

**ASSEMBLY TRANSPORTATION COMMITTEE**  
**CALIFORNIA HIGH-SPEED RAIL AUTHORITY**  
**OVERSIGHT HEARING: 2019 PROJECT UPDATE REPORT**

Lenny Mendonca, CHSRA Board Chairman  
Brian Annis, Secretary, California Transportation Agency  
May 21, 2019



### *Credibility:*

*The quality of being believable  
and worthy of trust.*

### Re-establishing Credibility through:

- Transparency
- Keeping Our Commitments
- Delivering High-Speed Rail trains while 'living within our means'

Governor Newsom is for delivering high-speed rail for Californians in a way that is:

- Transparent
- Responsible
- Realistic
- Accountable

# ASSEMBLY OVERSIGHT HEARING

CALIFORNIA HIGH-SPEED RAIL AUTHORITY



“High-speed rail is much more than a train project. It’s about economic transformation and unlocking the enormous potential of the Valley.”

**- Governor Newsom**

# TRANSPARENCY – BOARD OF DIRECTORS

## Board of Director's Finance and Audit Committee



- Public Meetings
- Reviews and monitors project status, trends, challenges and opportunities in public forum
- Committee documents/monthly reports are available online today

### MONTHLY MEETING AGENDA

MARCH 19, 2019

10:00 AM

California Secretary of State Auditorium  
1500 11<sup>th</sup> Street  
Sacramento, CA 95814

#### PUBLIC COMMENT

For this meeting, an opportunity for public comment on all agenda and non-agenda items will be provided at the outset of the meeting. Those persons who wish to comment are required to submit their requests to the Board Secretary before the start of the meeting by filling in the green cards. Typically, public comment will be limited to two minutes per person, however the Chair may decide to shorten or lengthen the public comment periods, at his or her discretion. Agenda items may be taken out of order.

Agenda Item	Responsible Party	Status*	Approx. Duration
1. Consider Approving the February 19, 2019 Board Meeting Minutes	--	A	5 min.
2. Consider Applying Budget Reserve to the Construction Package 1 Design-Build Contract	J. Hedges	A	20 min.
3. Finance & Audit Committee Report	T. Richards	I	20 min.



### TRANSPARENCY – 2018 BUSINESS PLAN

- First plan to assign dollars and time to risks
- First plan that used ranges to estimate costs
- Recognized funding constraints and introduced the idea of delivering the project in “building blocks,” like most major infrastructure projects are delivered



### TRANSPARENCY – NEW MEASURES

**Governor Newsom:** Make project change orders available to the public online.

*Status:* 338 change orders now available on our “Transparency and Accountability” page at the Authority’s website.

**State Auditor:** Provide quarterly reporting to the Legislature on our progress toward meeting our federal Funding Agreement requirements.

*Status:* First report provided January 30, 2019, refinements to format made in collaboration with Peer Review Group, Legislature and State Auditor, the next one due on July 1, 2019.



# ASSEMBLY OVERSIGHT HEARING

CALIFORNIA HIGH-SPEED RAIL AUTHORITY



“We will continue our regional projects in the north and south.”

- *Governor Newsom*

### KEEPING OUR COMMITMENTS

Northern California:

- Caltrain Electrification
  - \$600m bond funds plus \$113m in Cap and Trade funds



### KEEPING OUR COMMITMENTS

#### Southern California:

- LA Union Station improvements (\$423m)
- Rosecrans/Marquardt Grade Separation (\$77m)



### KEEPING OUR COMMITMENTS

“We will finish Phase 1 (San Francisco – Los Angeles /Anaheim) environmental work.” – *Governor Newsom*

- Progressing all environmental work
- Requested streamlining authority from federal government
- Environmental work is on schedule to be completed by the required date in the federal funding agreement (2022)

### KEEPING OUR COMMITMENTS

Completing environmental work is necessary in front of future construction contracts – necessary to:

- Refine cost estimates
- Advance design
- Identify and mitigate risk
- Develop strategies for project development work (i.e., ROW acquisition, utility relocations, etc.)
- Ready shared corridors for investments as funding opportunities become available

### DELIVERING HSR WHILE LIVING WITHIN OUR MEANS

Project does not have all the funding needed to complete the entire project statewide.....*and it never has:*

**2008:** Bond Measure (Proposition 1A) passes and provides 20% of the project's then estimated costs.

**2018:** With a stable Cap and Trade program through 2030, federal funds and Proposition 1A funding, the Authority has access to just under 30% of today's estimated project costs



### DELIVERING HSR WHILE LIVING WITHIN OUR MEANS

How do we make high-speed rail real in California within the reasonable estimate of funding available to the project today?

- 2017:** The Authority contracted with an Early Train Operator (DB who operates high-speed rail in Germany) to advise on operational issues for service in California;
- 2018:** Business Plan directs the ETO to analyze the costs and early passenger service benefits of two separate potential interim early service building blocks within the Silicon Valley to Central Valley;
- 2019:** Merced-Fresno-Bakersfield is the only early service line that makes sense in the Central Valley—the only place in the state the environmental work is complete or near completion and construction is underway.

### DELIVERING HSR WHILE LIVING WITHIN OUR MEANS

#### 2019 Project Update Report:

- Lays out the path forward for the Merced-Fresno-Bakersfield line, a building block project that matches the available funding.
- Provides a significant economic boost to fast-growing and dynamic parts of our state, anchoring economic development vision for rural resilience in the Central Valley





### IMPLEMENTATION STRATEGY SUMMARY

Deliver High-Speed Rail in California by:

- Getting trains on the ground ASAP in the Central Valley, where the environmental work is near completion and construction is underway;
- Completing the environmental work statewide by 2022;
- Completing our “bookend” commitments in northern and southern California;
- Being prepared to expand the system, consistent with Proposition 1A, as federal and/or private funding opportunities materialize.

### APPROACH TO DELIVERY SUMMARY

We are working to get high-speed rail operational in California by:

- Being transparent on opportunities and challenges;
- Maintaining our Commitments to our partners;
- Delivering High-Speed Rail while ‘living within our means.’



## 2019 PROJECT UPDATE REPORT– KEY THEMES

- Builds on the 2018 Business Plan
  - Early service options
  - Updated cost and risks
- Refocusing delivery around “building block” approach
- Deliver what we can with what we have
- Show we can deliver – build credibility
- Demonstrate high-speed rail benefits as soon as practicable
- Continue advancing project development for the 520 mile system

### 2018 BUSINESS PLAN COMMITMENTS

Report on progress in these areas in 2019 Project Update Report:

- Early Train Operator – analysis of interim service
- Early Train Operator - review of capital cost estimates
- Complete cost risk evaluation, update estimates and apply Monte Carlo risk analysis to assess cost ranges
- Continue to address risk areas and mitigation strategies

## EARLY INTERIM SERVICE ANALYSIS

- Early Train Operator tasked with evaluating options for:
  - Central Valley
  - Bay Area Peninsula
- Central Valley
  - Concept is not new
  - Subject of discussion with FRA since 2013
  - Consistent with building block approach
  - Puts high-speed rail assets to use

# ASSEMBLY OVERSIGHT HEARING

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

**Introduction of an early operations HSR service in the Central Valley will produce significant benefits:**

**Reduced Dependency on the current private freight railroad infrastructure**

**Connectivity and Higher Frequencies available to local communities:** contribute to economic development and ease of access to opportunities throughout the Central Valley;

**Reduced Valley to Valley Ramp-up Period:** allows the HSR operator to test and adjust the optimal rail service offered to the communities

**Improved Total Corridor (HSR+ACE+San Joaquin) Fare recovery ratio for the State of California**

**Reduced CO2 emissions** from public transportation across the wider Central Valley corridor;

**Shorter travel times for the passengers,** enhancing the attractiveness of public transport and resulting in higher ridership across the wider the corridor.

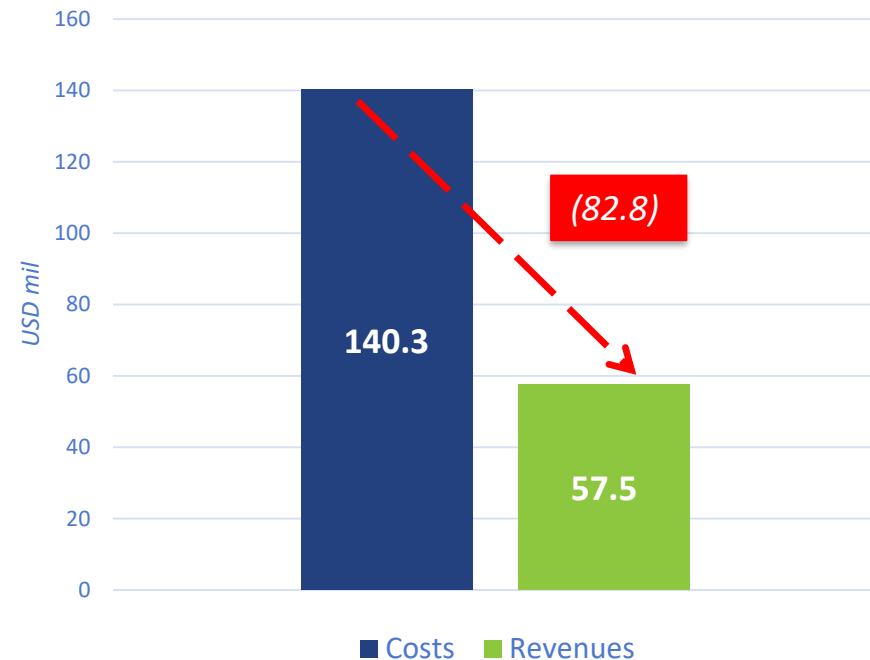


### MERCED-BAKERSFIELD CORRIDOR IMPROVES FAREBOX RECOVERY

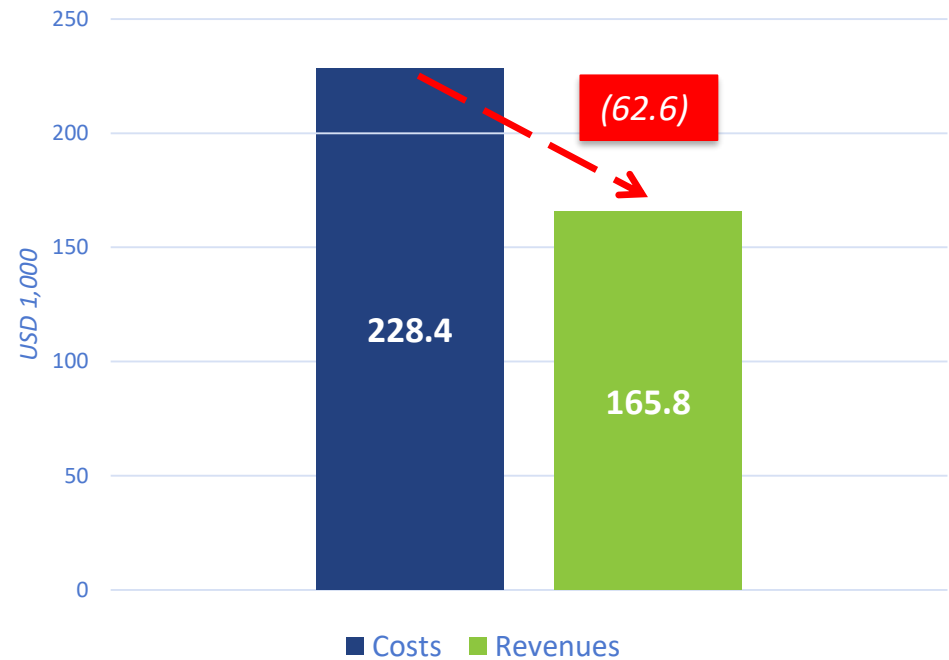
— ALL FIGURES IN 2018 USD

## Corridor Costs and Revenues Compared

Total Corridor View



Without HSR (ACE + San Joaquin)



With HSR (HSR+ACE+San Joaquin)

## Early Train Operator Cost Review

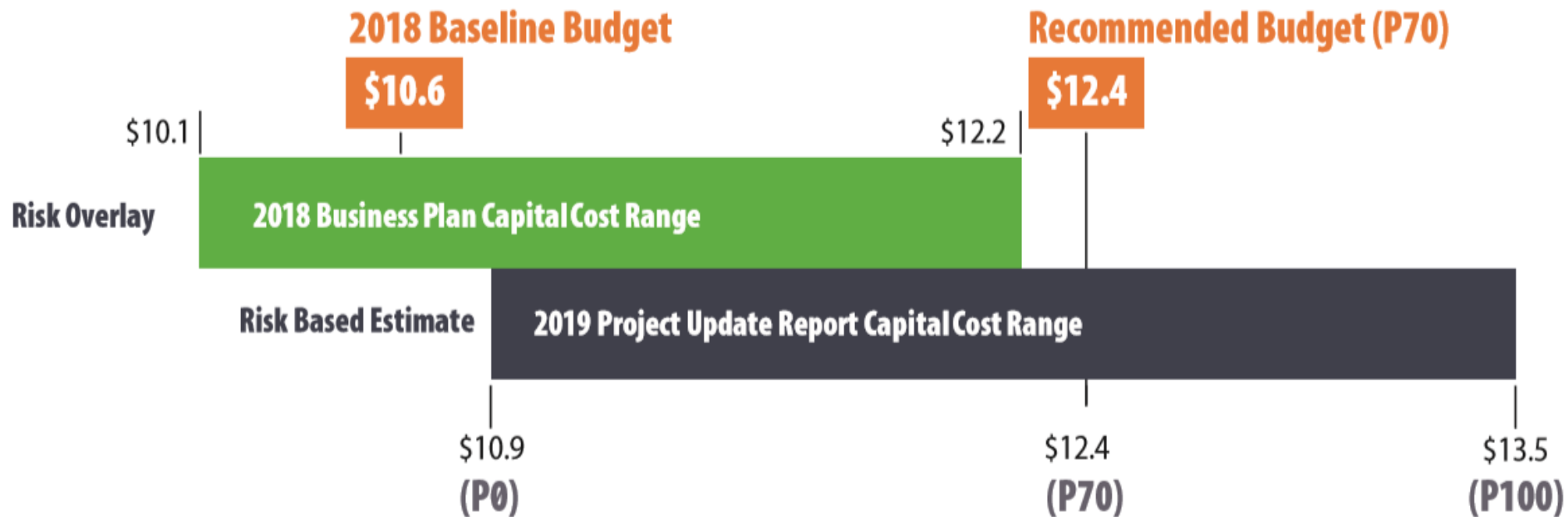
- ETO conducted benchmarking exercise focused on cost categories that are not location dependent
- Not able to compare certain conditions in Germany to US such as seismic or state/federal requirements (e.g., Buy America)
- Authority will work with the ETO going forward on preliminary engineering as well as procurement and final design documents



### Capital Cost Review of Central Valley Segment

- Updated cost review and moving from P10 to risk-based P70 confidence level increases budget by \$1.8 billion
- This is a 17% increase over the 2018 Program Baseline of \$10.6B
- There are three main drivers:
  - 9.3% \$990M - additional contingency to manage risk
  - 4.5% \$477M - revised specific cost estimates
  - 3.4% \$362M - scope changes
- Total - \$1.8 billion
- Creates a more prudent contingency of \$1.52 billion to manage risks

### Comparison of 2018 Business Plan Cost Range to 2019 Risk-Based Range

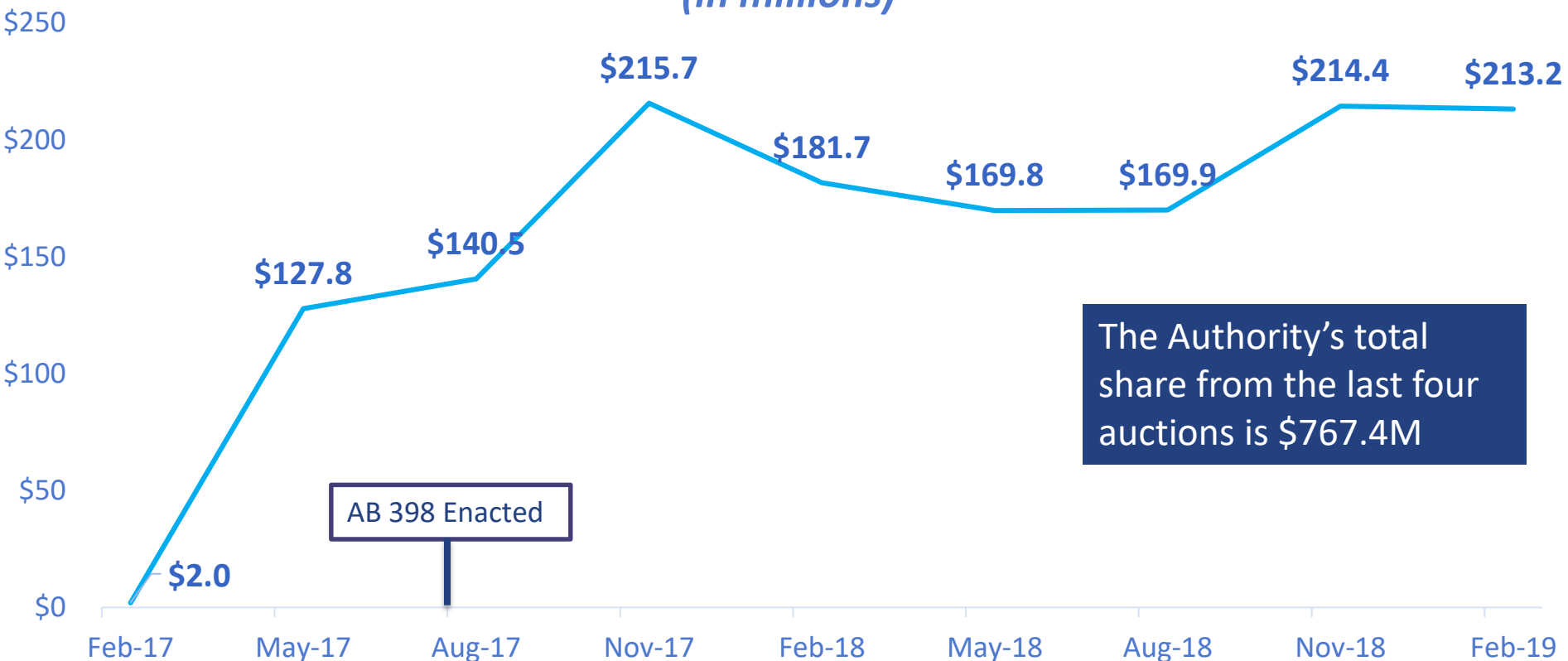


## Funding and Costs Review

- Summarizes current and committed funding through 2030
- Compares funding capacity (sources) to cost estimates
- Shows more than sufficient funding to complete federal project and fulfill regional bookend commitments
- Shows Merced-Fresno-Bakersfield is within our funding capacity with conservative cap and trade revenue assumptions, and assuming the illegal federal de-obligation of funds is unsuccessful.

### Funding with Cap-and-Trade is stabilizing

Quarterly Auctions and Cap-and-Trade Funds  
(in millions)



# ASSEMBLY OVERSIGHT HEARING

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

## Summary of Total Funding Authorized and Total Funds Expended

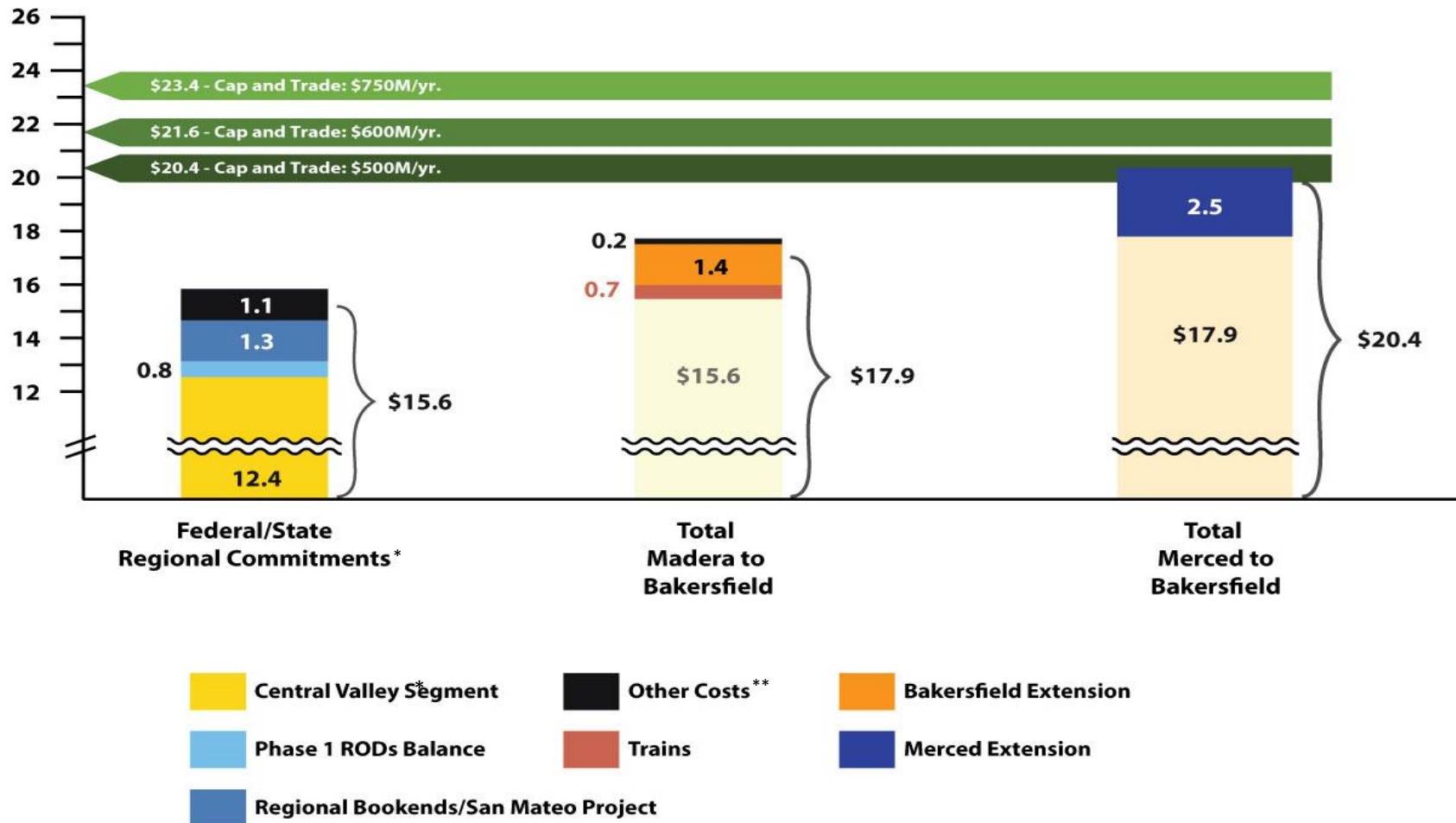
Funding Source	Total Authorized Funding	Total Appropriated/Received	Total Expended to Date	Total Remaining
Federal Funds				
ARRA Construction	\$2.06	\$2.06	\$2.06	-
ARRA Planning	\$0.49	\$0.49	\$0.49	-
FY10	\$0.93	\$0.93	-	\$0.93
State Funds				
Proposition 1A Planning**	\$0.68	\$0.58	\$0.43	\$0.25
Proposition 1A Central Valley Segment Construction**	\$2.61	\$2.61	\$1.44	\$1.17
Future Proposition 1A for Silicon Valley to Central Valley Line Construction**	\$4.17	-	-	\$4.17
Proposition 1A Bookends	\$1.10	\$1.10	-	\$1.10
Cap-and-Trade Received through December 2018	\$2.42	\$2.42	\$0.61	\$1.81
Subtotal	\$14.45	\$10.18	\$5.02	\$9.43
Future Cap-and-Trade*	\$6.00 - 9.00	\$6.00 - 9.00	-	\$6.00 - 9.00
<b>Grand Total</b>	<b>\$20.45 23.45</b>	<b>\$16.18 19.18</b>	<b>\$5.02</b>	<b>\$15.43 18.43</b>
*Future Cap-and-Trade assumes a low of \$500 million to a high of \$750 million per year from 2019 to 2030 (12 years). Authority's February 2019 C&T quarterly auction receipt was \$213 million.				



# ASSEMBLY OVERSIGHT HEARING

## CALIFORNIA HIGH-SPEED RAIL AUTHORITY

### Cost Estimates vs Funding Compared to Three Cap-and-Trade Scenarios Through 2030



\*Includes fulfillment of the federal grant agreements to complete all Phase 1 environmental documents and 119 miles of civil and structural rail infrastructure, including track and systems, from Madera to Poplar; funding for state and regional projects including SB 1029 bookend projects in Northern and Southern California (Caltrain Electrification Project, San Mateo Grade Crossing Project, Rosecrans/Marquardt Grade Separation Project and Link US project).

\*\*Other costs include program support costs and historical Phase 2 expenditures



### Program Milestones – Achieved

- Construction packages advanced on final design as construction continues
- Met the September 2017 deadline for expending ARRA grant funding
- Three major structures were completed in the Central Valley
- Agreements with UPRR and BNSF
- State Route 99 Realignment Project completed in February 2019
- Creation of more than 2,700 construction jobs since the start of the project

## Program Risks

- Current funding
- Costs
- Disengagement of federal partner
- Construction
- Litigation
- Stakeholder support



# 2019 Project Update Report – Key Takeaways

- ETO concluded that Merced-Bakersfield is best option for early service in Central Valley
- ETO cost review yielded several opportunities to refine costs – which we are incorporating and will continue to engage ETO going forward
- We updated costs and scope and performed Monte Carlo risk analyses
- Based on updated cost review/risk analysis, staff recommends P70 confidence level budget of \$12.4B for Central Valley Segment, an increase of \$1.8B made up of the following elements:
  - \$990M additional contingency to manage risks
  - \$477M cost increases
  - \$362M new scope
- Funding scenarios show that Merced–Fresno–Bakersfield is within our funding capacity through 2030 based on current assumptions
- Threat of loss of federal funds and federal disengagement impacts schedule and costs

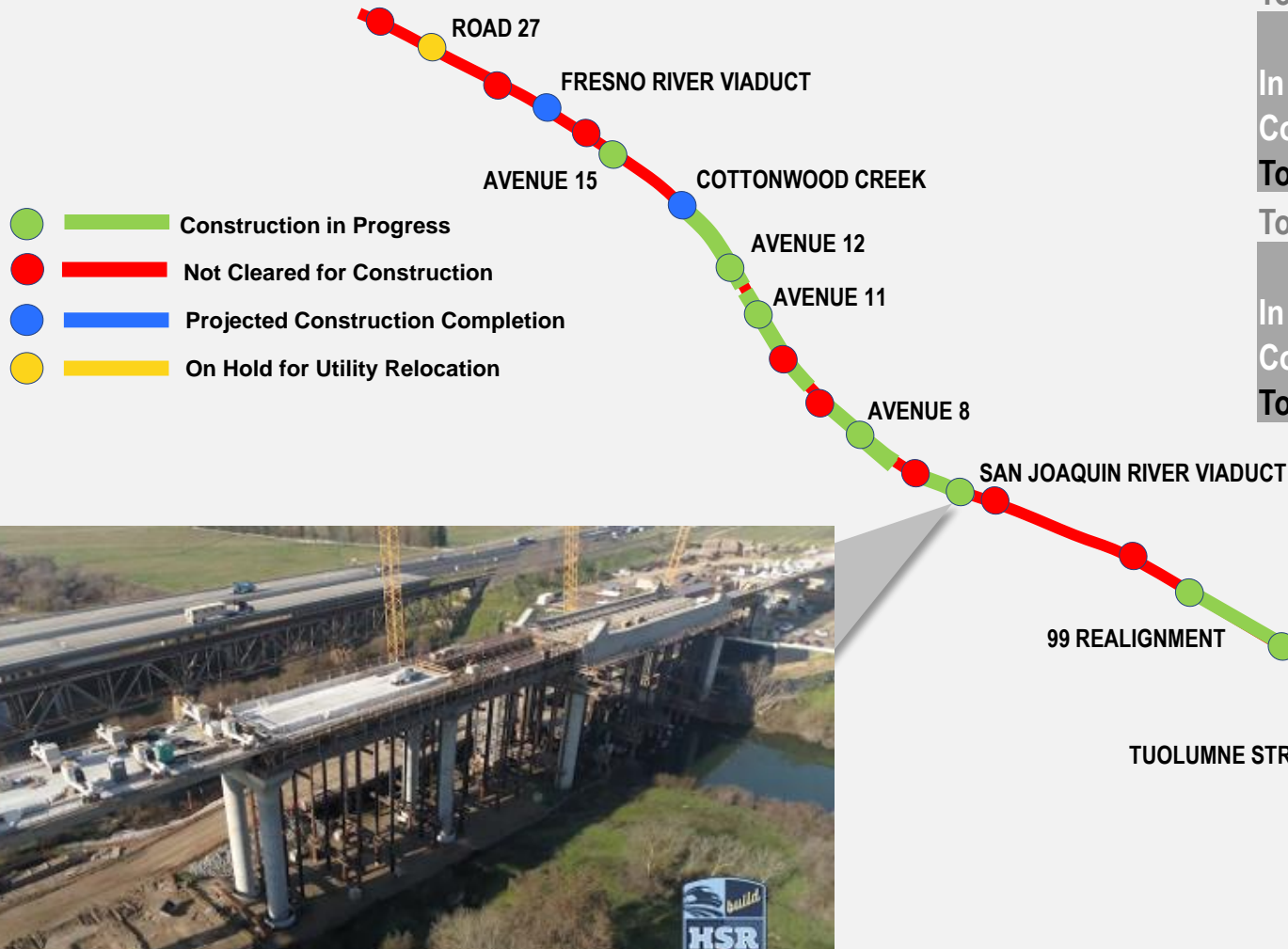


## Upcoming Implementation Steps

- Adoption of new 2019 Program Baseline – scope, schedule, cost, budget
- Select sites for Central Valley operating and maintenance facilities
- Long-lead procurements -- track & systems, trainsets and civil contracts
- CEQA first strategy pending FRA re-engagement
- Continuing to build organizational capacity
- Continuing to work with the leadership at ACE and the San Joaquin Amtrak on integrated service planning
- Deliver, Deliver, Deliver

# CONSTRUCTION PACKAGE 1

JANUARY 2019



Total Guideway Miles: 25

	Jan
In Progress	7.25
Completed	0
<b>Total</b>	<b>7.25</b>

Total Structures: 31

	Jan
In Progress	7
Completed	4
<b>Total</b>	<b>11</b>



# CONSTRUCTION PACKAGE 1

DECEMBER 2019



Total Guideway Miles: 25

	Jan	Jun	Dec
In Progress	7.25	12	18.5
Completed	0	0	0
<b>Total</b>	<b>7.25</b>	<b>12</b>	<b>18.5</b>

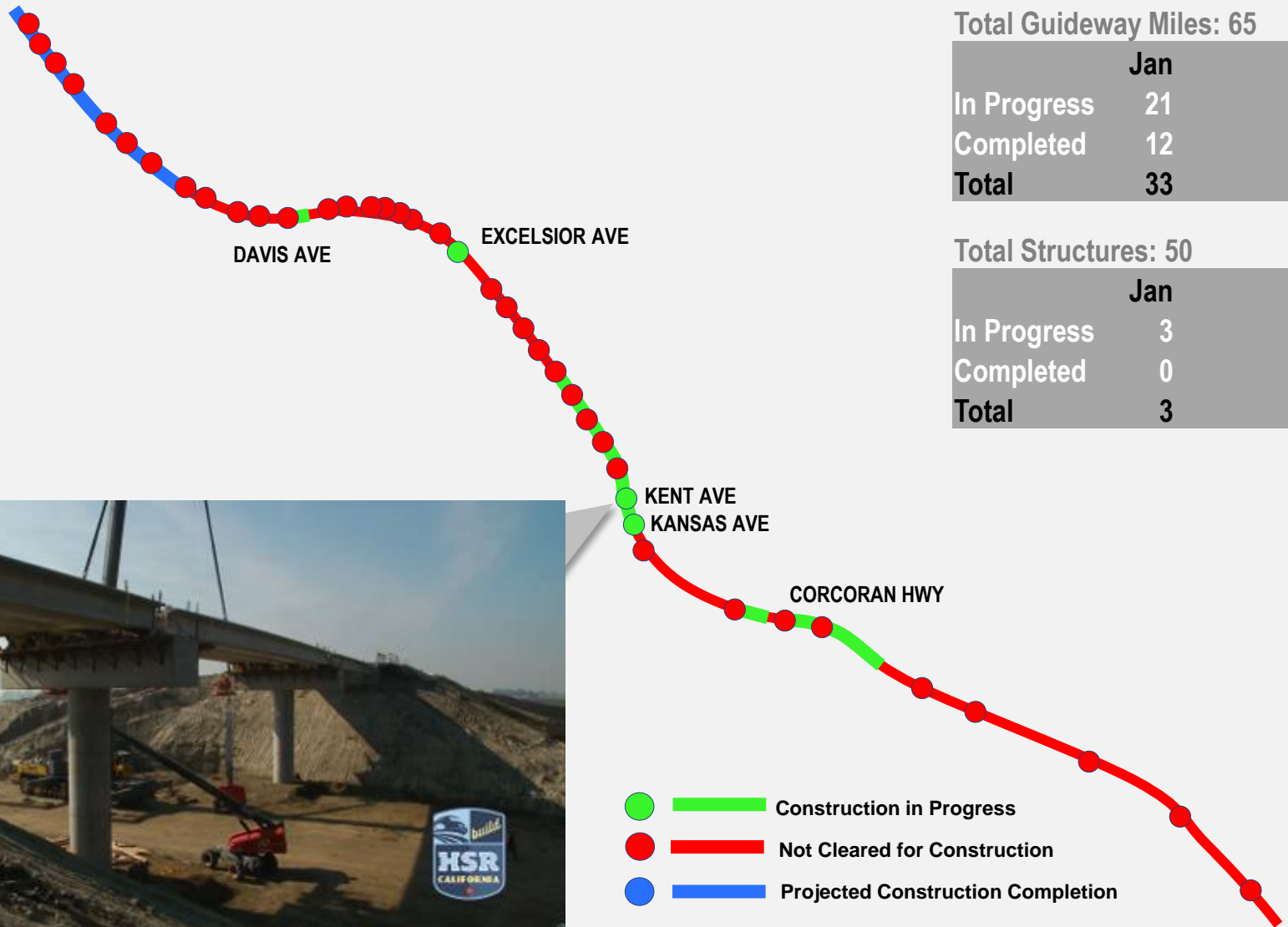
Total Structures: 31

	Jan	Jun	Dec
In Progress	7	9	10
Completed	4	6	10
<b>Total</b>	<b>11</b>	<b>15</b>	<b>20</b>



# CONSTRUCTION PACKAGE 2-3

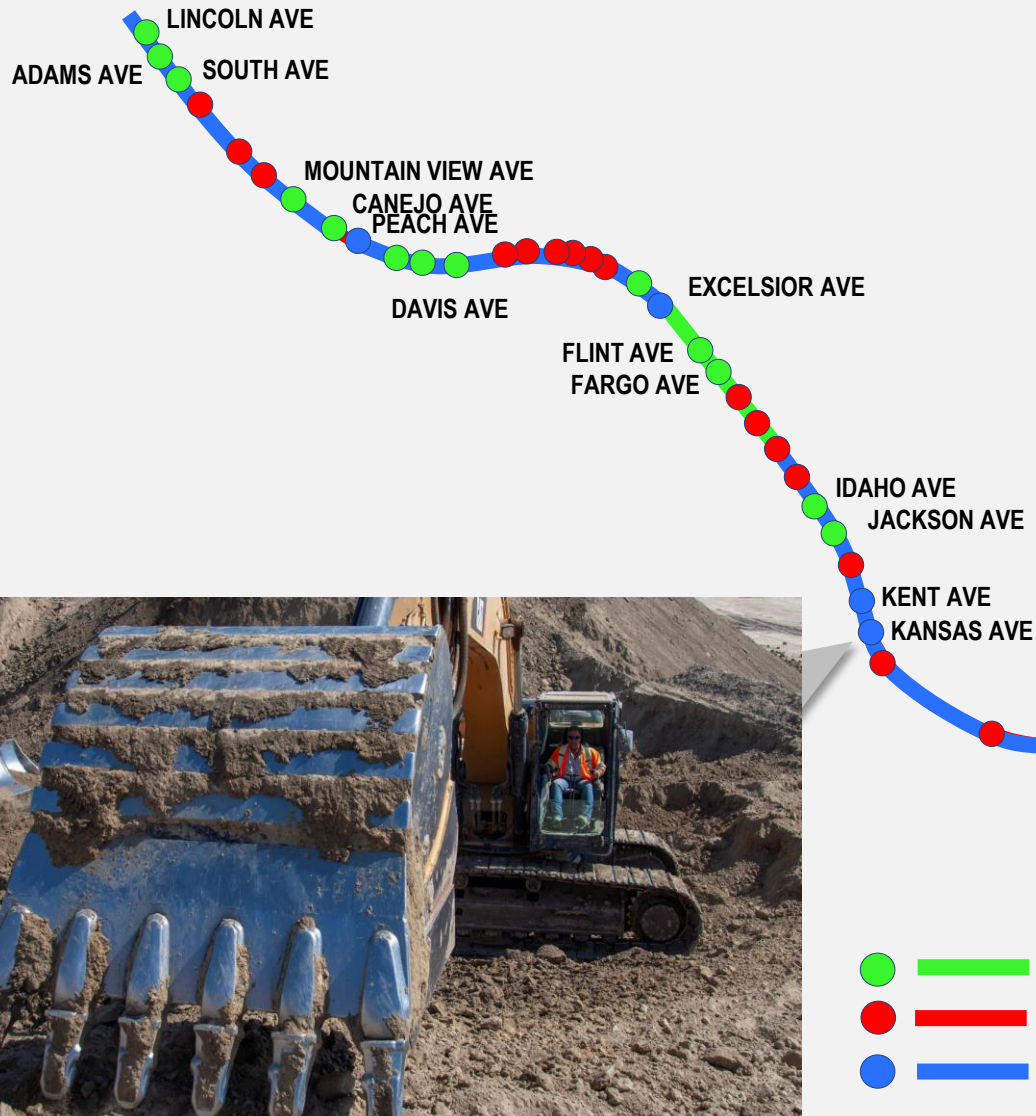
JANUARY 2019





# CONSTRUCTION PACKAGE 2-3

DECEMBER 2019



Total Guideway Miles: 65

	Jan	Jun	Dec
In Progress	21	23	28
Completed	12	22	37
<b>Total</b>	<b>33</b>	<b>45</b>	<b>65</b>

Total Structures: 50

	Jan	Jun	Dec
In Progress	3	7	14
Completed	0	0	4
<b>Total</b>	<b>3</b>	<b>7</b>	<b>18</b>

- — Construction in Progress
- — Not Cleared for Construction
- — Projected Construction Completion



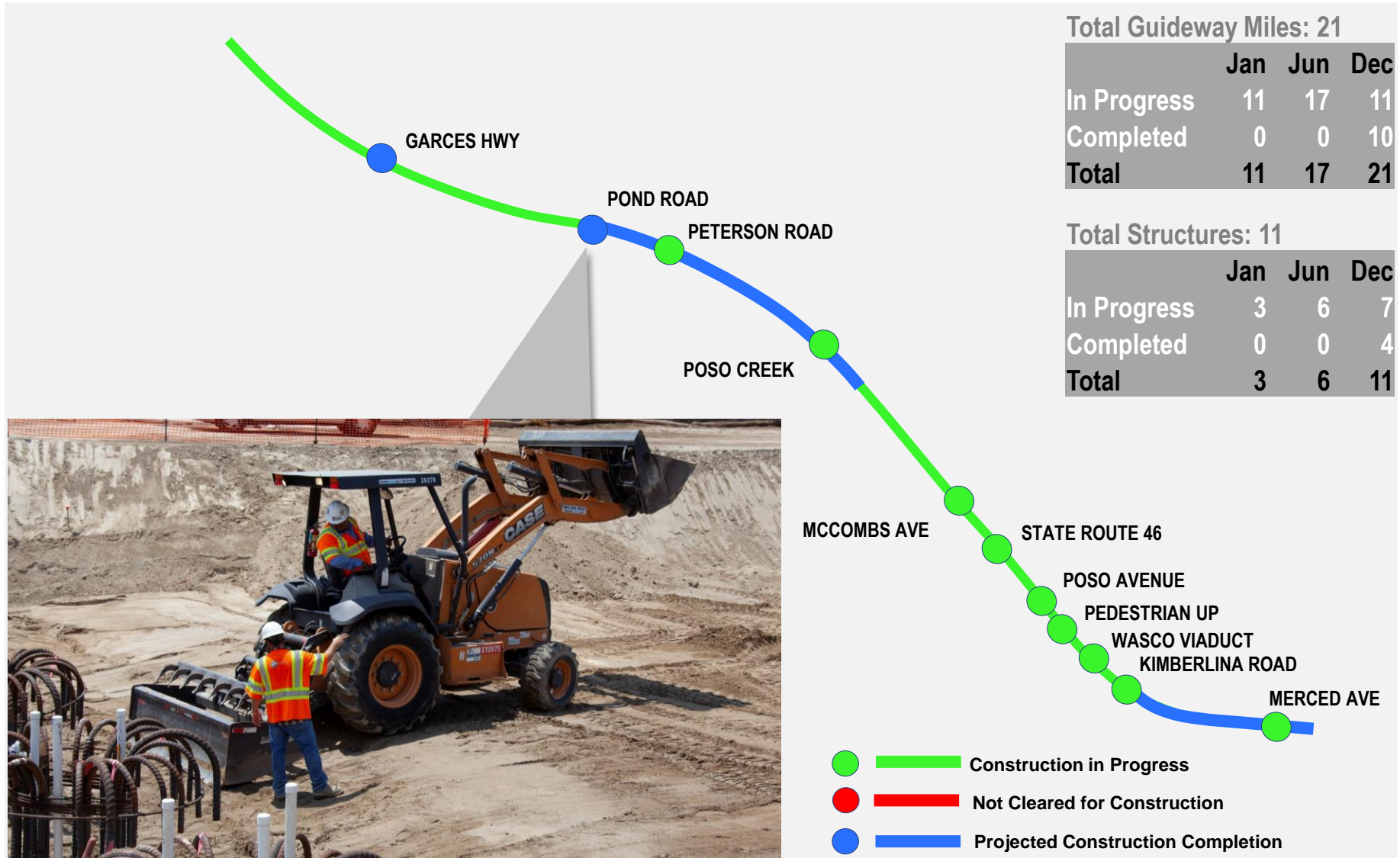
# CONSTRUCTION PACKAGE 4

JANUARY 2019



# CONSTRUCTION PACKAGE 4

DECEMBER 2019





# Outcomes of PUR Plan upon Implementation

- Caltrain Electrification in the Bay Area on a 50 miles segment used initially by Caltrain and later shared with High-Speed Rail. This improves speeds, capacity and improves air quality.
- Central Valley high-speed rail early interim service on a 171 mile segment linking Merced, Fresno and Bakersfield and linked to ACE and San Joaquin rail for Bay Area and Sacramento connectivity. Getting high-speed rail on the ground in CA.
- Los Angeles Union Station run-through tracks and the Rosecrans Marquardt grade separation, increasing speeds and capacity through Southern CA's busiest rail corridor. Initially benefiting Metrolink and the Amtrak Surfliner service, and later shared with HSR.
- Completing environmental on other segments to continue construction as funding is identified.

# ASSEMBLY OVERSIGHT HEARING

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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