

**SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT**  
300 Lakeside Drive, P. O. Box 12688, Oakland, CA 94604-2688

**NOTICE OF MEETING AND AGENDA**  
**BOND OVERSIGHT COMMITTEE**

Friday, March 15, 2019  
9:30 a.m. – 11:00 a.m.

COMMITTEE MEMBERS: Marian Breitbart, Michael Day, Daren Gee, Michael McGill, John Post

A Meeting of the Bond Oversight Committee will be held on Friday, March 15, 2019, at 9:30 a.m. The Meeting will be held in Conference Room 2100, 300 Lakeside Drive, 21<sup>st</sup> Floor, Oakland, California.

AGENDA

1. Call to Order
  - A. Roll Call
2. Introduction of Committee Members and BART Staff
3. Meeting Minutes: December 21, 2018 (For Discussion/Action)
4. Update on New Committee Members Search (For Discussion)
5. Presentation: Measure RR Update (For Discussion)
  - A. Program Progress
  - B. Videos & Photos
  - C. Financial, Small Business, & RR Hiring
6. Annual Report Update (For Discussion)
7. Measure RR On-site Field Trip (For Discussion)
8. Setting Next Meeting Agenda Scheduled for June 21, 2019 (For Discussion)
9. Public Comment

Please refrain from wearing scented products (perfume, cologne, after-shave, etc.) to this meeting, as there may be people in attendance susceptible to environmental illnesses.

BART provides service/accommodations upon request to persons with disabilities and individuals who are limited English proficient who wish to address Committee matters. A request must be made within one and five days in advance of Board/Committee meetings, depending on the service requested. Please contact the Office of the District Secretary at (510) 464-6083 for information.



**San Francisco Bay Area Rapid Transit District  
Measure RR Program**

**BART Bond Oversight Committee  
\*\*\*DRAFT Meeting Minutes\*\*\***

**Friday, December 21, 2018  
9:30 AM – 11:00 AM  
Kaiser Center Tower, 21<sup>st</sup> Floor  
Conference Room 2100  
300 Lakeside Drive Oakland, CA 94612**

<b>MEETING NUMBER</b>	<b>MEETING DATE</b>	<b>MEETING TIME</b>
Term 1, Meeting 5	December 21, 2018	9:30am – 11:00 am
<b>Attendees</b>	<b>Present Members</b> Michael McGill Marian Breitbart John Post Daren Gee  <b>Absent Members</b>	<b>Staff</b> Kerry Hamill Lori Lovett Carl Holmes Michael Jones Linton Johnson Shane Edwards Tamar Allen Chris Fillipi Maceo Wiggins

<b>Agenda Item</b>	<b>Meeting Notes</b>
1. Call to Order.	M. McGill called the meeting to order. L. Johnson took roll call.
2. Introduction of Committee Members	Committee members introduced themselves.
3. Introduction of BART Staff	BART staff introduced themselves. After the introductions, M. McGill requested that the meeting materials be given to the committee members a week in advance.

<p>4. Selection of New Chairperson and Vice Chairperson</p>	<p>J. Post nominates M. McGill as Chair and D. Gee seconds the nomination. Committee, including M. McGill unanimously approves M. McGill’s nomination. M. McGill nominates J. Post as Vice Chair. M. Breitbart seconds the nomination. Committee, including J. Post votes unanimously.</p>
<p>5. Meeting Minutes</p>	<p>J. Post motions to adopt the meeting minutes of the last two meetings with the caveat that the incomplete sentence in the first item of the June 1, 2018 meeting minutes be deleted by staff. D. Gee seconds the motion and the committee unanimously approves the minutes.</p>
<p>6. Presentation: Measure RR Update</p>	<p>C. Holmes gave a program update. M. Jones gave an update on the hiring of the 309 positions for FY19. M. Wiggins described the small business outreach BART has conducted.</p> <p>J. Post says that he has yet to have any data that allows him to stand behind the statement the committee made in the annual report, which stated, “While most Measure RR–funded projects are still in the ramp-up phase, based on performance to date, the projects that are underway are on time and on budget. At this point, the Committee has every reason to believe the bond will be implemented as planned.” J. Post says he can take staff’s word that the work is done, but he says he doesn’t know how well staff did the work, whether it was late, on-time, under or over budget.</p> <p>J. Post requests that the committee get the packet a couple of weeks ahead of time, so the members have time to read it and discuss what’s in the report rather than reading it at the meeting. D. Gee says he appreciates M. McGill and J. Post’s request to have the packet ahead of time. Gee reminds staff that the committee wants more transparency on what has happened and that the cost matches the scope.</p>
<p>7. Presentation: Earned Value Management</p>	<p>L. Lovett gives a presentation on earned value management – and how the method is to objectively assess a project’s progress.</p> <p>J. Post says the point of earned value management is, “Did you do what you said you were going to do when you said you were going to do it for what you said it was going to cost? Did you control changes,</p>

	<p>and what are you learning from that, that tells you when and where you will be.”</p>
<p>8. Setting Next Meeting Agenda Schedule for March 15, 2019</p>	<p>J. Posts asks, “When can we expect to see real data?” D. Gee says, “I’ll go one further, we need to see this next time.”</p> <p>J. Post says, “I don't know if you're performing efficiently. I don't know what your baselines are, when you successfully complete the work. I don't know if that was behind schedule. I don't know where it was relative to your original estimate. I don't know what the risk you're taking on each of them is. I just don't know.”</p> <p>T. Allen says she thought the Earned Value Management presentation was responsive to Post’s concerns. T. Allen and C. Holmes say they will convene a meeting with J. Post to address his remaining concerns before the next committee meeting.</p> <p>J. Post says he is willing to come in and work with staff to write out a “dummy chart” describing the information the committee needs to see if projects are on-time and on-budget.</p> <p>M. McGill says he doesn’t have a problem with J. Post working with staff on the chart, but adds staff has to, “nod up and down yeah, this makes sense.”</p>
<p>9. Public Comment</p>	<p>No public attended.</p>





# RR Program Progress and Controls

March, 2019

# Proposed Reporting – Slide 9



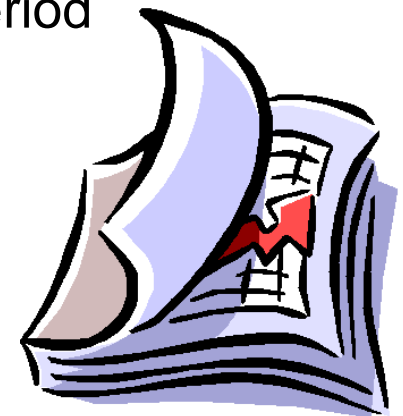
## ✓ Earned Value Rollup by Program:

Total Budget (BAC)	Physical % Complete	Planned Value (BCWS)	Earned Value (BCWP)	Expended to Date: (ACWP)	CPI	SPI
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## ✓ Program Level Schedule Update

## ✓ Specific Project Info for Programs greater than 25%:

- # Projects > 25%
- # Projects > 25% and  $CPI < .9$  or  $> 1.1$
- # Projects > 25% and  $SPI < .9$  or  $> 1.1$
- # Risk Register Updates Performed in previous period
- # Projects Quality Reviews performed



# Earned Value Terminology



PMI	Description	BART Description	Shown	Plan	Comments
BAC	Budget at Completion	Total Budget	✓		
BCWS	Budgeted Cost of Work Scheduled	Planned Value	✓		
BCWP	Budgeted Cost of Work Performed	Earned Value	✓		
ACWP	Actual cost of Work Performed	Expended to Date	✓		
CPI	Cost Performance Index	CPI	✓		
SPI	Schedule Performance Index	SPI	✓		
ES	Earned Schedule (Emerging PMI Trend)		●		Currently develop rollup and detail schedules
EAC	Estimate at Completion	EAC		✓	
VAC	Variance at Completion	VAC		✓	Calculated from EAC
ETC	Estimate to Complete	ETC		✓	Currently done through Budget planning process. Adding regular parametric approach.

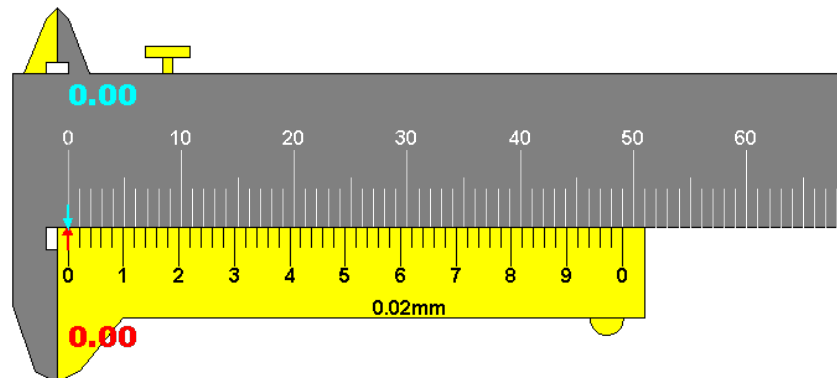
<b>Totals</b>	\$ 2,554,400,000.00	4.7%	\$ 110,864,369.57	\$ 123,448,744.86	\$ 119,495,705.55	1.08	0.97
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	Total Budget	Physical % complete	Expended to Date:	Planned Value	Earned Value	CPI	SPI
<b>Track</b>	\$ 62,968,811	8.2%	\$ 52,106,957	\$ 47,404,920	\$ 39,749,407	0.99	1.09
<b>structure</b>	\$ 1,225,000,000	4.4%	\$ 46,580,039	\$ 55,534,132	\$ 53,960,835	1.16	0.97
<b>ctures</b>	\$ 570,000,000	1.6%	\$ 9,055,282	\$ 14,327,306	\$ 9,176,813	1.01	0.64
<b>anical</b>	\$ 134,400,000	3.7%	\$ 3,122,092	\$ 6,182,378	\$ 4,908,650	1.57	0.79

# Earned Value Management



- ✓ Method to objectively assess a project's progress
- ✓ Snapshot in Time
- ✓ CPI Compares Earned Value with Actual Cost
- ✓ SPI Compares Earned Value with Planned Cost



# EVM – Additional Layers of Controls



## Value of Earned Value (A Project Control Tool):

Validate Commitment

Ensure Production Rates  
Evaluate \$ per Quantity

Early Warning

Assess Mitigation Measures  
Identify holes in the process

Build Confidence

Report Objective Measures  
Discuss Risk & Mitigations  
Withstand Scrutiny

## Goal:

- Keep Lean: Complexity of tracking vs value of predictive action
- Apply Consistency between Self Performed and Contracted work

# Current Controls: Track Re-Profile

## How Executive Reports connect to the Field



**Program: Track**  
**Project: Rail Re-Profile**  
**Type: Self Perform**

### Monitor

- Project Controls
- Asst Chief/Chiefs
- AGM
- General Manager
- Controller

### Control

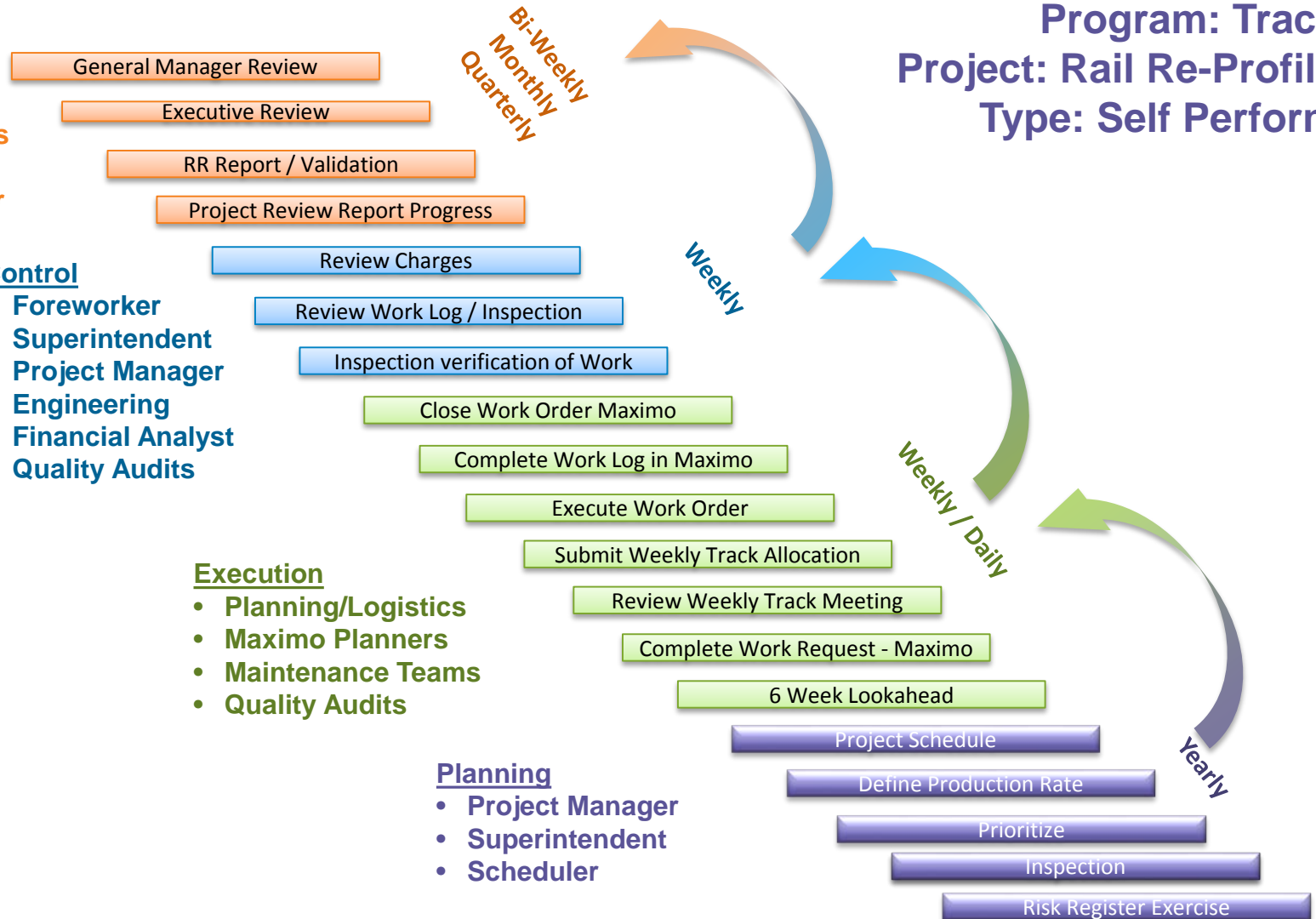
- Foreworker
- Superintendent
- Project Manager
- Engineering
- Financial Analyst
- Quality Audits

### Execution

- Planning/Logistics
- Maximo Planners
- Maintenance Teams
- Quality Audits

### Planning

- Project Manager
- Superintendent
- Scheduler



# Reporting Balance: Quality vs Quantity



## Recommendations

### EAC/VAC:

At early stages of the Programs (<50%) there is minimal additional value to the calculation in this environment.

### ES – Earned Schedule:

The Project Teams are currently using Schedule updates/tracking. ES could be considered as a back check to the schedule updates triggered by a fluctuation of CPI/SPI and/or the schedule update indicates a concern

### After a Project is 25% Spent:

CPI/SPI should hover around 1.0. <.9 (Previously .8) or > 1.1 (previously 1.2) should elicit further scrutiny

*“Complexity of tracking vs value of predictive action”*



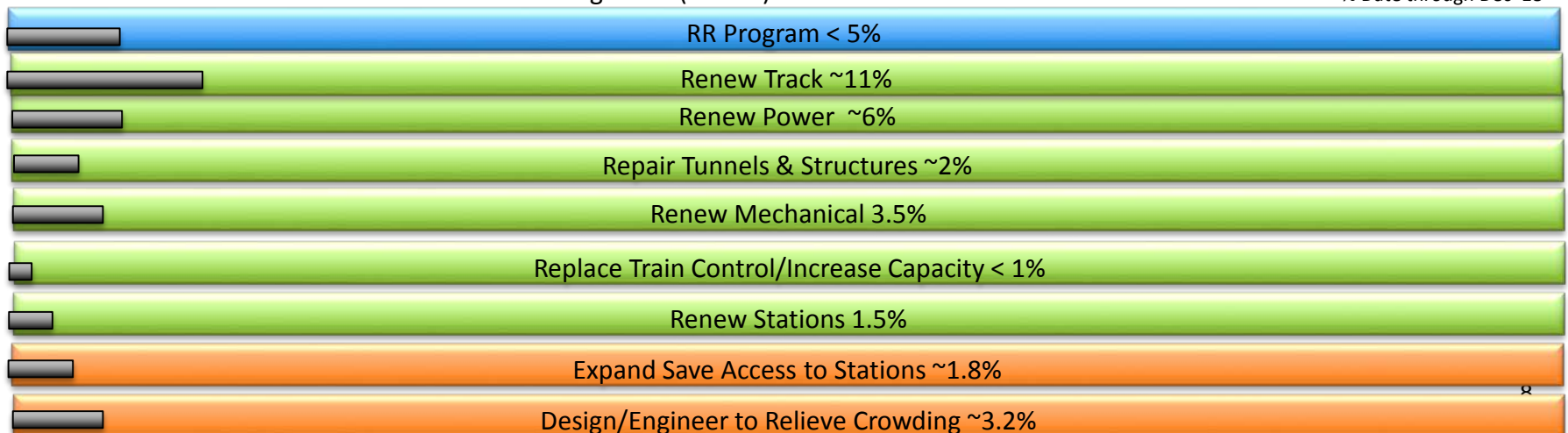


# Maturity of Project vs Accuracy of Data



ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges [a]
Class 5	0% to 2%	Functional area, or concept screening	SF or m <sup>2</sup> factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

American Association of Cost Engineers (AACE®) International Recommended Practice No. 56R-08 % Date through Dec '18





# Earned Value Implementation Framework

## DECEMBER



Program	Initiate				Quality Control			
	Evaluate Sub Projects	Schedule of Values per Project	Planned Value (PV) per Project	Calculate % Complete, EV, CPI, SPI	Compare Program Level PV with Project Level Roll up PV	Check Formulas	Validate % complete	Executive Leadership Review
Renew Track	✓	✓	✓	✓	●	●		
Renew Power Infrastructure	✓	●	●					
Repair Tunnels & Structures	✓	✓	✓	✓	●	●		
Renew Mechanical	✓	✓	✓	●	●	●		
Replace Train Control / Increase Capacity	✓	✓						
Renew Stations	✓	✓						
Expand Safe Access to Stations	●	●						
Design/Engineer to Relieve Crowding	●	●						



Completed






In Progress

# Earned Value Implementation Framework

## MARCH



Program	Initiate				Quality Control			
	Evaluate Sub Projects	Schedule of Values per Project	Planned Value (PV) per Project	Calculate % Complete, EV, CPI, SPI	Compare Program Level PV with Project Level Roll up PV	Check Formulas	Validate % complete	Executive Leadership Review
Renew Track	✓	✓	✓	✓	✓	✓	✓	●
Renew Power Infrastructure	✓	✓	✓	✓	✓	✓	●	
Repair Tunnels & Structures	✓	✓	✓	✓	✓	✓	●	
Renew Mechanical	✓	✓	✓	✓	✓	✓	●	
Replace Train Control / Increase Capacity	✓	✓	✓	✓	✓	✓	●	
Renew Stations	✓	✓	✓	✓	✓	✓	●	
Expand Safe Access to Stations	✓	✓	✓	✓	✓	✓	●	
Design/Engineer to Relieve Crowding	✓	✓	✓	✓	✓	✓	●	

 Completed
 
 In Progress

# RR Oversight Committee Reporting



## Earned Value Rollup by Program:

Total Budget	Physical % Complete	Planned Value	Earned Value	Expended to Date:	CPI	SPI
(BAC)		(BCWS)	(BCWP)	(ACWP)		

## Program Level Schedule Update

### Specific Project Info for Programs greater than 25%:

- # Projects > 25%
- # Projects > 25% and  $CPI < .9$  or  $> 1.1$
- # Projects > 25% and  $SPI < .9$  or  $> 1.1$
- # Risk Register Updates Performed in previous period
- # Projects Quality Reviews performed



# Earned Value Rollup by Program:



## RR Program Totals

Total Budget	% Spent!	Physical % Complete	! Expended to Date:	Planned Value	Earned Value	CPI	SPI
<b>\$ 3,500,000,000</b>	<b>7.0%</b>	<b>8.7%</b>	<b>\$ 245,142,564</b>	<b>\$ 354,281,338</b>	<b>\$ 303,177,402</b>	<b>1.24</b>	<b>0.86</b>

RR Budget	% Spent	Physical % complete	Expended to Date:	Planned Value	Earned Value	CPI	SPI	
<i>BAC</i>			<i>ACWP</i>	<i>BCWS</i>	<i>ACWP</i>	<i>CPI</i>	<i>SPI</i>	
Renew Track	\$ 625,000,000	14.7%	15.3%	\$ 91,873,221	\$ 98,858,913	\$ 95,550,240	1.04	0.97
Renew Power and Infrastructure	\$ 1,225,000,000	8.1%	4.0%	\$ 98,665,062	\$ 127,513,768	\$ 112,655,549	1.14	0.88
Repair Tunnels & Structures	\$ 570,000,000	5.8%	2.6%	\$ 33,004,786	\$ 29,864,974	\$ 14,878,135	0.45	0.50
Renew Mechanical	\$ 135,000,000	5.0%	7.8%	\$ 6,729,000	\$ 7,944,865	\$ 10,572,460	1.57	1.33
Renew Stations	\$ 210,000,000	1.5%	4.9%	\$ 3,114,942	\$ 10,365,446	\$ 10,241,358	1.19	0.99*
Replace Train Control/Increase Capacity	\$ 400,000,000	0.9%	5.8%	\$ 3,641,565	\$ 22,567,846	\$ 23,128,710	0.68	1.02*
Expand Safe Access to Stations	\$ 135,000,000	2.7%	20.2%	\$ 3,698,850	\$ 44,667,434	\$ 27,323,638	1.02	0.61*
Design/Engineer to Relieve Crowding	\$ 200,000,000	2.2%	4.4%	\$ 4,415,138	\$ 12,498,092	\$ 8,827,311	1.15	0.71*

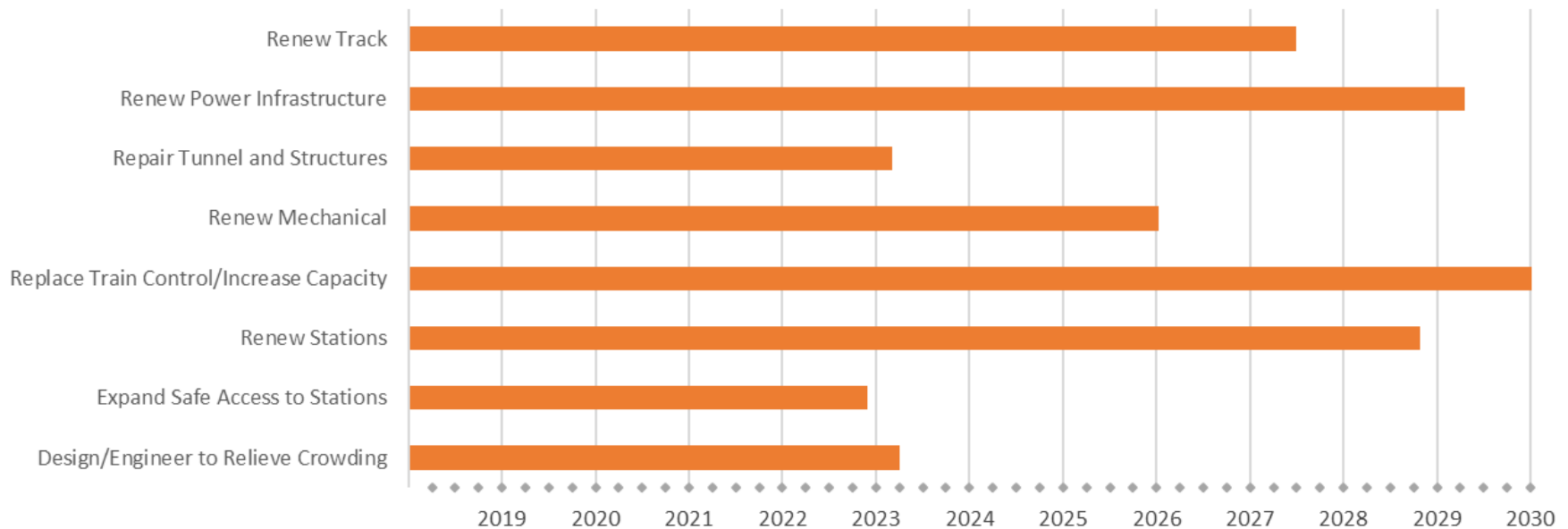
! % Spent and Expended to date for Earned Value Calculation includes pending expenses

\* Programs contain mixed funds - the CPI and SPI are calculated based on the total program funding

# DRAFT Roll up Schedule by Program:



## Measure RR Program Schedule Update



Future updates may include additional projects as programs mature.

# Earned Value: Renew Power



## Five (5) Renew Projects > 25% Spent:

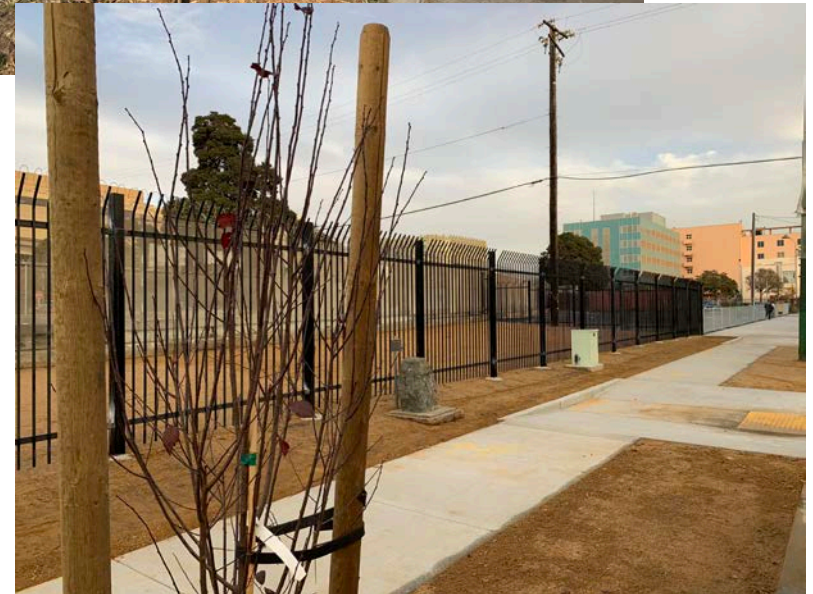
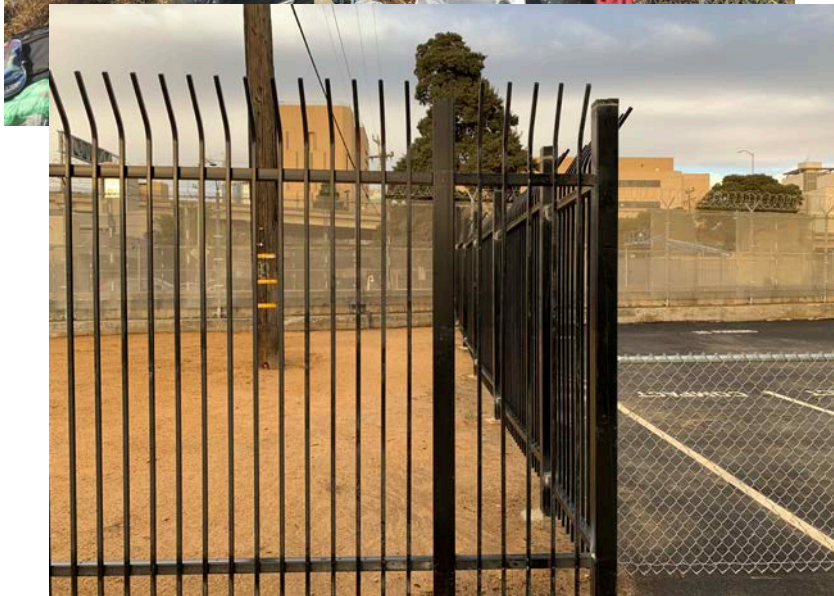
	RR Budget	% Spent	Physical % complete	Expended to Date:	Planned Value	Earned Value	CPI	SPI
	<i>BAC</i>			<i>ACWP</i>	<i>BCWS</i>	<i>ACWP</i>	<i>CPI</i>	<i>SPI</i>
Renew Power and Infrastructure	\$ 1,225,000,000	8.1%	4.0%	\$ 98,665,062	\$ 127,513,768	\$ 112,655,549	1.14	0.88

Project Name	RR Budget	% Spent	Physical % complete	Expended to Date:	Planned Value	Earned Value	CPI	SPI
34.5 KV AC Cable Replacement	\$ 74,453,851	29%	53.6%	\$ 1,211,542	\$ 36,841,142	\$ 29,554,196	1.37	0.80
K-Line 34.5kV AC Cable Replacement	\$ 40,000,000	23%	21.8%	\$ 1,244,467	\$ 5,809,202	\$ 8,730,675	0.94	1.50
TRACTION POWER SUBSTATION PROCUREMENT	\$ 29,888,997	45%	60.0%	\$ 3,492,538	\$ 27,863,703	\$ 17,933,398	1.33	0.64
TRACTION POWER SUBSTATION INSTALLATION	\$ 25,883,984	40%	15.8%	\$ 10,321,123	\$ 4,235,107	\$ 4,095,975	0.40	0.97
Replace Substation RRY DC House	\$ 8,857,154	90%	5.0%	\$ 7,985,410	\$ 8,576,388	\$ 8,502,353	1.06	0.99

EXAMPLE

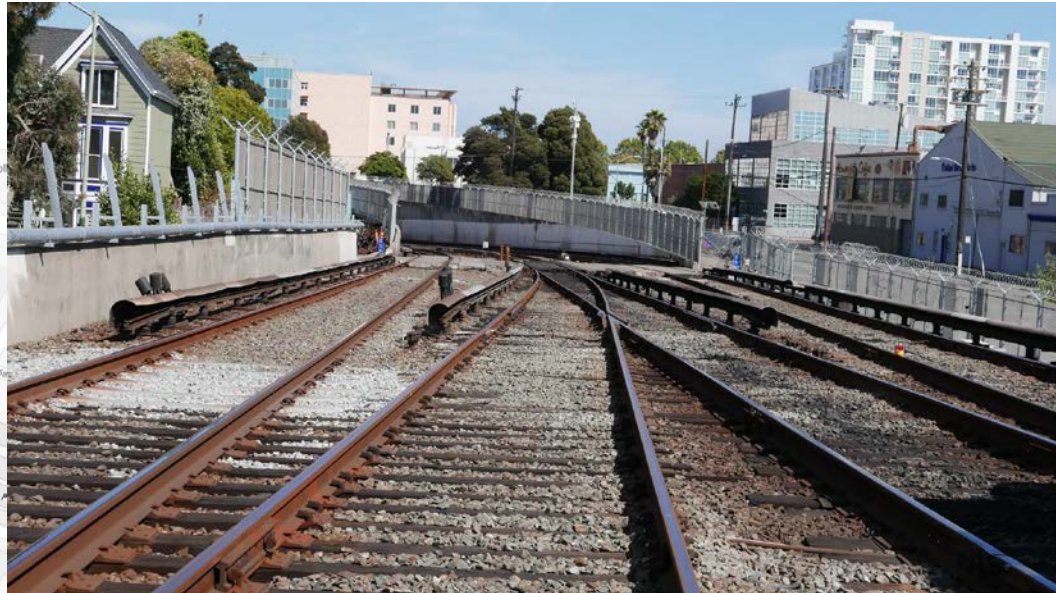
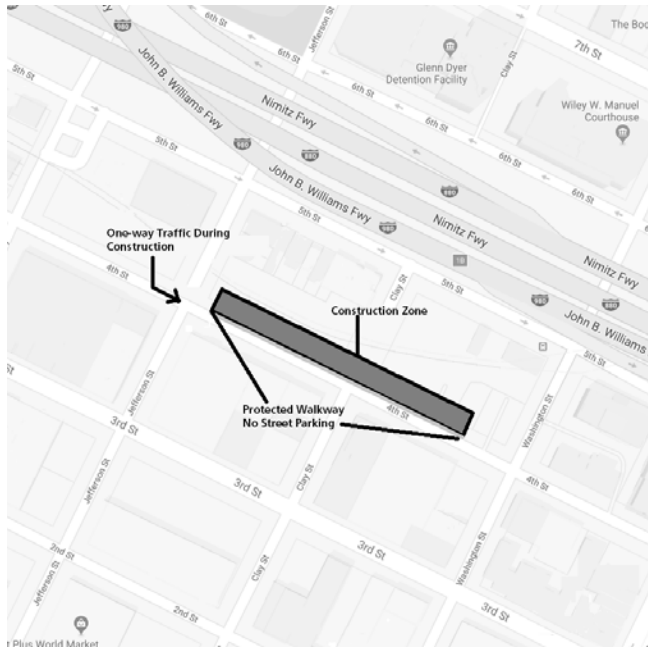


# Work In Progress





# Work In Progress – M03



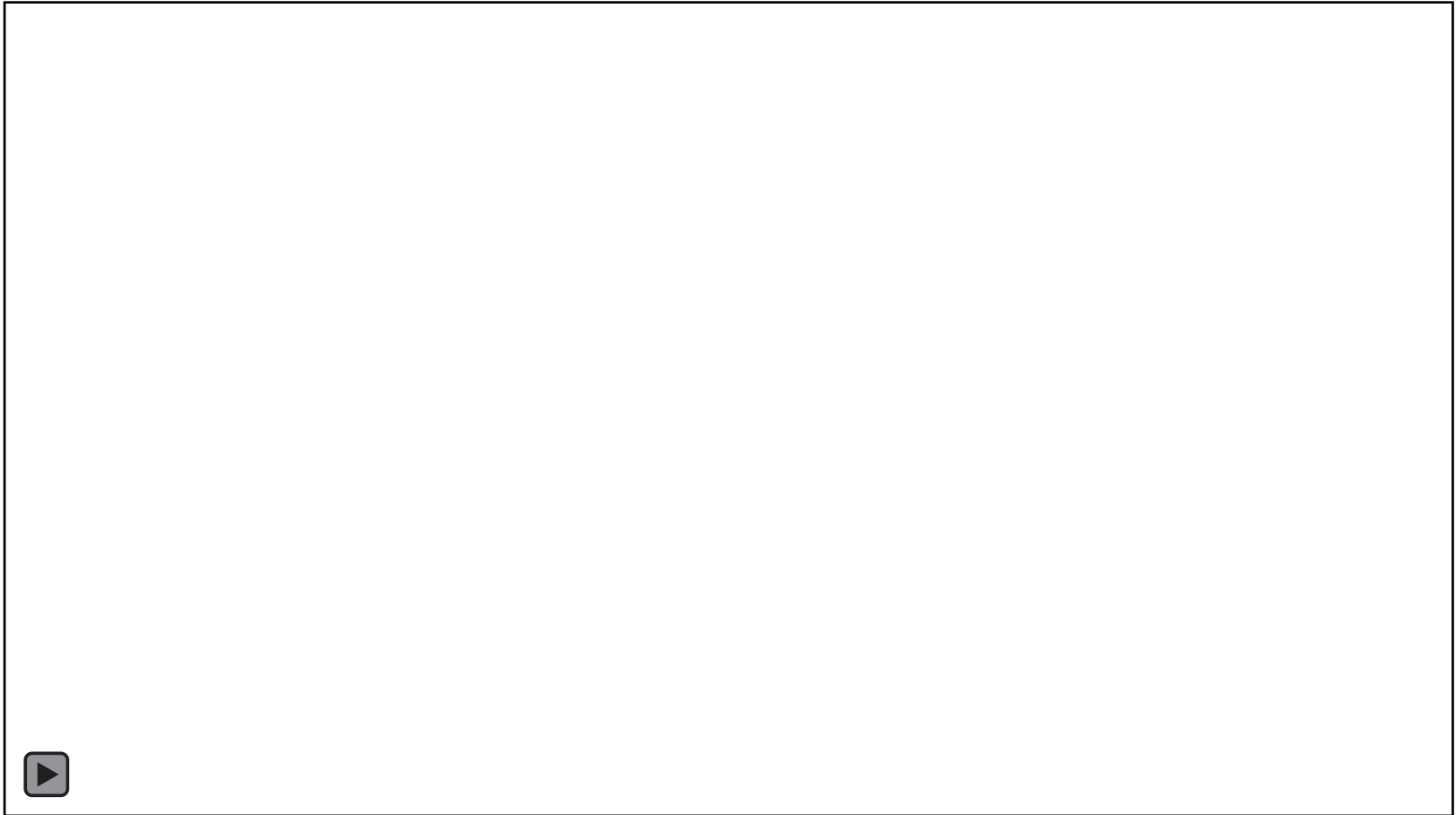
BEFORE



AFTER



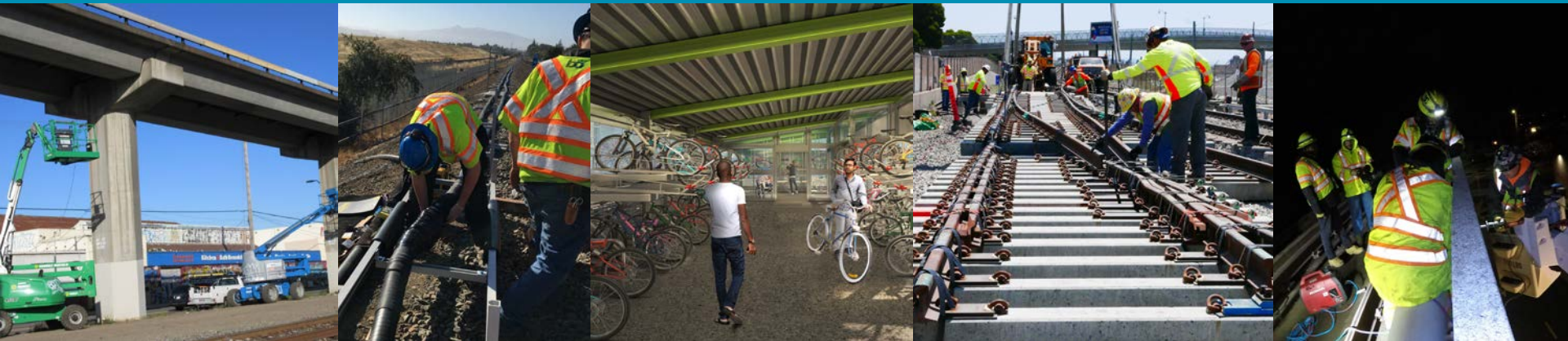
# Work In Progress







# BART Safety, Reliability, and Traffic Relief Program (Measure RR) Update



Bond Oversight Committee  
March 15, 2019



# RR Program Financials

3/15/2019



# RR Program Overview - Expenditures (millions)

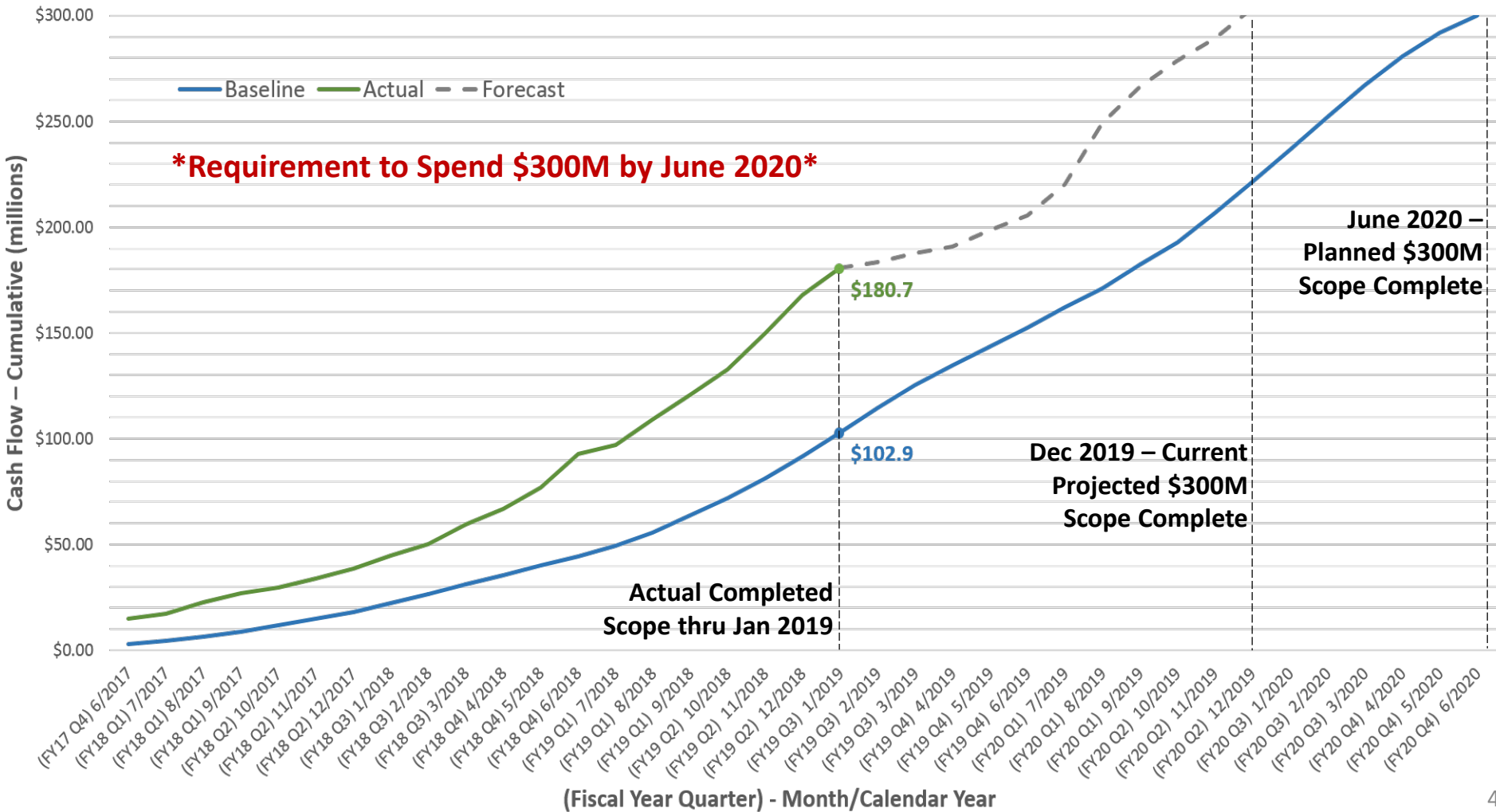
3/15/2019

Program	Forecast Expenditures			Expended (thru Jan 2019)	% Expended out of Total Bond Investment
	SHORT-TERM (thru June 2020)	MID-TERM (thru 2025)	LONG-TERM (thru End of Bond)		
Renew Track	\$223	\$400	\$625	\$77.1	12%
Renew Power Infrastructure	\$145	\$608	\$1,225	\$67.9	6%
Repair Tunnels & Structures	\$27	\$268	\$570	\$14.5	3%
Renew Mechanical	\$23	\$65	\$135	\$5.0	4%
Replace Train Control/Increase Capacity	\$20	\$286	\$400	\$4.4	1%
Renew Stations	\$14	\$148	\$210	\$3.2	2%
Expand Safe Access to Stations	\$16	\$86	\$135	\$3.8	3%
Design/Engineer to Relieve Crowding	\$27	\$69	\$200	\$4.8	2%
<b>Total</b>	<b>\$495</b>	<b>\$1,930</b>	<b>\$3,500</b>	<b>\$180.7</b>	<b>5%</b>



# Measure RR - Scope & Spending (SHORT-TERM) CUMULATIVE

## BART Measure RR Program - SHORT-TERM (3-Year Planned Work, thru June 2020)





# Renew Track (millions)

Thru 1/2019  
EXPENDED: \$77.1

Thru 6/2020  
FORECAST: \$223

RENEW TRACK		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	7				
# Projects in Design	5	\$0.8	\$3.8		\$9.8
# Projects in Bid/Award	2			\$19.5	
# Projects in Construction	4	\$1.5	\$24.5		\$88.3
<b>TOTAL</b>	<b>18</b>	<b>\$2.3</b>	<b>\$28.3</b>	<b>\$19.5</b>	<b>\$98.1</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>Award of agreement for production of rail profiling services \$8.8M</li> <li>Award of Traffic Control Services for C55 and R65 Interlocking</li> </ul>	<ul style="list-style-type: none"> <li>Award of agreement for System Joint Elimination Services \$32M</li> </ul>	<ul style="list-style-type: none"> <li>Submit A65/75 to Procurement</li> <li>Board review of C25 and System Joint Elimination</li> <li>C55 1<sup>st</sup> weekend shutdown</li> </ul>	<ul style="list-style-type: none"> <li>Complete Procurement package for Oakland Yard Spur Tracks</li> </ul>



# Renew Power Infrastructure (millions)

Thru 1/2019  
EXPENDED: \$67.9

Thru 6/2020  
FORECAST: \$145

RENEW POWER INFRASTRUCTURE		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	1				
# Projects in Design	13	\$0.2	\$22.8		\$3.9
# Projects in Bid/Award	3			\$1.0	
# Projects in Construction	9	\$1.0	\$14.2		\$35.2
<b>TOTAL</b>	<b>26</b>	<b>\$1.2</b>	<b>\$37.0</b>	<b>\$1.0</b>	<b>\$39.1</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>Issue IFB for 34.5 kV conduit procurement \$1M</li> <li>Issue IFB for Train Control UPS \$1M</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of Willow Pass Road (CWS) High Voltage Substation</li> <li>Complete 100% Design of 34.5 kV Cable Design A Line (Coliseum to Union City)</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of 34.5 kV Cable Design R Line (Ashby to Richmond Yard)</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of Cast Coil Transformer (L &amp; C Lines)</li> </ul>





# Repair Tunnels & Structures (millions)

Thru 1/2019  
EXPENDED: \$14.5

Thru 6/2020  
FORECAST: \$27

REPAIR TUNNELS & STRUCTURES		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	2	\$0.1			
# Projects in Design	13	\$0.1	\$1.5		\$1.0
# Projects in Bid/Award	3			\$1.0	
# Projects in Construction	7	\$0.3	\$4.6		\$4.4
<b>TOTAL</b>	<b>25</b>	<b>\$0.5</b>	<b>\$6.1</b>	<b>\$1.0</b>	<b>\$5.4</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>BART Labor: Complete Renew Soundwalls (C Line)</li> <li>BART Labor: Renew Soundwalls (R Line)</li> </ul>	<ul style="list-style-type: none"> <li>BART Labor: Richmond Station Platform Edge Rehabilitation</li> <li>Submit to Procurement Safety Barrier Maintenance of Way Contract \$1M</li> <li>Material procurement for Cross Passage Doors (Walnut Creek)</li> </ul>	<ul style="list-style-type: none"> <li>BART Labor: Renew Soundwalls (R Line)</li> <li>Start construction for Cross Passage Doors (Walnut Creek)</li> </ul>	<ul style="list-style-type: none"> <li>Advertise Aerial Fall Protection A-Line North \$6M</li> </ul>



# Renew Mechanical (millions)

Thru 1/2019  
EXPENDED: \$5.0

Thru 6/2020  
FORECAST: \$23

RENEW MECHANICAL		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	0				
# Projects in Design	8	\$0.2	\$2.5		\$0.2
# Projects in Bid/Award	1			\$8.0	
# Projects in Construction	1		\$6.0		\$1.3
<b>TOTAL</b>	<b>10</b>	<b>\$0.2</b>	<b>\$8.5</b>	<b>\$8.0</b>	<b>\$1.5</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>Complete 100% Design of Rotoclone Replacement (Yards Richmond, Concord &amp; Hayward)</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of Fire Services (OCY) \$1.9M</li> <li>Complete 100% Design of Sewage Pumps</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of Yard Fire Services (ORY)</li> </ul>	<ul style="list-style-type: none"> <li>Complete 100% Design of Turntables for OCY</li> <li>Complete 100% Design of Systemwide HVAC Equipment Phase 1</li> </ul>



# Replace Train Control / Increase Capacity (millions)

Thru 1/2019  
EXPENDED: \$4.4

Thru 6/2020  
FORECAST: \$20

TRAIN CONTROL		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	0				
# Projects in Design	2				
# Projects in Bid/Award <i>(Spend FTA Funding First)</i>	1	\$0.8	\$3.6		\$12.0
# Projects in Construction	0				
<b>TOTAL</b>	<b>3</b>	<b>\$0.8</b>	<b>\$3.6</b>		<b>\$12.0</b>

## CRITICAL PATH SCOPE:

FY19 Q2	FY19 Q3	FY19 Q4	FY20 Q1
<ul style="list-style-type: none"> <li>Two Technical Proposals were received on Nov 20<sup>th</sup> (Thalus declined to continue)</li> <li>Review Technical Proposals</li> <li>Develop Addenda for technical workshops w/ Vendors</li> <li>Prepare additional addenda &amp; answers to questions</li> </ul>	<ul style="list-style-type: none"> <li>Receive and begin evaluation of technical/price proposals (Mar 19<sup>th</sup>)</li> <li>Switch Machines/Train Control Room Power Cabinets (enabling work) – 30% Design</li> <li>Continue ICS enabling work (CSE/BART Labor)</li> </ul>	<ul style="list-style-type: none"> <li>Continue evaluation of technical/price proposals</li> <li>Continue ICS enabling work (CSE/BART Labor)</li> </ul>	<ul style="list-style-type: none"> <li>CM Support On-Call Contract(s) (Advertise)</li> <li>Prepare/Issue BAFO</li> <li>Advertise Switch Machines/Train Control Room Power Cabinets contract (enabling work)</li> </ul>

**Note:** Have not received formal approval to use AATC settlement fund. AATC fund can only be used for 80% of Non-CIG expenditure. Need Measure RR for CIG expenditure and 20% match for Non-CIG expenditure.



# Renew Stations (millions)

Thru 1/2019  
EXPENDED: \$3.2

Thru 6/2020  
FORECAST: \$14

RENEW STATIONS		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	0				
# Projects in Design	0				
# Projects in Bid/Award	2	\$0.1	\$0.1	\$8.6	
# Projects in Construction	1		\$0.7		\$1.4
<b>TOTAL</b>	<b>3</b>	<b>\$0.1</b>	<b>\$0.8</b>	<b>\$8.6</b>	<b>\$1.4</b>

## CRITICAL PATH SCOPE:

FY19 Q2	FY19 Q3	FY19 Q4	FY20 Q1
<ul style="list-style-type: none"> <li>19<sup>th</sup> St Station (07EA-120) – Advertised in Nov 2018</li> <li>Escalator Contract Advertisment in Oct2018</li> <li>Ongoing construction for El Cerrito del Norte</li> </ul>	<ul style="list-style-type: none"> <li>19<sup>th</sup> St Station (07EA-120) – Bids received Feb 26, 2019)</li> <li>Escalator contract – Award (Mar 14, 2019)</li> <li>Ongoing construction for El Cerrito del Norte</li> </ul>	<ul style="list-style-type: none"> <li>Evaluating bids for 19<sup>th</sup> St Station (07EA-120)</li> <li>Ongoing construction for:               <ul style="list-style-type: none"> <li>– El Cerrito del Norte</li> <li>– Escalator contract</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Ongoing construction for:               <ul style="list-style-type: none"> <li>– El Cerrito del Norte</li> <li>– Escalator contract</li> </ul> </li> </ul>

COMPLETE



# Expand Safe Access to Stations (millions)

Thru 1/2019  
EXPENDED: \$3.8

Thru 6/2020  
FORECAST: \$16

STATION ACCESS		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	3				\$0.3
# Projects in Design	12	\$0.1	\$3.7		\$1.1
# Projects in Bid/Award	1			\$0.5	
# Projects in Construction	5		\$3.0		\$3.6
<b>TOTAL</b>	<b>21</b>	<b>\$0.1</b>	<b>\$6.7</b>	<b>\$0.5</b>	<b>\$5.0</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>On-going Station Active Access and Accessibility improvements in various locations</li> <li>Construction: El Cerrito del Norte &amp; MacArthur Transit Improvement (Phase 2 and bicycle enclosure)</li> </ul>	<ul style="list-style-type: none"> <li>Construction:               <ul style="list-style-type: none"> <li>El Cerrito del Norte</li> <li>MacArthur Transit Improvement (Phase 2 &amp; bicycle enclosure)</li> <li>ADA Lighting Improvements</li> <li>Warm Springs West Ped Bridge</li> </ul> </li> <li>Advertise Embarcadero &amp; Civic Bike Station (57RR-110)</li> </ul>	<ul style="list-style-type: none"> <li>Substantial Completion for MacArthur bicycle enclosure</li> <li>Construction:               <ul style="list-style-type: none"> <li>El Cerrito del Norte</li> <li>MacArthur Transit Improvement (Phase 2)</li> <li>ADA Lighting Improvements</li> <li>Warm Springs W. Ped Bridge</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Advance design on multiple Station Access Improvements projects</li> <li>Construction:               <ul style="list-style-type: none"> <li>El Cerrito del Norte</li> <li>MacArthur Transit Impr (Ph 2)</li> <li>ADA Lighting Improvements</li> <li>Warm Springs W. Ped Bridge</li> </ul> </li> </ul>

COMPLETE



# Design/Engineer to Relieve Crowding (millions)

Thru 1/2019  
EXPENDED: \$4.8

Thru 6/2020  
FORECAST: \$27

RELIEVE CROWDING		Current RR Spend/Month	POs Remaining to be Invoiced	Contracts in Bid/Award	Remaining Forecast Expenditures Prior June 2020 (unawarded contracts & forecasted labor)
# Project in Planning	3	\$0.2	\$1.7		\$6.2
# Projects in Design	3		\$5.0		\$1.1
# Projects in Bid/Award	2	\$0.1	\$0.3	\$7.9	
# Projects in Construction	0				
<b>TOTAL</b>	<b>8</b>	<b>\$0.3</b>	<b>\$7.0</b>	<b>\$7.9</b>	<b>\$7.3</b>

## CRITICAL PATH SCOPE:

February 2019	March 2019	April 2019	May 2019
<ul style="list-style-type: none"> <li>New Transbay Rail Crossing – Bids Due</li> <li>HMC 2: Complete 100% Design</li> <li>Award Civic Center Station Scissor Stairs (111A-112)</li> </ul>	<ul style="list-style-type: none"> <li>HMC 2: Complete 60% Design for Civil/Grading</li> <li>New Transbay Rail Crossing – Review Strategic Advising &amp; Pgm Mgmt (SA/PM) Contract Proposals</li> <li>Civic Center Station Scissor Stairs (111A-112) – NTP</li> </ul>	<ul style="list-style-type: none"> <li>HMC 2: Advertise Trackwork</li> <li>New Transbay Rail Crossing – Interview teams proposing on Contract 2 (SA/PM)</li> <li>Advertise Embarcadero New Platform Elevator (11FE-110)</li> </ul>	<ul style="list-style-type: none"> <li>New Transbay Rail Crossing – Complete evaluation of Contract 2 (SA/PM) proposals</li> </ul>



# RR Program Small Business & Outreach

3/15/2019



# RR Program Update – Small Business

3/15/2019

Program	Total RR Commitment	Total RR SB Commitment	SB Commitment %	# of SB Contracts	Total RR Payments on RR Contracts	RR Payments to SBs	SB Payment %
Renew Track	\$47,199,550	\$11,465,412	24%	52	\$22,607,668	\$3,698,446	16%
Renew Power	\$144,213,145	\$76,384,823	53%	139	\$42,349,092	\$14,222,923	34%
Repair Tunnels & Structures	\$71,985,785	\$12,876,543	18%	47	\$21,272,638	\$1,765,245	8%
Renew Mechanical	\$14,547,320	\$2,277,635	16%	25	\$1,160,256	\$574,404	50%
Replace Train Control/Increase Capacity	\$3,578,654	\$255,358	7%	6	\$12,497	-	0%
Renew Stations	\$23,593,863	\$2,761,586	12%	18	\$2,052,623	\$674,070	33%
Expand Safe Access to Stations	\$5,312,061	\$1,793,726	34%	52	\$2,355,231	\$369,708	16%
Design/Engineer to Relieve Crowding	\$5,723,106	\$1,509,231	26%	13	\$2,003,610	\$511,535	26%
<b>Total</b>	<b>\$316,153,485</b>	<b>\$109,324,314</b>	<b>35%</b>	<b>352</b>	<b>\$93,813,615</b>	<b>\$21,816,332</b>	<b>23%</b>

Notes: All amounts are based on RR fund percent only. Amounts are updated to February 21, 2019. Includes formal contracts only; does not include informal purchases or work performed by BART's own forces. SB totals include DBEs, MSBEs, SBs, and LSBs. Sources: RR commitments are based on RR Requisitions report, Procurement Sealed Bids Report and PeopleSoft Work Plans application. RR% for each project is based on Financial Analysts' report, RR Funds / Total Project Budget. Payments based on PeopleSoft and VPT.





# RR Program Update – Outreach

3/15/2019



- Recently Completed Events
  - LGBT Power Pitch (9 participants)
  - National Association of Minority Contractors (58 participants)
- Upcoming Events
  - Small Business Construction Expo (March 22)
  - Disadvantaged and Small Business Summit (March 22)
  - NorCal Procurement Expo (May 31)



- Additional Programs
  - **Mentor-Protégé Program:** currently three Mentor-Protégé relationships have been established
  - **Small Business Supportive Services:** contract has been awarded and OCR is working with the consultant to strategically develop the program



# RR Program Hiring

3/15/2019

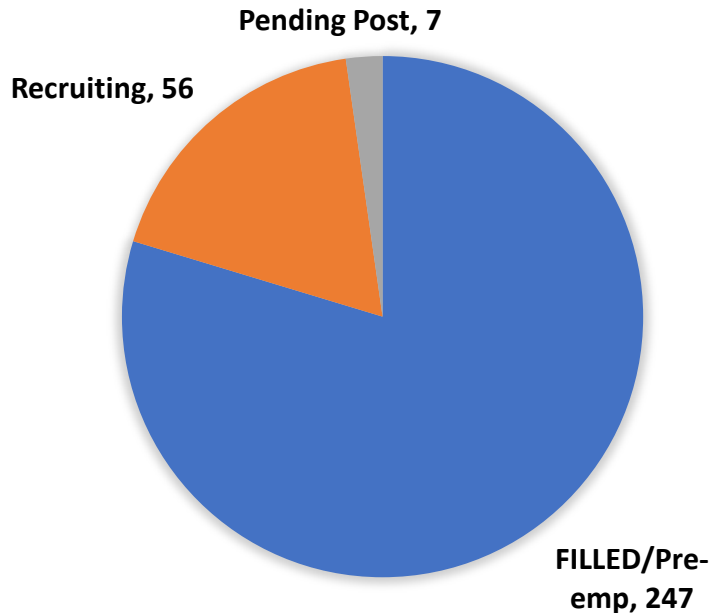


# RR Program Update – Hiring

3/15/2019

Bond Progress	# of Positions
FILLED/Pre-employment	247
Recruiting	56
Pending Post	7
	310

## BOND PROGRESS



## Measure RR Hiring Update

- 80% Filled for FY18-FY19 Headcount
- Recruitments prioritized to meet project goals and deadlines
- On track to fill needed positions by FY20