the Regional Growth Forecast, as well as the underlying assumptions. At this point, the forecast is still a work in progress, and MTC/ABAG staff expects some changes will occur. For example, the methodology for the income distribution forecast is still being refined, and those results will be shared in future meetings.

Setting the Stage: The Context for Plan Bay Area 2050

Developing a Regional Growth Forecast has long been a key element of drafting the long-range plan for the Bay Area. However, in recent years, it has become apparent that critical issues need to be better understood in the context of developing such a forecast.

¹ The technical advisory committee includes: 6 Bay Area economists, 3 California Department of Finance experts, 3 megaregion representatives (Sacramento Area Council of Governments, San Joaquin Council of Governments, University of the Pacific), and 3 experienced REMI users (from the Atlanta Regional Commission, a Michigan think tank, and a Colorado nonprofit).

The first is related to **regional affordability**. In Plan Bay Area 2040, it was estimated that the average share of lower-income household income spent on housing would rise by approximately 13 percentage points; this was due in part to the fact that regional housing strategies were limited in nature and affects the geographic distribution of forecasted growth rather than the Regional Forecast itself. Policymakers specifically asked “what it would take” to move the needle on affordability, but these affordability gaps were not identified until after the Regional Growth Forecast was finalized. Plan Bay Area 2050 presents an opportunity to integrate new housing strategies specifically designed at increasing supply for all income levels, which in turn may contribute to a more affordable region and a slightly higher Regional Growth Forecast.

The second is related to **uncertainty**. While required by statute, the creation of a single Regional Growth Forecast in prior cycles did not provide the opportunity to explore how different trajectories for regional growth would affect critical environmental, economic, and other goals. To address this gap, MTC/ABAG staff undertook the Horizon initiative in 2018-19, which explored not only how different growth trajectories would affect the region but also how the region could respond to those different trajectories through new strategies. Ultimately, the efficacy of those strategies was explored in summer 2019 and will soon be published in the forthcoming Futures Final Report.

Entering the Plan Bay Area 2050 cycle, staff worked with technical stakeholders to make methodological refinements to incorporate lessons learned from both efforts. The methodology adopted enables the Regional Growth Forecast to incorporate changes in strategies that would affect the level of growth in the region, while also affecting affordability, equity, economic mobility, and other critical outcomes. For this memo, staff will focus on integrating housing strategies that would change the relative price of housing, primarily because it is expected that housing strategies will yield the most significant change to the forecast at the regional level. With the final set of strategies for Plan Bay Area 2050 still under discussion through the Blueprint process, staff has provided both a Base Case Forecast and an Upper Range Forecast. This range compares a “business as usual” policy approach - based on today’s strategies - with a more ambitious policy approach - in which bold strategies yield a significant drop in the relative price of housing between the Bay Area and the nation.

Methodology and Assumptions: Base Case Forecast

The Regional Growth Forecast is primarily developed using the REMI (Regional Economic Modeling Inc.) model version 2.3. The REMI model integrates into one package a dynamic accounting of the core components of the economy: industry structure and competitiveness relative to other regions, propensity to export, and population and labor market structure. The population is explicitly connected to industry growth and demand for labor, with migration increasing in times of strong employment growth. This is an updated version of the REMI model used to calculate the growth forecast for Plan Bay Area 2040, which used REMI version 1.7.8.

The model of demographic and economic growth coordinates with the land use models and transportation models to identify the amounts and locations of growth, and how those changes will impact the transportation system. Once regional growth totals are identified, the Bay Area UrbanSim 2.0 model incorporates infrastructure and development costs and constraints to identify where that growth will take place. The results of Bay Area UrbanSim 2.0 are then

further analyzed using Travel Model 1.5 to understand mobility impacts associated with such growth. Working with the TAC, staff has reviewed REMI data, assumptions and its default results, and made some changes to both national demographic data and regional economic data to get a better baseline picture of the region's future.

Demographic Adjustments

Staff adjusted Hispanic international migration based on numbers from the most recent U.S. Census Bureau projections. Compared to Census projections, REMI 2.3 Default projects 42,000 more Hispanic international migrants in 2020. The difference decreases for the next 30 years, and by 2050, the REMI Default projection is just 1,000 higher than the Census (See Table 1).

Table 1: Hispanic International Migration Census vs REMI 2.3 Default

	2020	2030	2040	2050
Census Hispanic	414,000	412,000	410,000	391,000
REMI Unadjusted Hispanic	456,000	431,000	415,000	392,000
Census Total	1,010,000	1,064,000	1,098,000	1,110,000
REMI Unadjusted Total	1,111,000	1,112,000	1,113,000	1,113,000
Source: REMI 2.3; Census 2017 National Population Projections				

As noted above, staff updated REMI's Hispanic international migration assumptions using Census 2020, 2030, and 2040 numbers and interpolated for the in-between years, as the Census trends more closely align with observed data in recent years. The gender and age distributions from REMI were used to produce detailed Hispanic international migration for all years between 2020 and 2050. Additionally, in conversation with DOF about REMI birth rates, DOF noted that REMI fertility rates are projected to be slightly higher, notably for Hispanic (which could overstate births). REMI 2.3 birth rates are higher than DOF estimates, although somewhat lower than rates found in earlier REMI version. Staff also changed Hispanic birth rates at the national level by 20 percent, consistent with observations from a variety of sources that slowing Hispanic birth rates are being observed throughout the country as well as in Mexico. This adjustment lowers the total national population in 2050 by less than 0.3 percent.

Economic Adjustments

At the national level, staff adjusted the employment growth downward for the data processing sector. Data processing (which includes data processing, hosting, and related services) is projected to grow by 136 percent between 2018 and 2050 in REMI 2.3 for the nation. REMI projects the average annual growth rate for this sector for 2018-2028 to be 2.2 percent, slightly above the BLS 2018-2028 forecast (2.1 percent). However, after 2030, REMI projects an average annual growth rate of roughly three percent for the data processing sector. Staff adjusted data processing employment using the 2020-2030 annual average growth rate from REMI and assuming a constant growth rate after 2030, which lowers the national total employment slightly.

The REMI 2.3 default forecast estimates that the region's share of the US will continue to grow, for both employment and population. The share of US data processing jobs was estimated to

grow from 18.5 percent to 22.5 percent in 2050. However, this contrasts sharply with historic experience. Based on Bureau of Economic Analysis (BEA) data, the Bay Area's share of total U.S. employment, even at peak periods, has never been above 2.9 percent and has not reached that level since the early 1990s. Staff identified sector shares to adjust and their period of adjustment, and created new regional controls that keep the share of some sectors constant after 2025 and after 2040, as shown in Table 2.

Table 2: Sector Share Adjustments Made in REMI 2.3 for a Base Case Regional Growth Forecast

- | |
|--|
| <p>(1) Sectors with share constant after 2025 (basic sectors):</p> <ul style="list-style-type: none">• Oil and gas extraction• Mining (except oil and gas)• Support activities for mining• Beverage and tobacco product manufacturing• Wholesale trade• Data processing, hosting, and related services; Other information services• Broadcasting, except Internet• Telecommunications• Professional, scientific, and technical services• Management of companies and enterprises• Administrative and support services <p>(2) Sectors with share constant after 2040 (local serving):</p> <ul style="list-style-type: none">• Construction• Retail trade• Transit and ground passenger transportation• Monetary authorities - central bank; Credit intermediation and related activities• Securities, commodity contracts, other investments; Funds, trusts, other financial vehicles |
|--|

Source: ABAG/MTC and Center for Continuing Study of the California Economy

Base Case Relative Housing Price Adjustment

In REMI, relative housing price influences overall population levels by way of factoring into the relative wage levels of the region, net of housing costs. Higher relative prices will make the region less attractive to new workers and labor costs more expensive, all other things equal. REMI does not account for absolute levels for current and future prices but instead provides a measure of relative prices for regions compared to national levels. Staff looked at ACS median prices and Zillow reported prices to determine if the REMI relative housing price index had accurately reflected the relative strength of the Bay Area housing market. Based on a review of ACS and Zillow data, staff determined that the price difference was not fully captured in the REMI index. REMI 2.3 shows Bay Area prices ranging from 1.3 times the national level in Solano to 3.6 times the national level in San Francisco in 2018 - with a weighted average of 2.8. While using Zillow homeowner and the renter indices, the weighted average of this aggregated series is 3.1, 11 percent above the REMI price index. Staff used this higher ratio for 2018 for each county and maintained this proportional higher price through 2050. This relative housing price was utilized for the Base Case Forecast.

*Table 3: Relative Housing Price Comparisons, REMI, ACS and Zillow**

	ACS Relative Home Value	Zillow All Home Index	Zillow Rental Index	Zillow Average All Home and Rental	REMI	Zillow Relative to REMI
Alameda	4.4	3.6	1.9	2.7	2.5	1.1
Contra Costa	3.5	2.5	1.7	2.1	2.1	1.0
Marin	5.5	4.4	2.4	3.4	3.3	1.0
Napa	3.4	3.3	1.8	2.6	2.0	1.3
San Francisco	6.2	7.0	2.7	4.9	3.6	1.4
San Mateo	6.2	5.9	2.3	4.1	3.5	1.2
Santa Clara	5.7	4.7	2.1	3.4	3.1	1.1
Solano	2.3	1.8	1.3	1.5	1.3	1.2
Sonoma	3.4	2.9	1.7	2.3	2.0	1.2
Weighted Average	4.8	4.0	2.2	3.1	2.8	1.1

Source: ABAG/MTC from REMI 2.3, calculations from data from the American Community Survey, and Zillow Home Value Index (2018, Bay Area Counties and US), Zillow Rental Index (2018, Bay Area Counties and US). Weighted average calculated using California Department of Finance housing unit numbers.

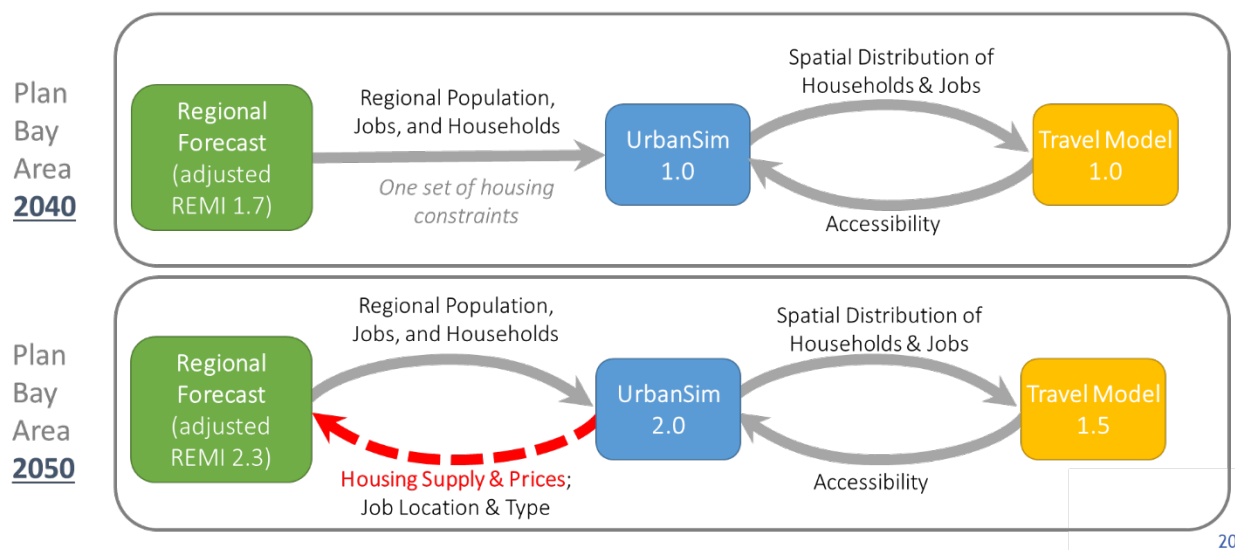
*Note: Staff used Zillow index only because it includes detailed rental information. ACS data was shown for reference in this table.

Methodology and Assumptions: Upper Range Forecast

Building upon the methodology for the Base Case Forecast, a consistent Upper Range Forecast was also developed. As described in the adopted Regional Growth Forecast Methodology, when preparing a Regional Growth Forecast for Plan Bay Area 2050, staff intends to consider how UrbanSim 2.0 results could be factored into the modified REMI model. These models appropriately reflect the effects of housing, economic, and other critical strategies in the Draft and Final Blueprint.

Due to the directionality of these data flows, this element of the methodology is referred to as the “backward arrow” as shown in Figure 2. For example, where and how much housing is built could change the cost of housing, as well as the cost and demand for labor. Similarly, a change in housing prices and location overall could further change the number and types of jobs that can be generated in the region as well as the labor force that can live in the region.

Figure 2: Integrating Strategies into the Regional Growth Forecast for Plan Bay Area 2050



In producing this range for the Draft Regional Growth Forecast, staff focused the effects of housing strategies on the region’s employment and demographics. The “backward arrow” indicates that the Regional Growth Forecast would ultimately use UrbanSim results as an input. Staff kicked off implementation of this conceptual approach, following a literature review process, by first looking at a potential affordability target - bringing home prices relative to the U.S. as a whole back to 2001 levels (approximately a 35 percent decrease from 2018 levels).

Based on Horizon Futures Round 2 analyses of development capacity associated with potential housing strategies, this would be an ambitious but still feasible target for the Bay Area to work towards over time. Future UrbanSim 2.0 modeling of the full suite of revised housing strategies going forward would help to determine if the final set of strategies for Plan Bay Area 2050 would be sufficient to enable this level of supply; this work will proceed once the Draft Blueprint strategies are advanced into the modeling phase this winter.

To produce the Upper Range Forecast while integrating greater housing supply and improved affordability outcomes, staff made several modifications to the Base Forecast. These modifications assume that strategies to increase housing supply at all income levels would be integrated into the Blueprint:

- First, staff modified the relative housing price variable in REMI such that by 2050 the ratio between the housing price of the Bay Area and that of the nation is 35 percent below 2018 levels. As a result of potential strategies to increase housing supply, Bay Area housing prices would then grow at a slower rate than the nation in the next three decades.
- Second, staff added the investment associated with construction of new housing units as an input in REMI to capture additional economic benefits of increasing housing supply in the region. Increases to construction employment and associated economic activity are meaningful co-benefits of additional housing construction.

Future iterations will enable further back-and-forth between UrbanSim 2.0 and REMI, based on the ultimate strategies integrated into the Draft Blueprint.

Draft Range for the Regional Growth Forecast

Table 4 shows the Plan Bay Area 2050 Draft Regional Growth Forecast range. The Base Case forecast shows that between 2015 and 2050, the region's employment is projected to grow by 1.1 million to just over 5.1 million total jobs. Population is forecasted to grow by 2.0 million people to 9.7 million. This population will comprise over 3.6 million households, for an increase of nearly 950,000 households from 2015. The Upper Range forecast, which assumes successful housing policies and strategies would effectively lower the region's relative housing price, shows the region would grow to 5.2 million jobs, and 10.2 million people comprising 4.0 million households. In each case, the number of housing units² plans for no net growth in the in-commute into the region, consistent with state law and MTC/ABAG legal agreements.

Table 4: Plan Bay Area 2050 - Draft Regional Growth Forecast Range

<i>Base Case</i>	2015	2020	2025	2030	2035	2040	2045	2050
<i>Employment</i>	4,007,000	4,418,000	4,453,000	4,522,000	4,654,000	4,825,000	4,952,000	5,087,000
<i>Population</i>	7,630,000	7,954,000	8,294,000	8,512,000	8,750,000	9,059,000	9,372,000	9,692,000
<i>Households</i>	2,701,000	2,880,000	3,035,000	3,155,000	3,274,000	3,404,000	3,529,000	3,648,000
<i>Housing Units</i>	2,862,000	3,047,000	3,211,000	3,341,000	3,471,000	3,614,000	3,749,000	3,880,000
<i>Upper Range</i>								
<i>Employment</i>	4,007,000	4,493,000	4,518,000	4,588,000	4,727,000	4,909,000	5,050,000	5,200,000
<i>Population</i>	7,630,000	8,029,000	8,440,000	8,708,000	9,008,000	9,396,000	9,805,000	10,236,000
<i>Households</i>	2,701,000	3,042,000	3,228,000	3,377,000	3,528,000	3,693,000	3,857,000	4,021,000
<i>Housing Units</i>	2,862,000	3,325,000	3,526,000	3,690,000	3,858,000	4,043,000	4,223,000	4,404,000

Changes Compared to Plan Bay Area 2040

The following table shows the Base Case 2050 forecast in blue, the Plan Bay Area 2040 forecast in black, and the difference between the two through 2040. The Base Case forecast projects approximately 100,000 more jobs, 600,000 fewer people, 23,000 fewer households and 9,000 more housing units in 2040 compared to the Plan Bay Area 2040 forecast.

² Consistent with the legal settlement with the Building Industry Association, this housing unit projection includes housing for all projected households plus the number of units that would be needed to house the increased number of workers estimated to commute into the region. The in-commute change is estimated using REMI output for employment, and "residence adjusted employment". After adjusting for workers per household, an in-commuter household number is added to the base for estimating the regional housing control total. The regional housing control total is the sum of the households estimated for the projected population plus households equivalent to the maximum estimated in-commute number, plus a vacancy factor.

Table 5: Plan Bay Area 2050 Base Case versus Plan Bay Area 2040

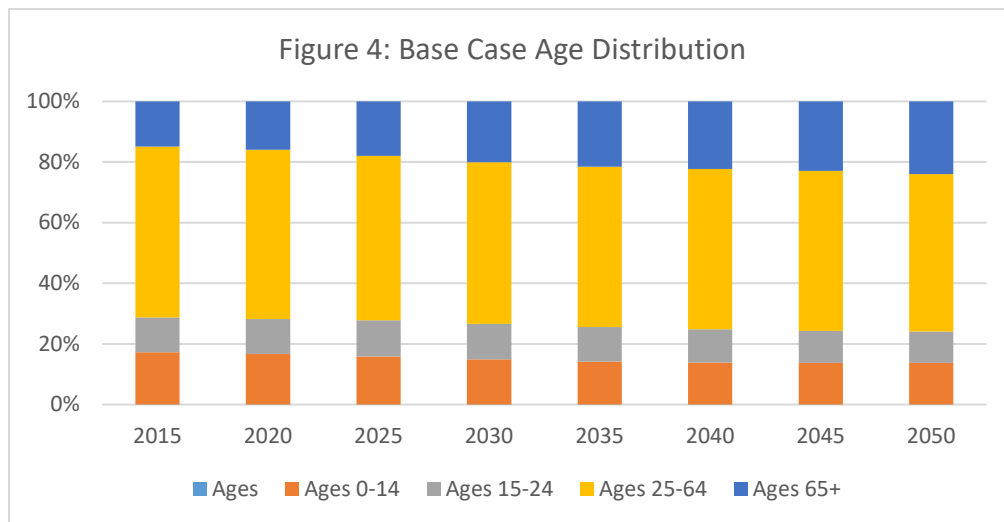
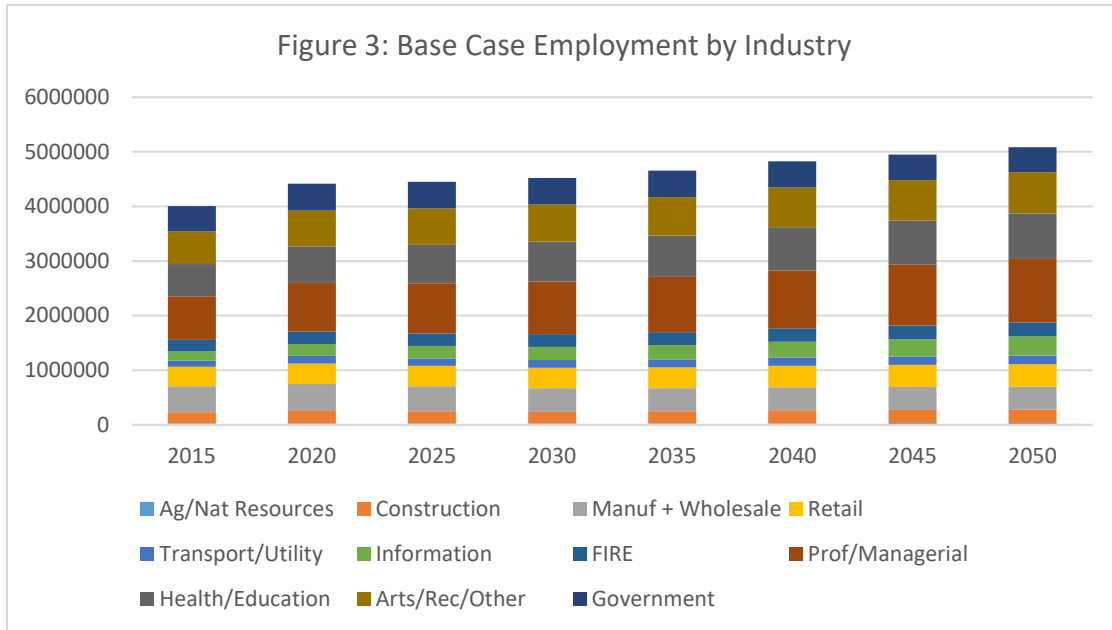
<i>Base Case</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>	<i>2030</i>	<i>2035</i>	<i>2040</i>	<i>2045</i>	<i>2050</i>
<i>Employment</i>	4,007,000	4,418,000	4,453,000	4,522,000	4,654,000	4,825,000	4,952,000	5,087,000
<i>Population</i>	7,630,000	7,954,000	8,294,000	8,512,000	8,750,000	9,059,000	9,372,000	9,692,000
<i>Households</i>	2,701,000	2,880,000	3,035,000	3,155,000	3,274,000	3,404,000	3,529,000	3,648,000
<i>Housing Units</i>	2,862,000	3,047,000	3,211,000	3,341,000	3,471,000	3,614,000	3,749,000	3,880,000
<i>PBA40</i>								
<i>Employment</i>	4,026,000	4,136,000	4,268,000	4,405,000	4,549,000	4,698,000		
<i>Population</i>	7,574,000	7,920,000	8,284,000	8,689,000	9,143,000	9,653,000		
<i>Households</i>	2,679,000	2,882,000	3,009,000	3,142,000	3,281,000	3,427,000		
<i>Housing Units</i>	2,840,000	2,927,000	3,080,000	3,245,000	3,421,000	3,605,000		
<i>Difference between Base Case & PBA40</i>								
<i>Employment</i>	-19,000	282,000	185,000	117,000	105,000	127,000		
<i>Population</i>	56,000	34,000	10,000	-177,000	-393,000	-594,000		
<i>Households</i>	22,000	-2,000	26,000	13,000	-7,000	-23,000		
<i>Housing Units</i>	22,000	120,000	131,000	96,000	50,000	9,000		

There are several reasons for the difference in the forecasts between Plan Bay Area 2040 and the Base Case for 2050. Differences in population are largely due to the assumption that the recent observed decline in Hispanic international migration and birth rates would continue into the future. Recent strong employment growth has caused us to adjust the early years of the forecast, and as a result the endpoint of the trend is also higher. Finally, comparing the age composition of the population in these two forecasts, the Base Case has higher number older adults, who usually have relatively high headship rates, i.e. forming more households.

Additional Demographic Data from Base Case Forecast

As expected, professional & management and health & education industries are forecasted to continue dominating future employment, as the absolute number of jobs in manufacturing & wholesale as well as transportation & utilities continue to decline. Such trends may be able to be affected slightly with new economic strategies under consideration for the Plan Blueprint. Results are generally consistent with the Upper Range Forecast as well.

Also as expected, the increasing share of the 65+ age group and the declining share of young children are anticipated to continue in the decades ahead. Results are generally consistent with the Upper Range Forecast as well.



Next Steps

This early presentation of the Draft Regional Growth Forecast gives staff time to incorporate feedback and address concerns from stakeholders. Upcoming refinements will work to align the Regional Growth Forecast with the specific strategies integrated into the Draft Blueprint for Plan Bay Area 2050. Staff will refine the assumptions and work on improving the methodology with the consultant and the TAC, with a Final Regional Growth Forecast adopted anticipated in spring 2020.



PLAN BAY AREA 2050

Draft Regional Growth Forecast

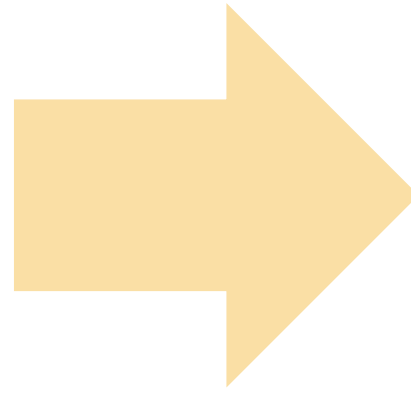
Bobby Lu, Associate Planner
Regional Planning Program

Regional Advisory Working Group
January 7, 2020

Setting the Stage: Context for Plan Bay Area 2050

Regional affordability
remained a critical issue
in **Plan Bay Area 2040**

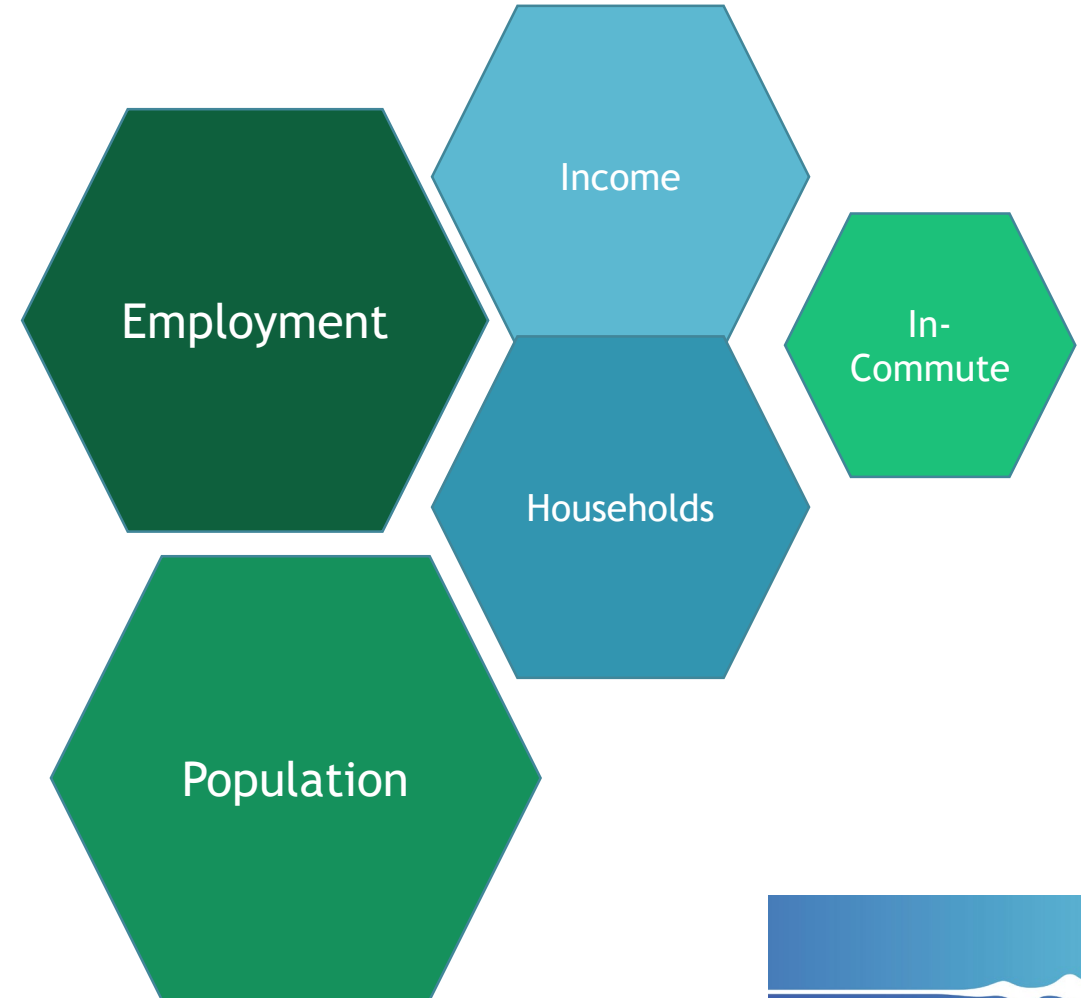
Horizon Initiative
studied how the region
could respond to
uncertainties with a
suite of new strategies



Plan Bay Area 2050
Regional Growth
Forecast to integrate
strategies that affect
both the level of
growth and critical
regional outcomes

Setting the Stage: How Will We Forecast the Growth Pattern

- **Plan Bay Area 2050 Regional Growth**
Forecast estimates employment and population, households by income category, and in-commuting change at the regional level between 2015 and 2050.
- The next step is to forecast the total amount of growth in **local areas** based on strategies integrated into the Plan.



Forecast Range: Business as Usual vs. Strategy Infused

- **Base Case:** business as usual, assuming few changes from existing policies.
- **Upper Range:** strategy infused forecast, reflecting the impacts of potential policies and strategies on regional economy and demographics.

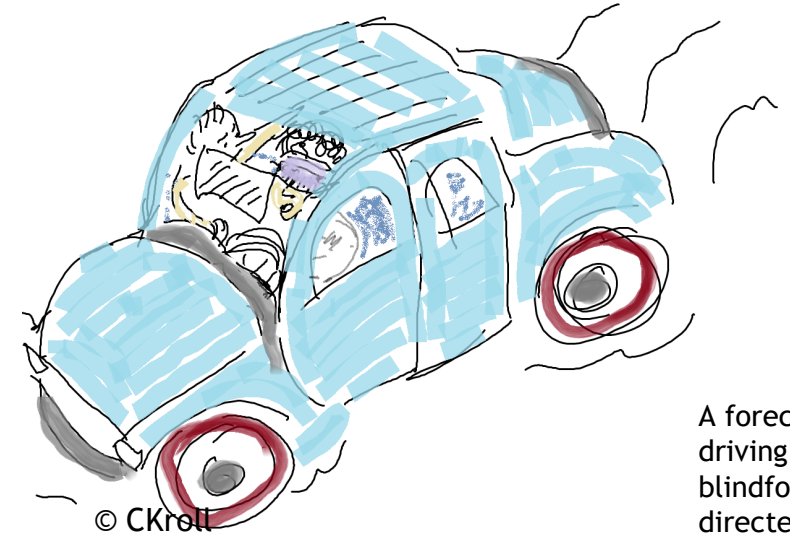


PLAN BAY AREA 2050

Forecasting Tools and Assumptions

Developing the Regional Growth Forecast

- **Tools**
 - Regional Economic Models, Inc. (REMI) version 2.3 - for the Bay Area
 - Household + Income Model (*developed in-house*)
 - In-Commute Assessment (*developed in-house*)
- **Builds upon the REMI model**, adjustment based upon ABAG/MTC data analysis; developed in consultation with a 15-member **Technical Advisory Committee** and the Center for Continuing Study of the California Economy.

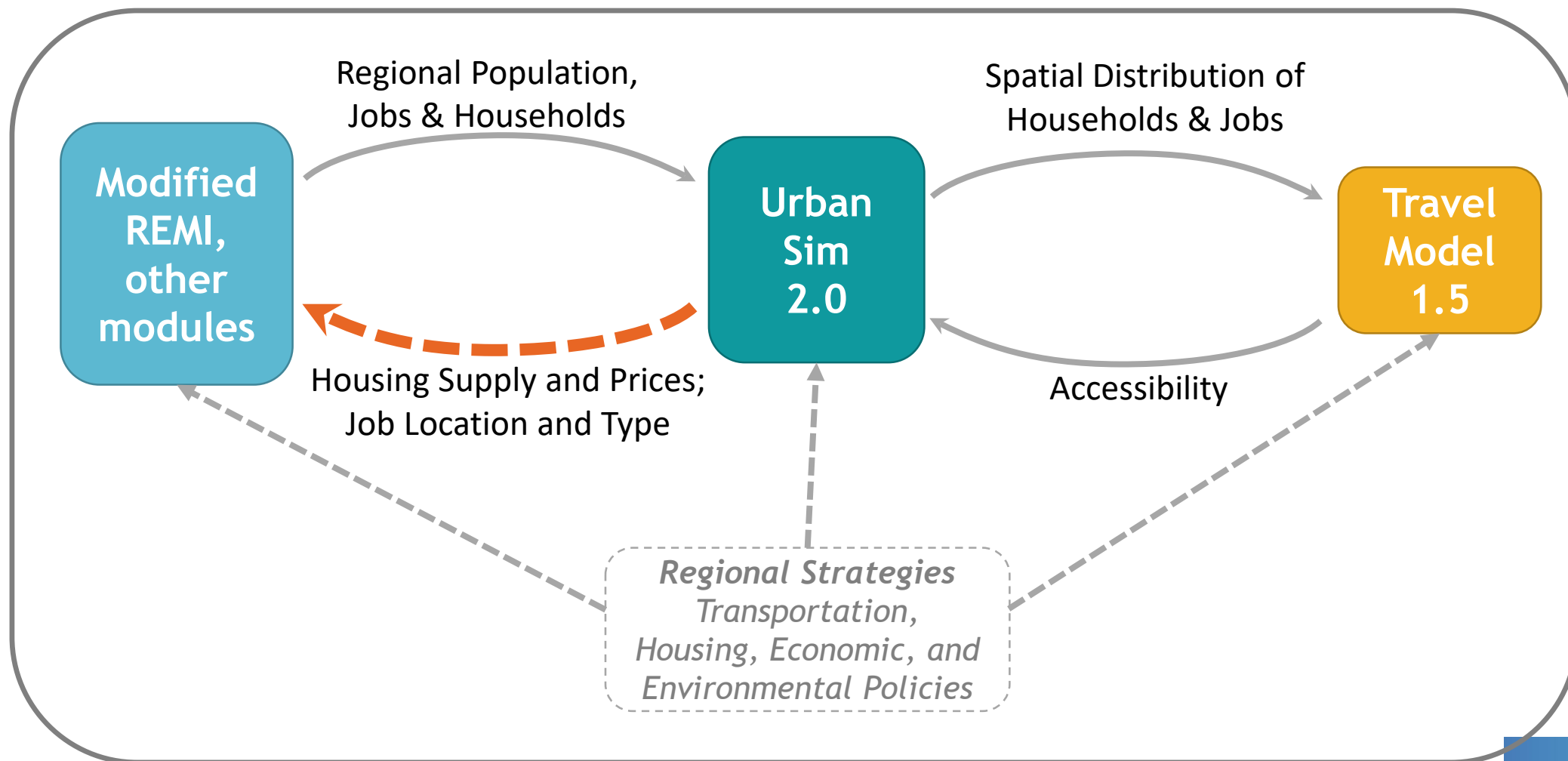


A forecast is like driving blindfolded, while directed by someone looking in the rear view mirror.

Base Case Assumptions

- Bay Area employment is driven by national trends in population growth and employment.
- Overall U.S. population growth will likely slow over next three decades, particularly given observed decline in Hispanic international migration and birth rates.
- Competitiveness of Bay Area sectors relative to the equivalent sectors in the U.S. will grow slowly then stabilize.
- Bay Area relative housing price to the nation remains high.

The Backward Arrow



Upper Range Assumptions

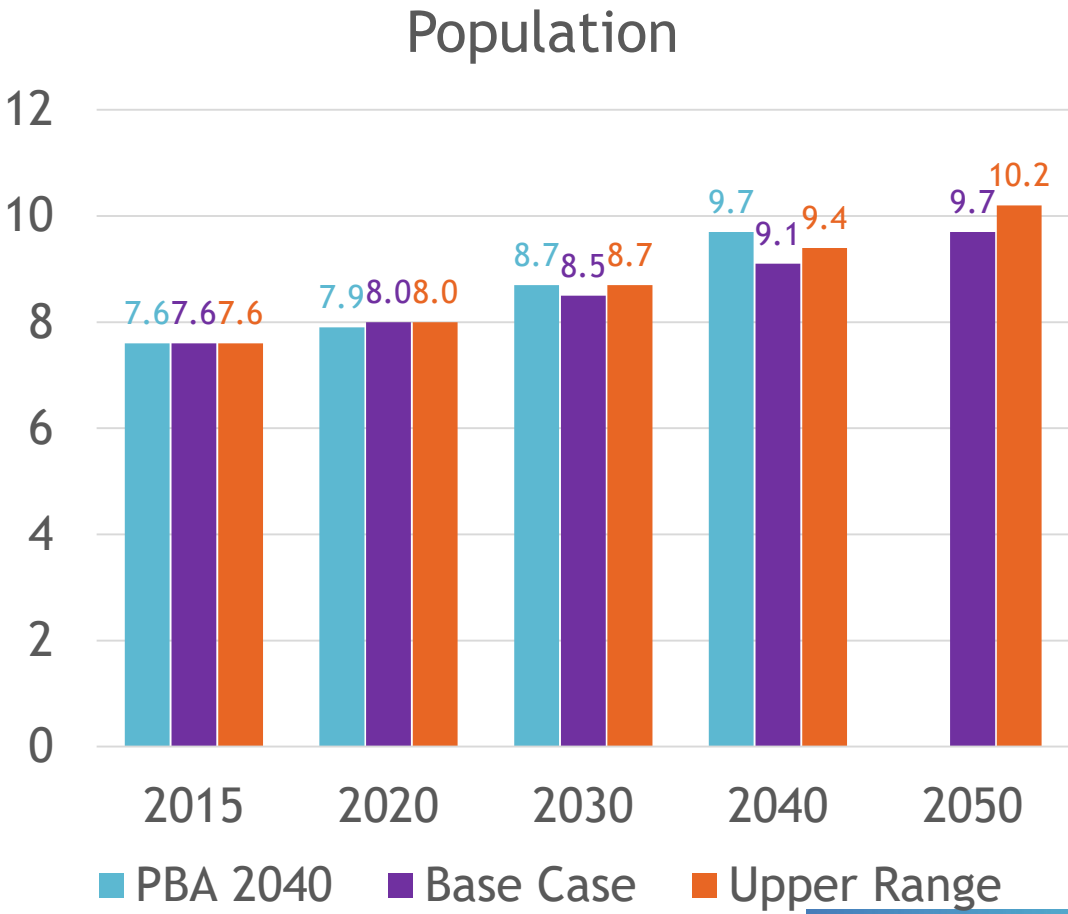
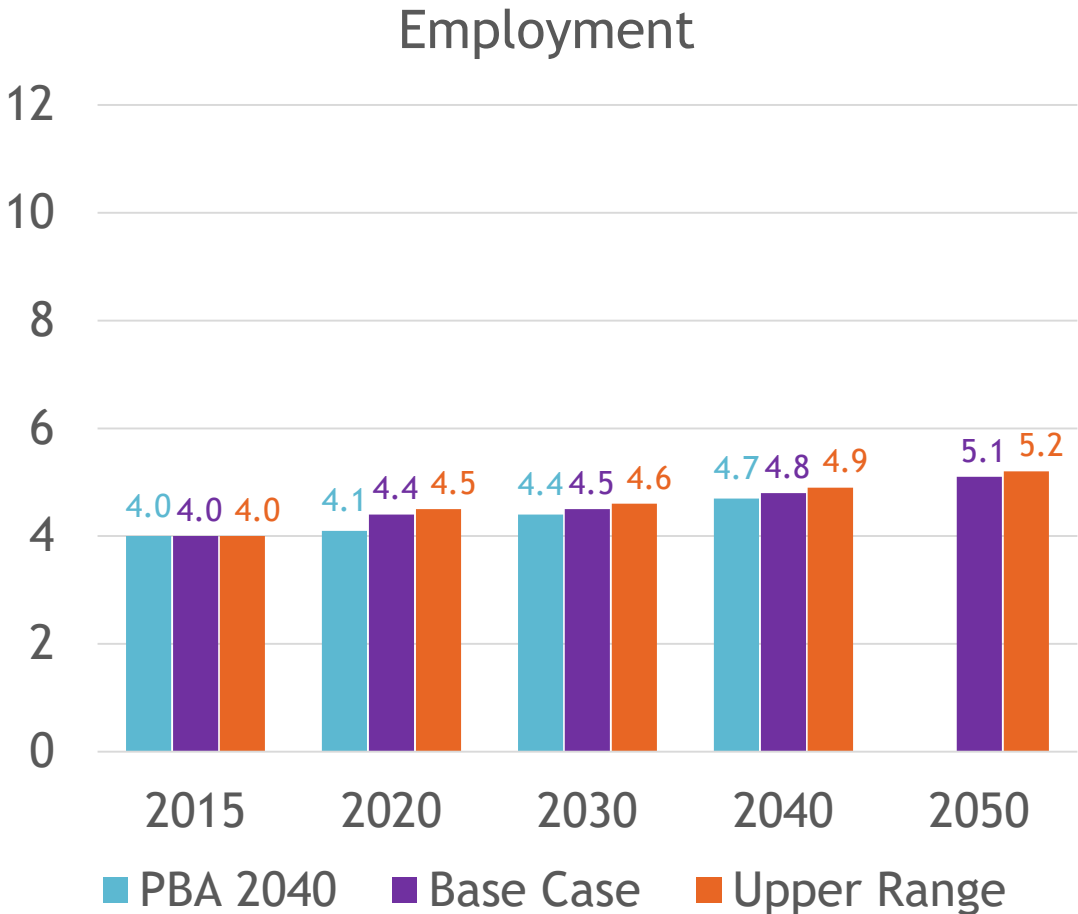
- Where and how much housing is built could change the cost of housing, as well as the cost and demand for labor.
- A change in housing prices and location could further change the number and types of jobs as well as the labor force that can live in the region.
- We use REMI model to explore what happens to the region's economy and demographics if a suite of housing strategies bring prices relative to the nation as a whole back to levels from 2001.
 - This represents a 35 percent decrease from the price differential in year 2018 - an ambitious but feasible target for improving regional affordability.



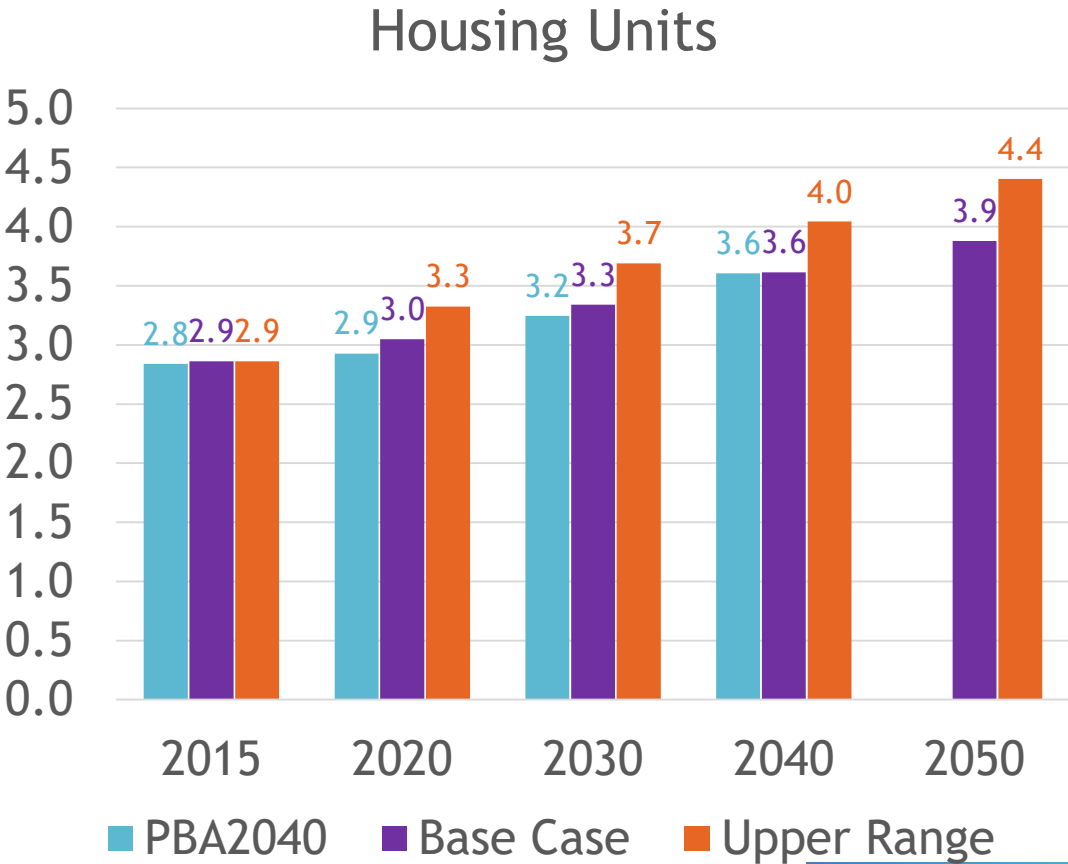
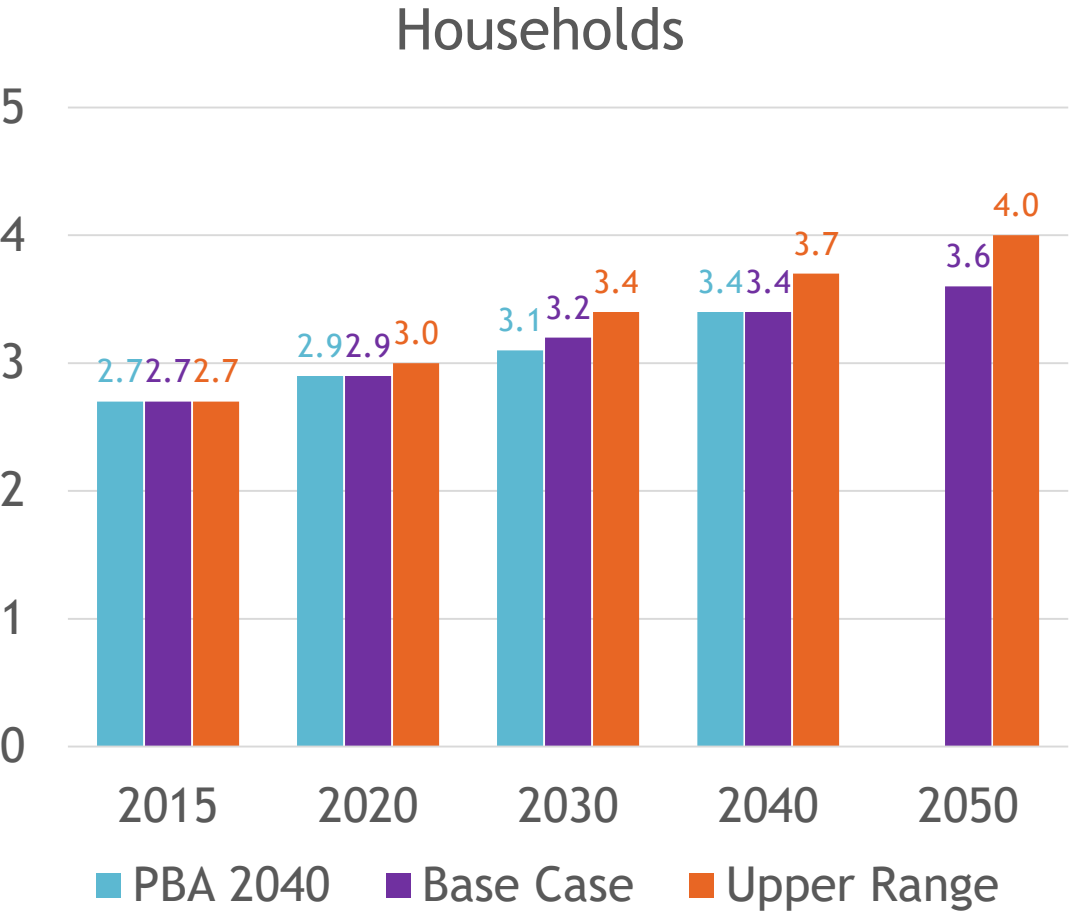
PLAN BAY AREA 2050

Draft Regional Growth Forecast

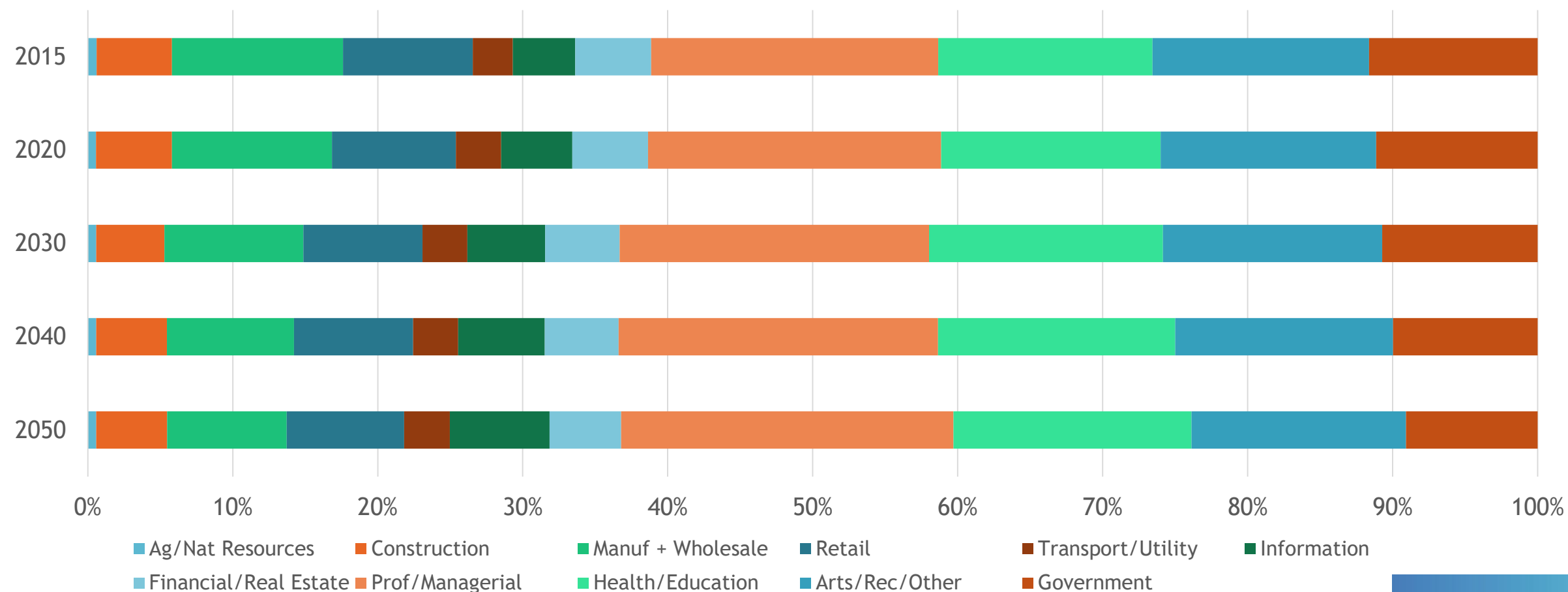
Draft Regional Growth Forecast Range: Employment and Population



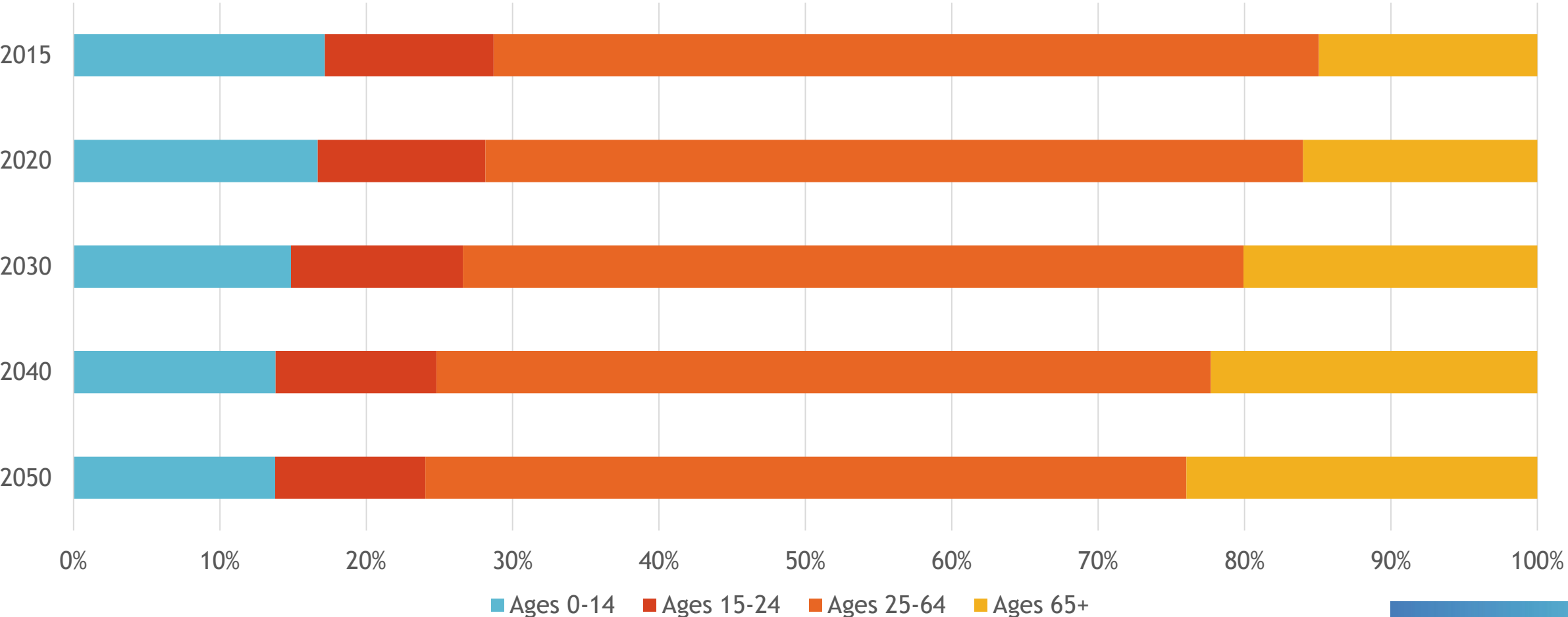
Draft Regional Growth Forecast Range: Households and Housing Units



Regional Growth Forecast: Base Case Employment by Industry



Regional Growth Forecast: Base Case Population Age Distribution



What's Next For the Regional Growth Forecast?

- Draft Regional Growth Forecast Feedback and Refinement - Winter 2020
- Final Regional Growth Forecast - Spring 2020

Metropolitan Transportation Commission

Legislation Details (With Text)

File #: 19-1380 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 11/21/2019 **In control:** Regional Advisory Working Group
On agenda: 1/7/2020 **Final action:**
Title: Plan Bay Area 2050: Transportation Element Next Steps

Information on the approach to move forward with the transportation investment strategy and complementary strategies for the Draft Blueprint.

Sponsors:**Indexes:****Code sections:**

Attachments: [03_PBA2050-Transportation Element Next Steps.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Plan Bay Area 2050: Transportation Element Next Steps

Information on the approach to move forward with the transportation investment strategy and complementary strategies for the Draft Blueprint.

Presenter:

Adam Noelting and Raleigh McCoy

Recommended Action:

Information

Attachments:

**Metropolitan Transportation Commission and the Association of Bay Area Governments
Regional Advisory Working Group**

January 7, 2020

Agenda Item 3

Plan Bay Area 2050: Transportation Element Next Steps

Subject: Information on the approach to move forward with the transportation investment strategy and complementary strategies for the Draft Blueprint.

Background: Regional Advisory Working Group Agenda Item 3, Plan Bay Area 2050: Transportation Element Next Steps is attached. This report will be presented to the Bay Area Partnership Board on January 6, 2020.

Staff will be at your January 7 meeting to discuss this report. The Working Group's input is requested.

Attachments: Agenda Item 3a from the January 6, 2020 Bay Area Partnership Board

Bay Area Partnership Board

January 6, 2020

Agenda Item 3a

Plan Bay Area 2050: Transportation Element Next Steps

Subject: Information on the approach to move forward with the transportation investment strategy and complementary strategies for the Draft Blueprint.

Background: The Plan Bay Area 2050 Blueprint will be comprised of four elements; Transportation, Housing, Economy, and Environment. Comprehensively, actions related to these four elements will strive to move the Bay Area towards a more affordable, connected, diverse, healthy, and vibrant region. The Blueprint's transportation element will build upon Horizon's nearly two years of exploratory analyses to identify a fiscally constrained investment strategy.

It is not feasible to include all of the proposed transportation investments within the region's forecasted revenues, even if new revenues become available. As a result, the investment strategy will strive to balance the forecasted revenues across strategies to maintain our existing transportation system—*road and transit infrastructure and run transit service*—and strategies to implement and build the region's next-generation transportation projects/programs.

The Blueprint will be crafted in two phases: the **Draft Blueprint** (analyzed in February 2020), and the **Final Blueprint** (analyzed in summer 2020). The Draft Blueprint will emphasize investments in regional strategies evaluated in Horizon to achieve PBA 2050's vision and state-mandated GHG emissions reduction goals. The Draft Blueprint will leave fiscal capacity for additional investments in strategies and to include other county priorities. The Final Blueprint will continue to refine the strategies and incorporate a more comprehensive yet fiscally constrained list of transportation investments. Both the Draft Blueprint and Final Blueprint will leverage work from the Project Performance Assessment to understand which projects are most effective and most equitable, given the financial constraints.

Issues: New to PBA 2050 is a more stringent per-capita GHG emissions reduction target set by the California Air Resources Board. Initial analysis shows that the region will fall short of the new target if the strategies from prior iterations of Plan Bay Area are advanced into PBA 2050. A more cohesive and comprehensive approach will be needed to meet PBA 2050's more stringent target, including consideration of more aggressive strategies. If PBA 2050 were to fall short of the GHG target, the region would be at risk for not receiving future funding allocations from the Senate Bill 1 Solutions for Congested Corridors Program.

Also new to PBA 2050, the Blueprint will consider two revenue scenarios: a scenario with revenue in line with the traditional forecasting methodology, and a scenario with a sizeable influx of new revenues. These two scenarios, titled Blueprint *Basic* and Blueprint *Plus*, will prepare the region to meet its goals in two disparate funding scenarios. Blueprint *Plus* will result in additional fiscal capacity for increased levels of investment in regional strategies to create a more aspirational Plan.

From Compelling Case to Collaborative Space

In previous iterations of Plan Bay Area, the most cost-effective capital-intensive projects (“high-performers”) formed the backbone of the Plan’s investment strategy and low-performers were required to present a “compelling case” to the Commission prior to their inclusion into the Plan. Staff propose an alternative to the compelling case process that would rely on collaboration with CTAs, transit operators, or other project sponsors to identify mitigations to boost a project’s performance across one or more of the three assessment metrics—*B/C Ratio*, *Equity Score*, and *Guiding Principles Flags*—through project-level refinements or support of complementary strategies. Staff propose working collaboratively with CTAs to draw upon the Project Performance Assessment findings and identify avenues to improve the performance of projects, such as rescoping or adopting strategies to mitigate negative outcomes, as an alternative to the Compelling Case process of previous Plans. Staff proposes to set aside a share of the Plan’s revenues for the Final Blueprint, thereby leaving capacity to add projects that align with the Blueprint strategies and that mitigate performance concerns.

Outreach and Strategy Refinement

Between October and December 2019, MTC carried out three engagement campaigns to solicit feedback on proposed strategies in order to refine the strategies for inclusion in the Draft Blueprint. Two campaigns were aimed at members of the general public, one in person and one online, soliciting a combined 15,000 comments. In an effort to engage with expert stakeholders from around the region, a half-day workshop was held in mid-November to further refine the strategies and dive into the priorities for the investment strategy. **Attachment A** details the three efforts and their key takeaways.

Next Steps:

The ABAG Executive Board and MTC Commission will meet in January 2020 to discuss an initial set of regional strategies and investments to maintain our existing transportation system. In February 2020, MTC will prepare and present the Draft Blueprint’s investment framework, and in Spring 2020 MTC will present the Draft Blueprint’s preliminary analysis findings.

Attachments:

Attachment A: Presentation


Therese W. McMillan



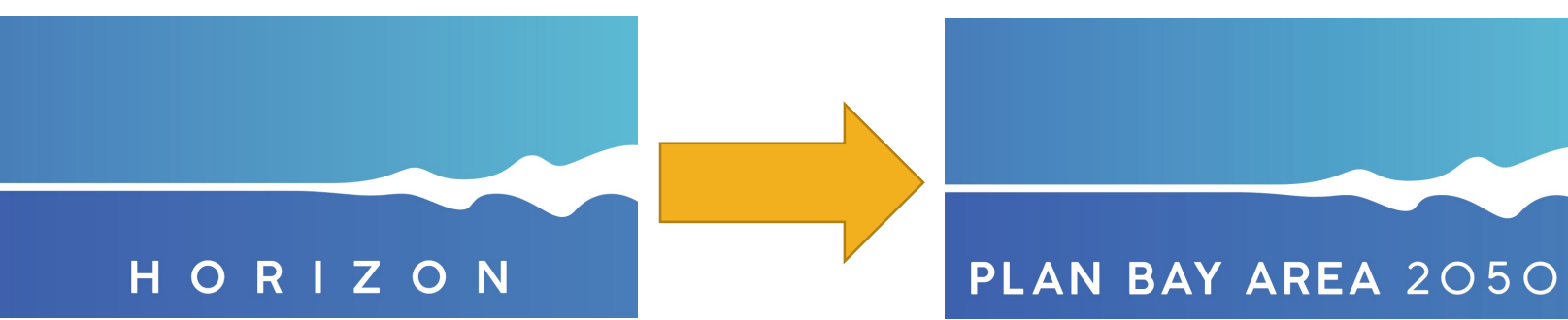
PLAN BAY AREA 2050

Plan Bay Area 2050 Draft Blueprint: Developing the Transportation Element

Bay Area Partnership Board

January 6, 2020

Adam Noelting and Raleigh McCoy



Similar to *Horizon*, ***Plan Bay Area 2050*** is integrating **four core topic areas**, as we work to create a long-range integrated regional vision for the next 30 years

Cross-Cutting Issues



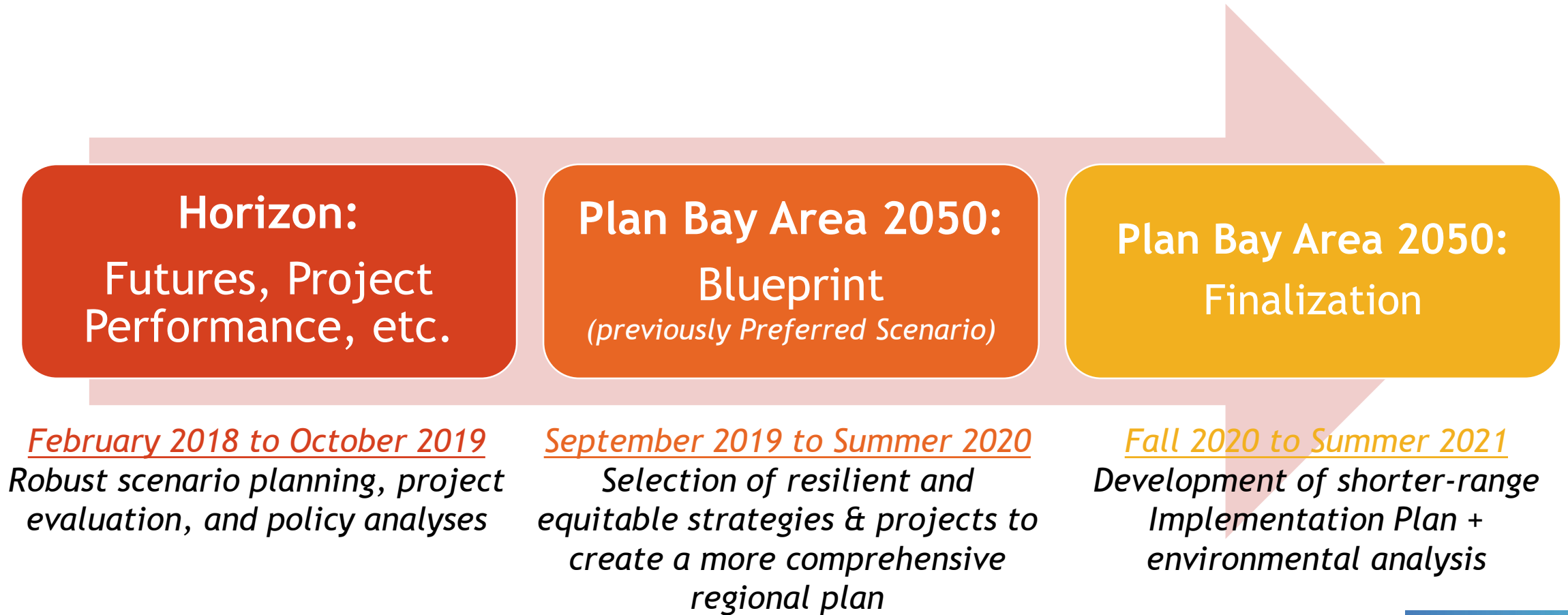
Equity



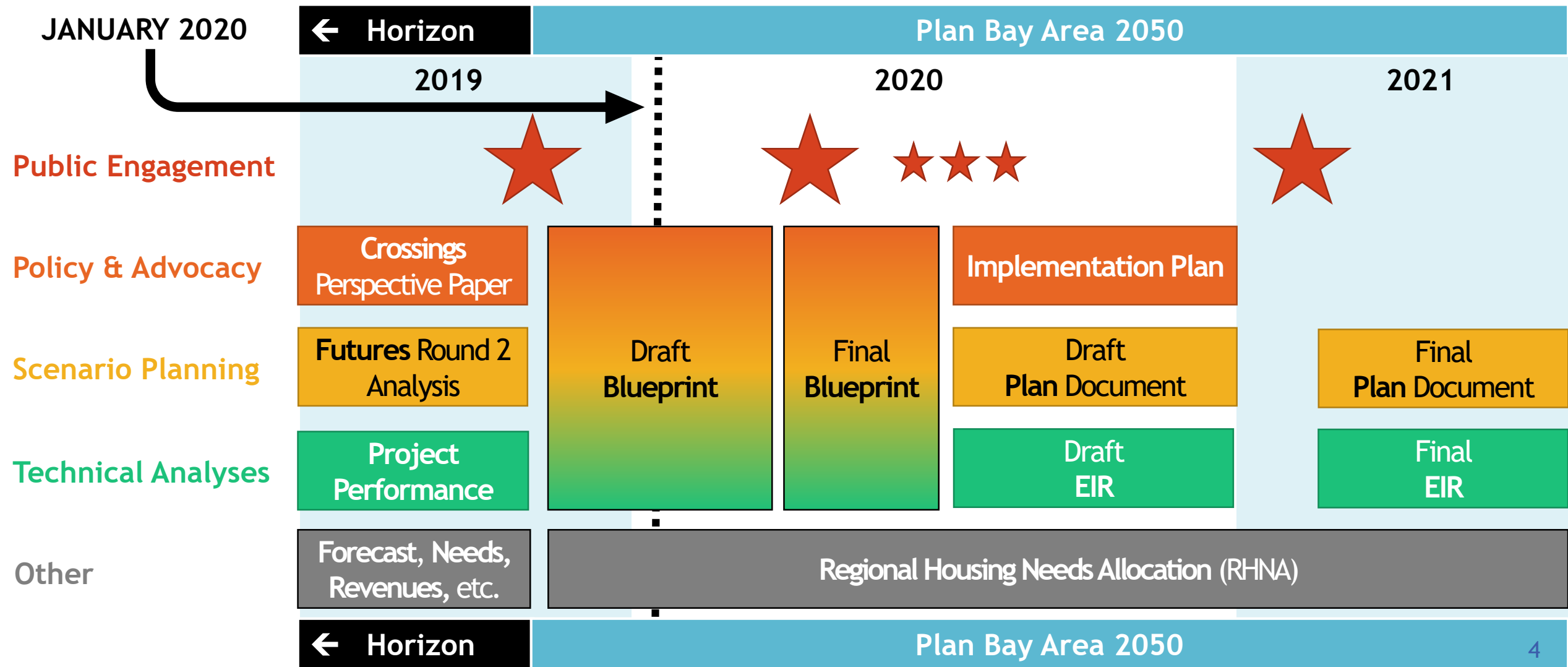
Resilience



Plan Bay Area 2050 builds on Horizon



Plan Bay Area 2050 Schedule



The Draft Blueprint Will Integrate Complementary Strategies to Achieve Improved Regional Outcomes



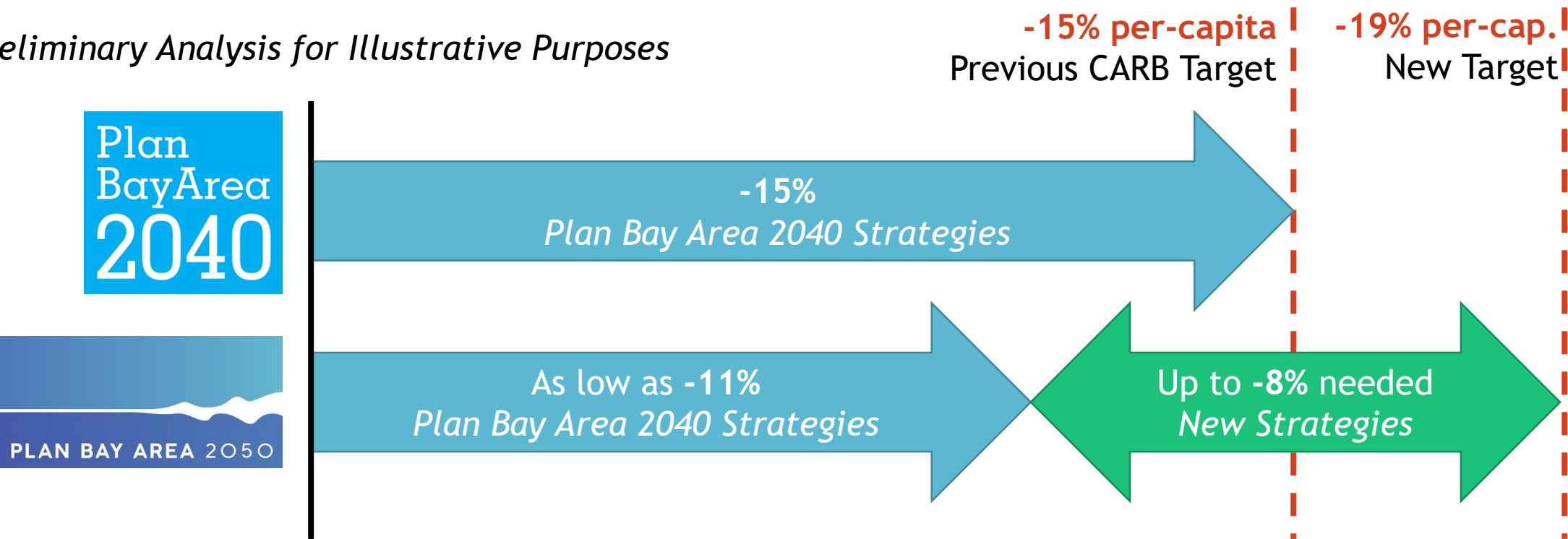
Plan Bay Area 2050 Blueprint

- **Transportation** Investments & Strategies
- **Housing** Geographies & Strategies
- **Economic** Geographies & Strategies
- **Environmental** Strategies

<p>Cross-Cutting Issues</p>	<div> <div>  <p>Equity</p> </div> <div>  <p>Resilience</p> </div> <div>  <p>Adopted by MTC and ABAG Boards September 2019</p> </div> </div>		
<p>Vision</p>	<p>To ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy, and vibrant for all.</p>		
<p>Guiding Principles</p>	 <p>Affordable</p>	<p>All Bay Area residents and workers have sufficient housing options they can afford - households are economically secure.</p>	
	 <p>Connected</p>	<p>An expanded, well-functioning, safe and multimodal transportation system connects the Bay Area - fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.</p>	
	 <p>Diverse</p>	<p>The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place - with full access to the region's assets and resources.</p>	
	 <p>Healthy</p>	<p>The region's natural resources, open space, clean water and clean air are conserved - the region actively reduces its environmental footprint and protects residents from environmental impacts.</p>	
	 <p>Vibrant</p>	<p>The Bay Area region is an innovation leader, creating quality job opportunities for all and ample fiscal resources for communities.</p>	

Plan Bay Area 2050 Must Meet a More Ambitious Greenhouse Gas Reduction Target Under SB 375

Preliminary Analysis for Illustrative Purposes



A More Cohesive, Comprehensive Approach Will be Needed to Meet this GHG Target

- Horizon provided the means to test transformative transportation and land use strategies for resilience to future uncertainty
- While previous plans have relied upon “high performer” projects and a focused growth strategy, our preliminary analysis suggests that this will not be sufficient to meet GHG goals
- Plan Bay Area 2050 will require a comprehensive approach to create a well-connected network of transportation investments, focused on complementary transportation and land use strategies that magnify the positive impacts of projects and mitigate negative externalities

The Role of “New Revenues”

Transportation



Housing



Economy



Environment



Plan Bay Area 2050 Blueprint *Basic*
Includes available revenues from Needs & Revenue assessments, but does not include New Revenues from future regional measures



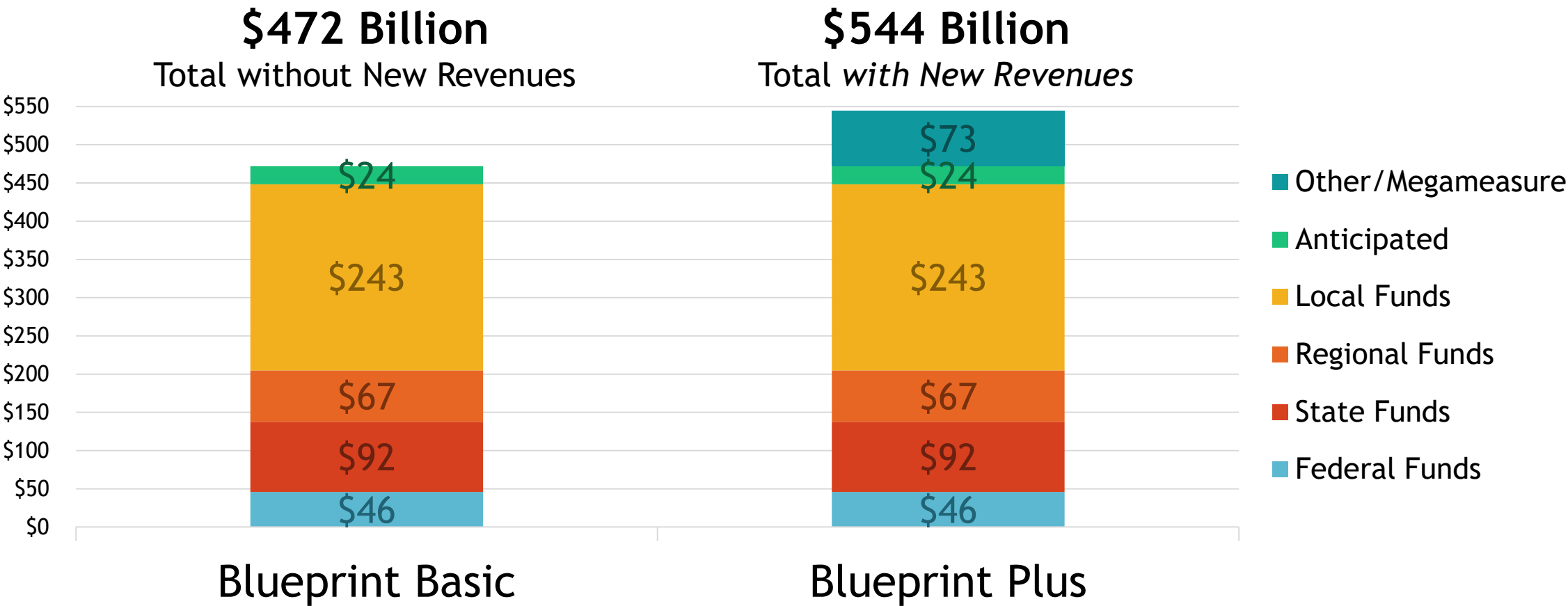
Plan Bay Area 2050 Blueprint *Plus*
Includes available revenues from Needs & Revenue assessments + additional New Revenues distributed to one or more topic areas of the Plan

This approach will provide more flexibility over the next year, should the MTC/ABAG boards wish to integrate new revenues to create a more aspirational Plan.

Either could be adopted as the Preferred Alternative in 2020 or 2021.

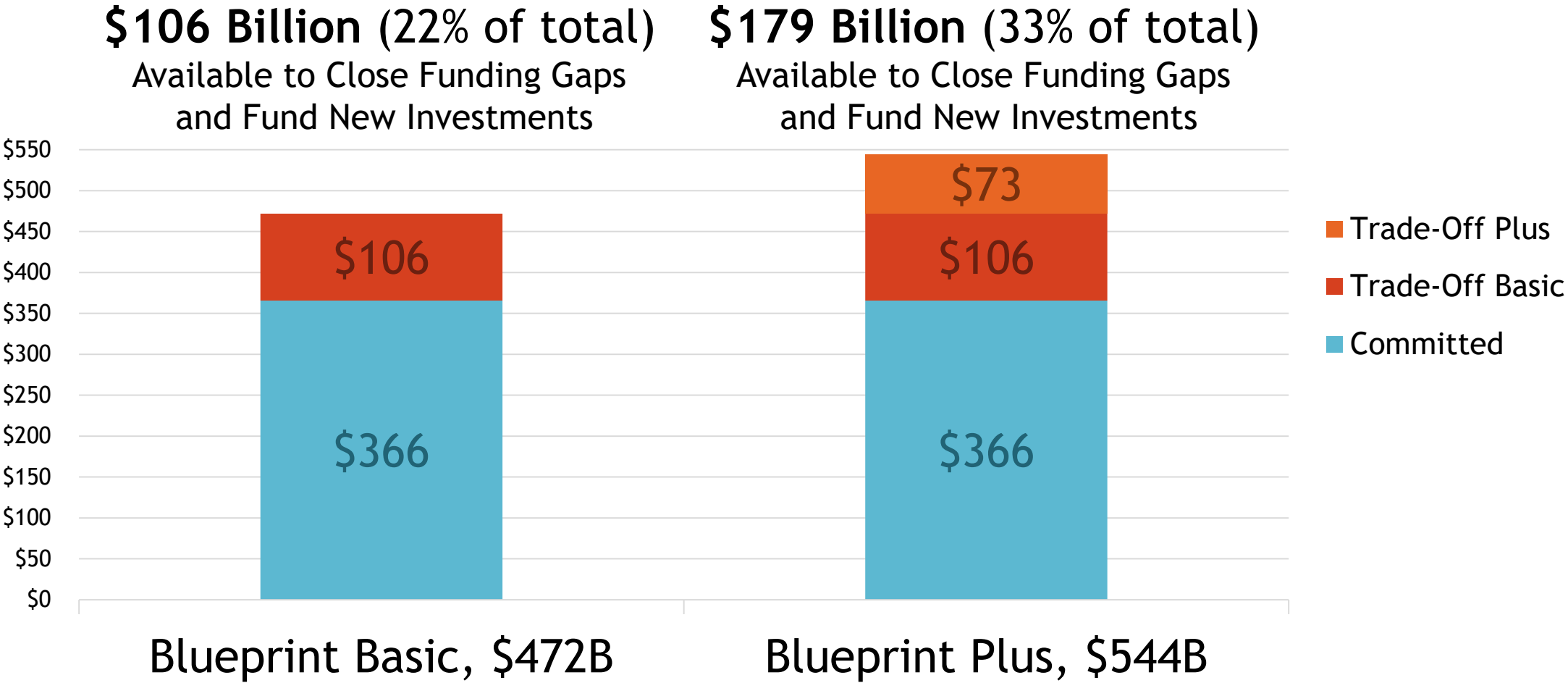
Sources of Transportation Revenues

30-Year (2021-2050) Revenue Forecast (in Billions of YOE\$)



30-Year (2021-2050) Revenue Forecast (in Billions of YOE\$)

Draft Transportation “Trade-Off” Revenues

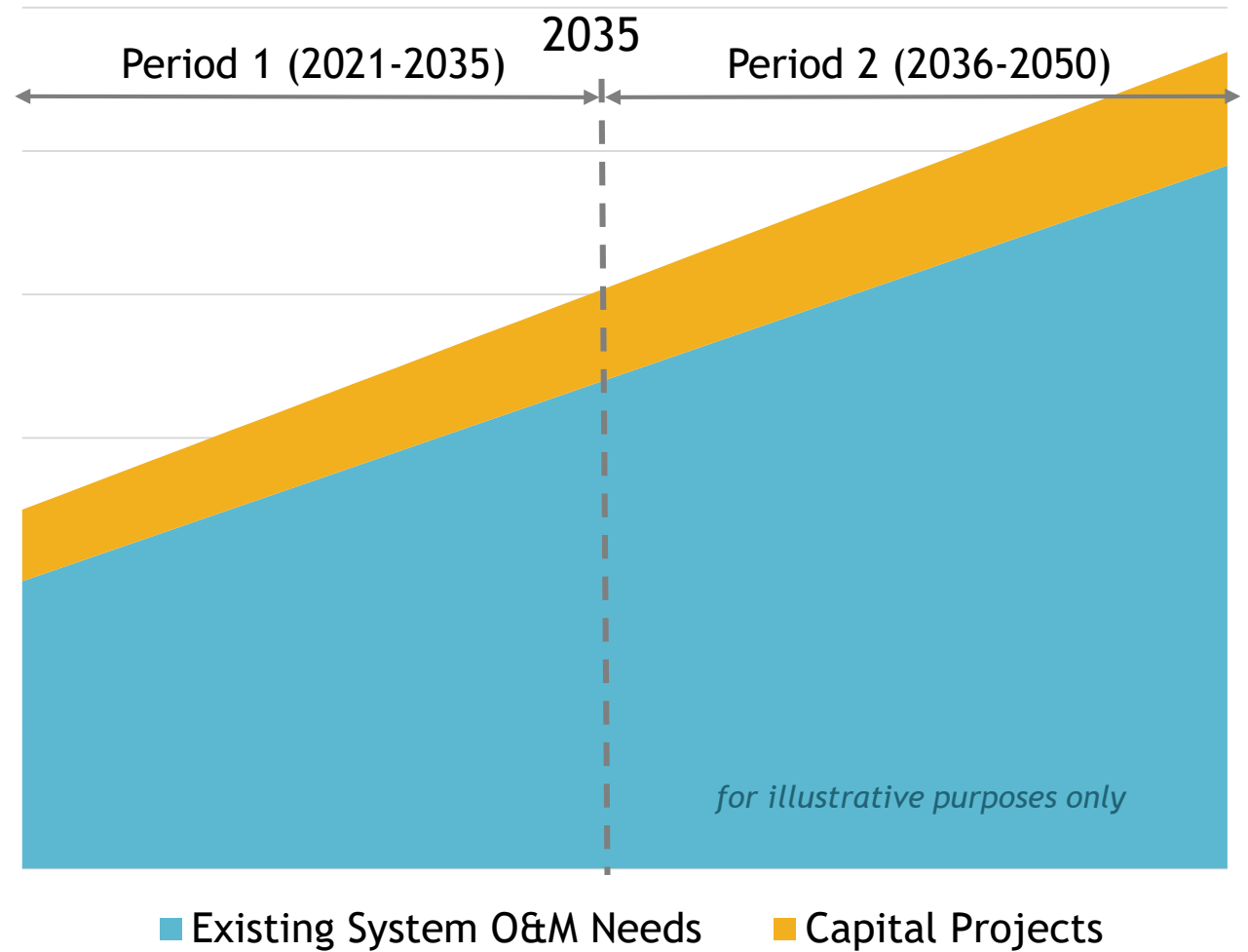


30-Year (2021-2050) Revenue Forecast (in Billions of YOES)

Transportation Revenues

PBA 2050's 30-year planning horizon will be divided into two 15-year periods.

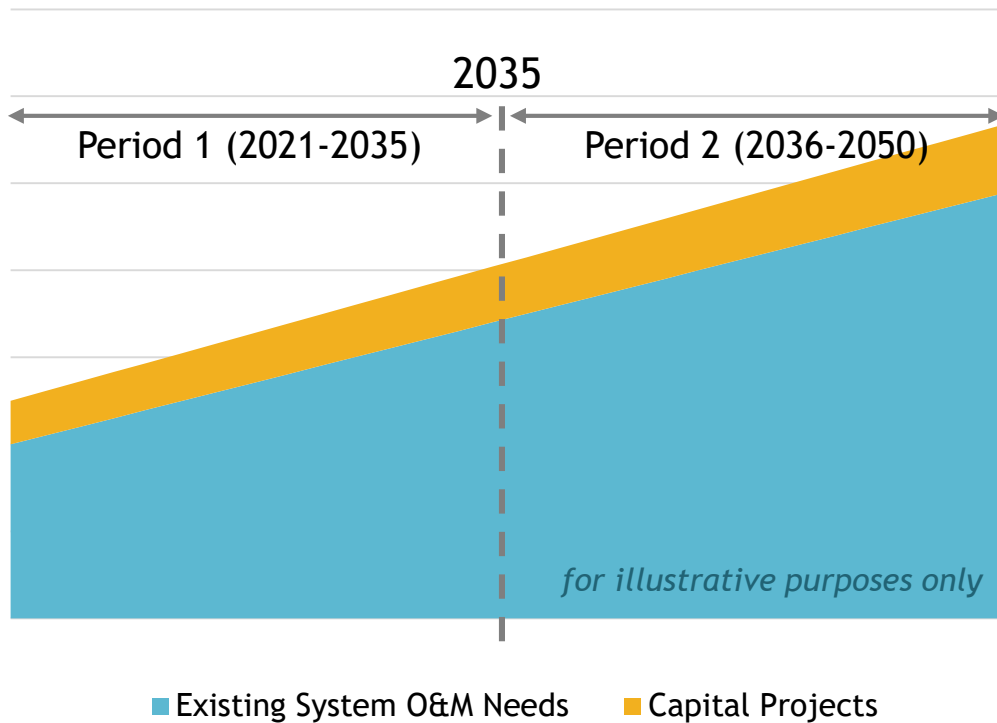
This will affect when we assume major capital projects will be delivered.



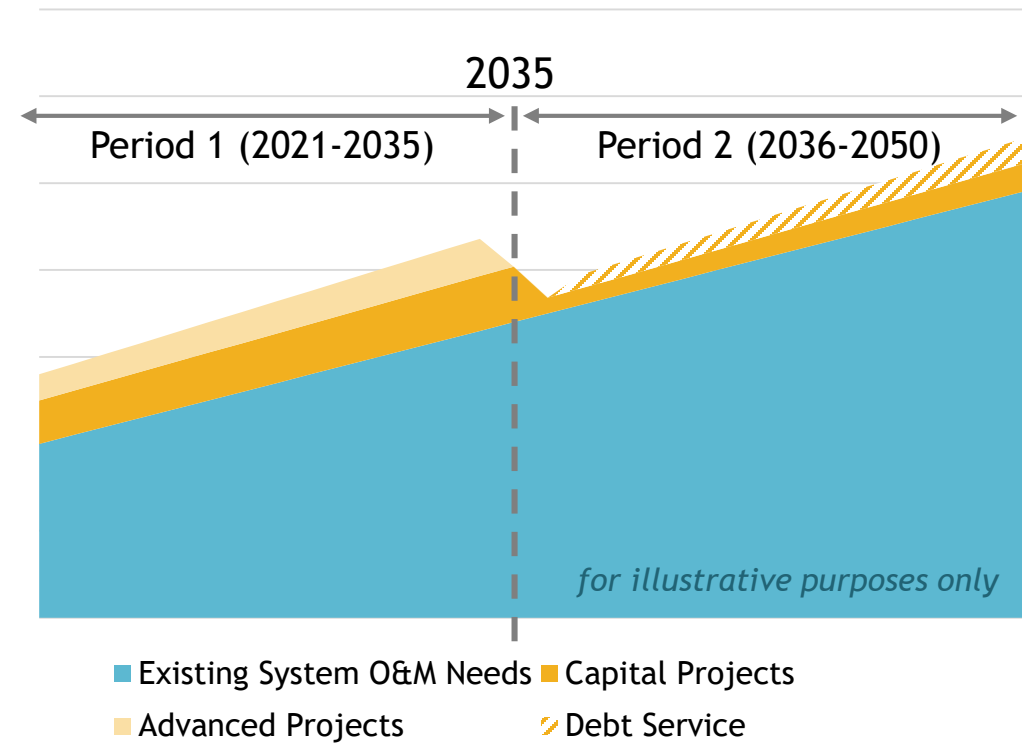
30-Year Revenue Forecast (in Billions of YOES\$)

Two Methods to Fiscally-Constrain Capital Projects in PBA 2050

Cashflow



Financing



Needs and Revenue Transportation Summary

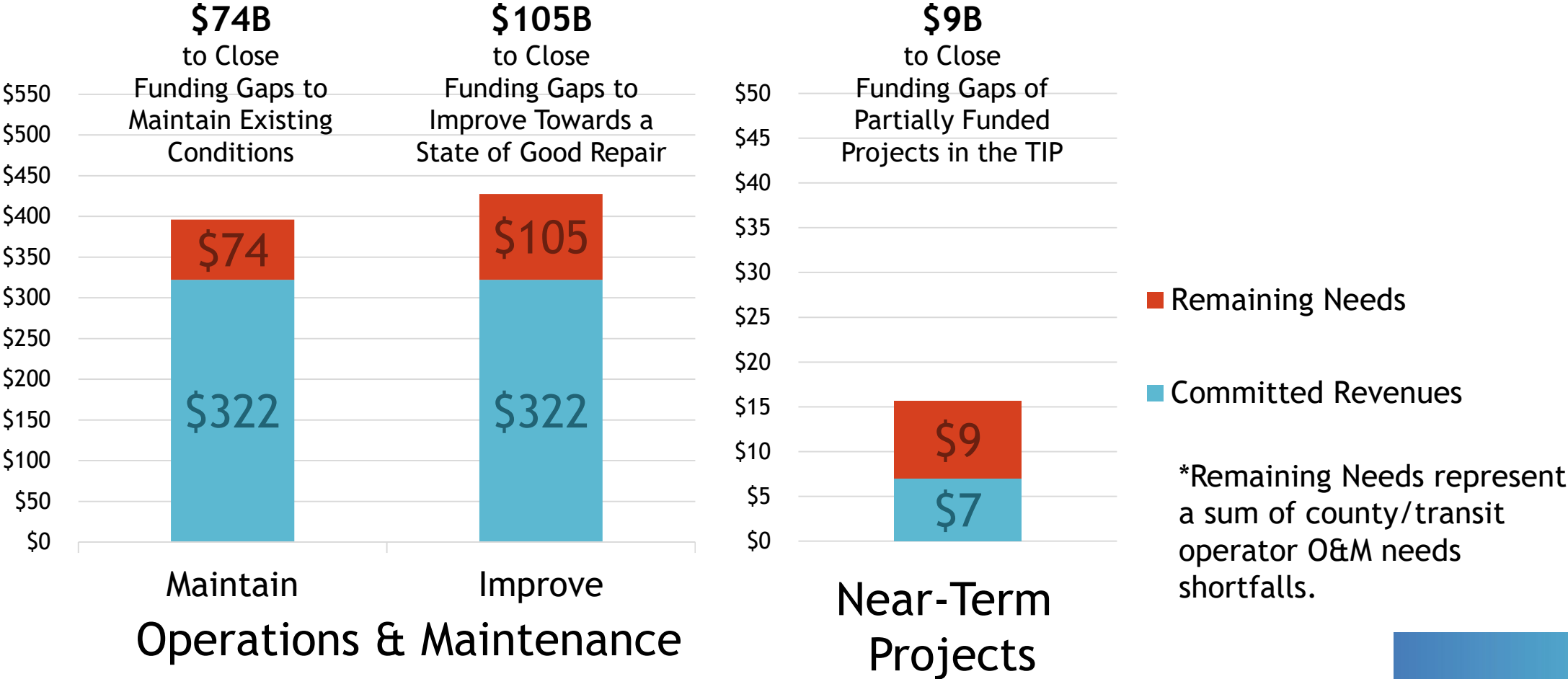
- \$423 billion to improve and maintain the system in a state of good repair
- \$392 billion to prevent further deterioration / maintain existing conditions

30-Year Transportation Operations and Capital Maintenance Needs (in Billions of YOES)

	Maintain Existing Conditions	State of Good Repair
Public Transit Operations	\$218 B	\$218 B
Public Transit State of Good Repair	\$63	\$88
Local Streets & Bridges State of Good Repair	\$64	\$71
Highways State of Good Repair	\$24	\$24
Bridges State of Good Repair	\$22	\$22
TOTAL	\$392 B	\$423 B

Note: Two condition scenarios could only be calculated for Local Streets, Roads, and Local Bridges, and Transit Capital

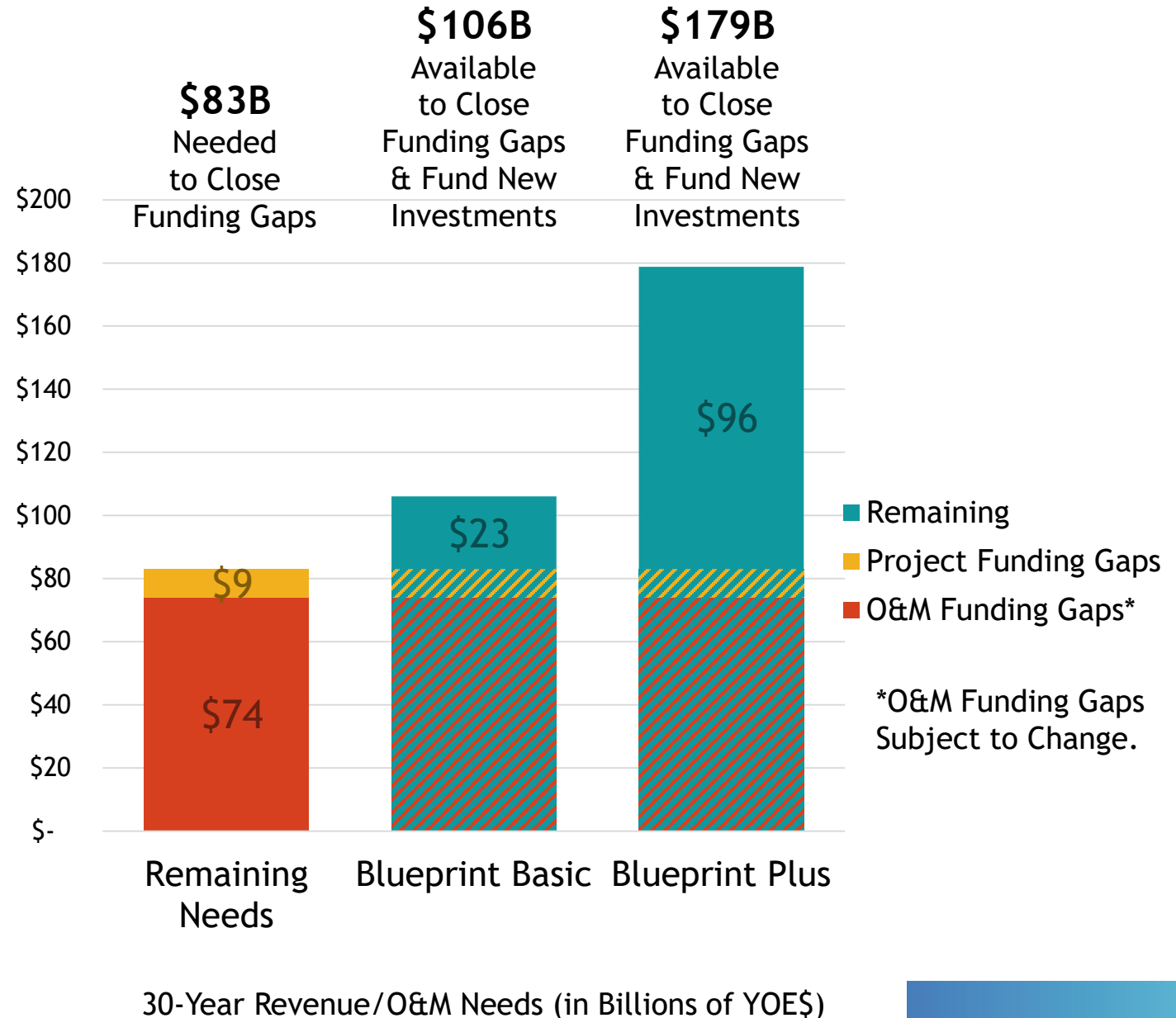
Unfunded Needs: Operations & Maintenance Needs and Near-Term Projects



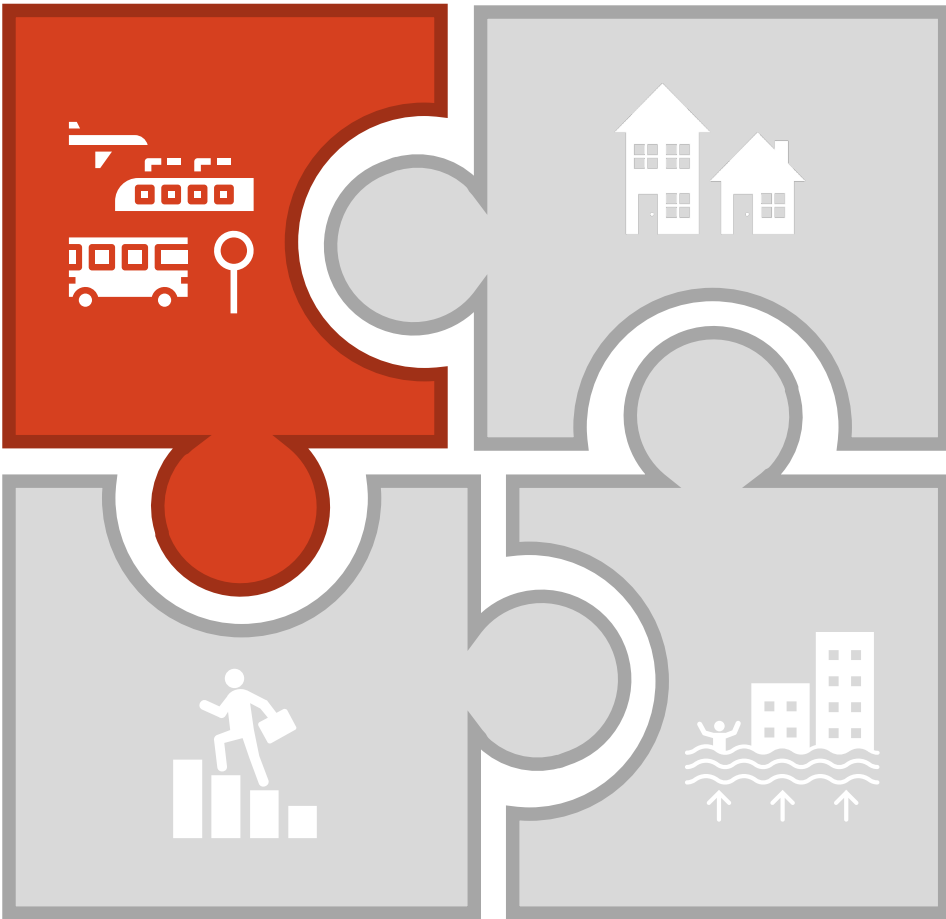
30-Year Revenue/O&M Needs (in Billions of YOES)

Trade-off Revenues Available for Strategies

- The **Draft Blueprint** will assign Trade-Off revenues to transportation strategies, some of which will be comprised of a subset of major transportation projects that performed well in the Project Performance Assessment.
- A share of the Trade-Off revenues will be set aside for the **Final Blueprint** to fund local priorities and major projects that align with the strategies and commit to mitigations to boost performance.
- The additional Trade-Off revenues in **Blueprint Plus** allow for increased investment in strategies, resulting in more projects inclusion in the Plan.



Plan Bay Area 2050 Blueprint: Transportation Element



Emerging Strategy Themes:

- Operate and Maintain the Existing System
- Create Healthy Streets
- Enhance Regional Transit
- Manage Freeway Demand

Plan Bay Area 2050 Blueprint: Transportation Element

Emerging Themes:



Create Healthy Streets

Incorporate into Draft Blueprint

- ✓ **Build a Complete Micromobility Network:** build out nearly 10,000 miles of new bicycle infrastructure, including protected bike lanes and trails.
- ✓ **Lower Speed Limits on Highways & Local Streets:** reduce local street speed limits in growth areas to 25 mph and reduce highway speed limits to 55 mph.
- ✓ **Build & Operate Lower Cost Transit Projects,** including Bus, BRT, and Ferry Projects.

Incorporate into Final Blueprint

- ❑ Provide Free Shared Bike & Shuttle Service

Plan Bay Area 2050 Blueprint: Transportation Element

Emerging Themes:



Enhance Regional Transit

Incorporate into Draft Blueprint

- ✓ **Complete Set of Plan Bay Area 2040 Transit Expansion Projects:** Construct projects including BART to Silicon Valley Phase 2, SMART to Windsor, and key rapid bus lines.
- ✓ **Build a New Transbay Rail Crossing*:** Invest in a new transbay rail crossing, enabling significant frequency boosts on rail systems in the East Bay and West Bay. This strategy will only be assumed in the Blueprint Plus.
- ✓ **Integrate Transit Fares Across the Region's Operators**

Incorporate into Final Blueprint

- ☐ Create a Next-Generation Rail Network
- ☐ Build and Operate a Regional Express Bus Network
- ☐ Provide Free Transit to Lower-Income Residents

Plan Bay Area 2050 Blueprint: Transportation Element

Emerging Themes:



Manage Freeway Demand

Incorporate into Draft Blueprint

- ✓ **Develop a Single Platform to Access and Pay for All Mobility Options:** Enable integrated trip planning and fare payment for all travel modes via smartphone.
- ✓ **Apply Tolls Based on Time of Day and Vehicle Occupancy on All Freeways:** Reduce traffic congestion by implementing tolls ranging from 5 cents to 15 cents per mile.

Incorporate into Final Blueprint

- ❑ **Build Express Lanes and Address Interchange Bottlenecks:** Will incorporate recommendations from the Bay Area Express Lanes 10-Year Strategic Implementation Plan.

What We've Been Hearing

Stakeholder Engagement: RAWG workshop

- **Investment Strategy: Priorities**
 - Participants dedicated funding to optimizing existing transit, reforming fare policy, and investing in micromobility infrastructure
 - With additional revenues, participants funded a new Transbay rail crossing, Express Lanes, and state of good repair
- **Strategies: Example Revisions**
 - **Fare Policy:** reorient to focus on fare integration instead of free transit
 - **Per-Mile Freeway Tolls:** roll out pilot projects on congested corridors with transit alternatives already in operation
 - **Micromobility Network:** increase the emphasis on amenities for pedestrians

Public Outreach: pop-ups and Mayor of Bayville “digital engagement”

- **Most Popular Strategies**
 - Modernize existing bus/rail
 - Micromobility network
- **Least Popular Strategies**
 - Lower speed limits for safety
 - Free shared bike and scooter service



Project Performance Assessment Results Will be Leveraged for Project Next Steps

Draft Blueprint

Will include:

- All committed transportation projects
- A fiscally-constrained subset of the Project Performance Assessment projects that:
 - Align with the Blueprint strategies
 - Performed well in the performance assessment
 - Are network improvements, advance equity, or reduce VMT (GHGs)

Final Blueprint

A share of Trade-off revenues will be set aside for the Final Blueprint.

Will incorporate:

- Projects that align with the Blueprint strategies and that commit to performance mitigations, and are network improvements, advance equity, or reduce VMT (GHGs)
- All other CTA priorities

From Compelling Case to Collaborative Space

What issues are causing projects to underperform:

- **Inequities** - project benefits skew through higher-income demographics
- **Increased GHG** - project leads to greater GHG and/or VMT
- **High costs** - project's costs are well in excess of project's benefits
- **Safety** - project leads to greater fatalities or injuries than baseline
- **Displacement** - project may displace homes or businesses

What mitigation actions can address these performance shortcomings:

- Through a revision of project scope, or...
- Through a new project- or local-level mitigation, or...
- Through support for a new regional mitigation strategy

What's Next?

January 2020

Answer key transportation questions in advance of the February committee meeting.

- Are these the right strategies to include in the Transportation element of the Plan Blueprint?
- How might we weave equity more substantially into the strategies?
- How might we fund these efforts?

February 2020

Finalize the strategies to test in the Draft Blueprint.

- At the February committee meeting, staff will present the full package of strategies proposed for the Draft Blueprint *Basic* and Draft Blueprint *Plus*.

Spring 2020

Share feedback on the Draft Blueprint results.

- Staff will present on the regional outcomes resulting from the Draft Blueprint *Basic* and Draft Blueprint *Plus* at committees and public workshops in spring 2020.
- Further refinements to all strategies can be made at this time in advance of the Final Blueprint, including integrating CTA's project priorities.