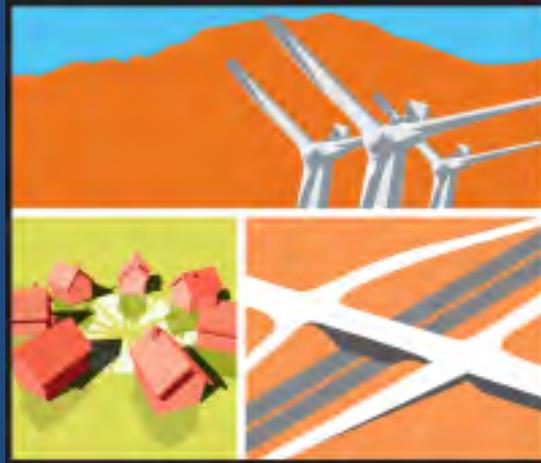


CV Link O&M Cost Estimate



CVAG

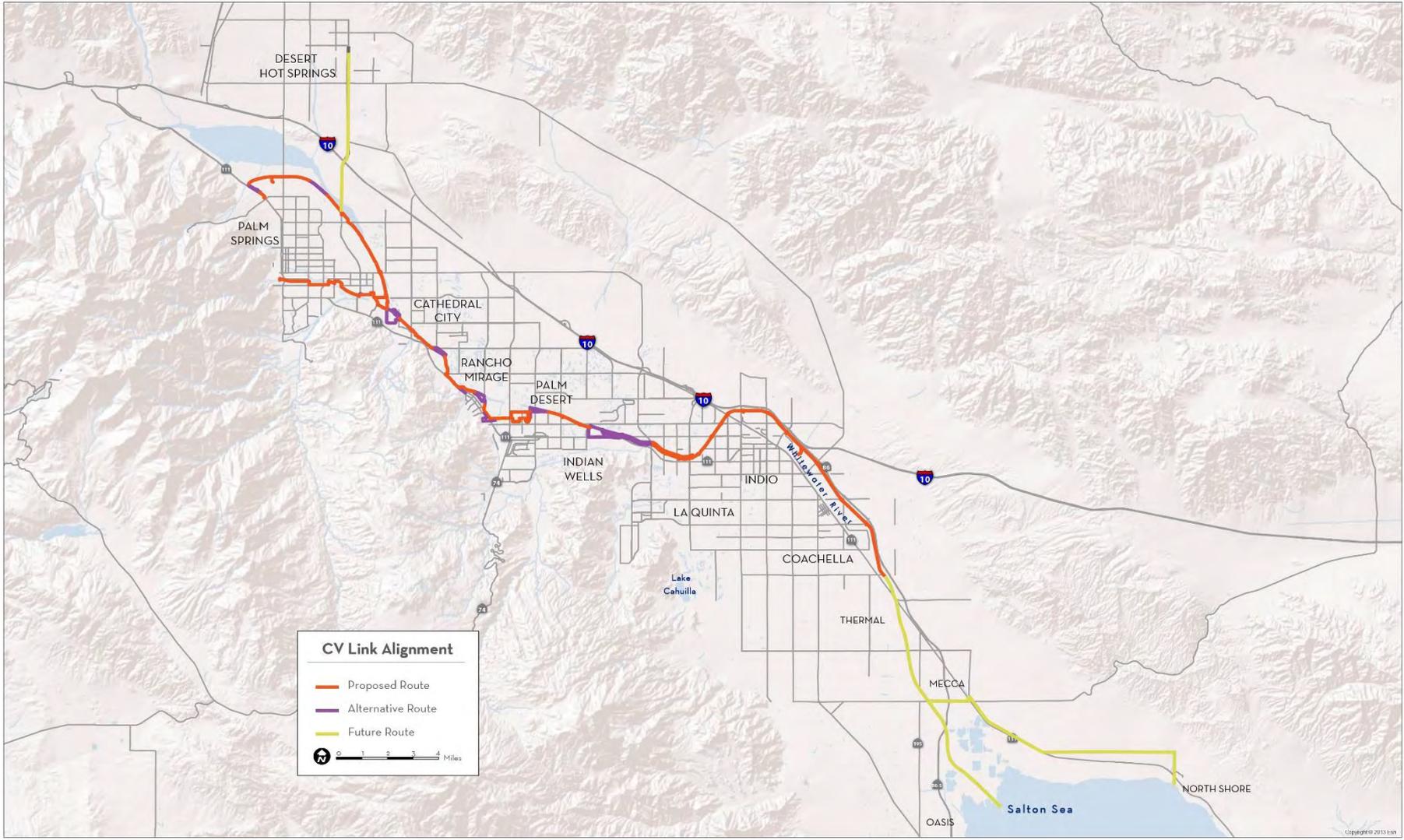
Transportation Committee

May 4, 2015

Agenda

- I. Purpose
- II. How much will O&M Cost
- III. O&M Comparison Examples
 - I. Bear Creek Trail – La Quinta
 - II. Santa Ana River Trail – Riverside County
 - III. American River Parkway – Sacramento County
- IV. Levels of Service
- V. Committee Input







MASTER PLAN
VOLUME 1
MARCH 2015



BUDGET ESTIMATE

ACTIVITY	ANNUAL COST
MAINTENANCE	
Sand and debris removal, sweeping	\$51,900
Concrete repair	\$268,700
Signs and pavement markings	\$56,400
Fences, bollards and gates	\$21,000
Clearing of drainage channels and culverts	\$15,000
Bridge structures (cyclic and periodic)	\$55,500
Restrooms	\$20,000
Site furnishings	\$30,000
NEV leases	\$36,000
Graffiti removal	\$30,000
Lighting maintenance	\$30,000
Landscaping	\$250,400
SUBTOTAL MAINTENANCE	\$864,900
OPERATIONS	
Utilities (electric and water)	\$28,900
Events, promotions and website maintenance	\$47,500
Management and administration, dispatch (2 FTE)	\$122,500
Rangers (10 FTE)	\$553,100
SUBTOTAL OPERATIONS	\$752,000
TOTAL MAINTENANCE AND OPERATIONS	\$1,616,900
TOTAL PER MILE	\$33,600



Assumptions and Sources

- Services will be contracted out
- Labor rates are fully burdened
- General Services Administration (Riverside County)
- California Employment Development Corporation
- First year of O&M is 2018: < \$600,000
- Includes Deferred Maintenance



TABLE 22: STRUCTURES MAINTENANCE COST ESTIMATE

Item	Time Interval (years)	Cost over 75 Years	Cost per year
Cyclic / Routine Maintenance			
Deck cleaning	3		
Deck sealing	25		
Expansion joint cleaning	10		
Bearing assemblies cleaning	15		
Total cost (cyclic)		\$373,565	\$14,900
Condition-based Rehabilitation Maintenance			
Deck resurfacing	50		
Expansion joint replacement	25		
Bearing replacement	50		
Railing refinishing	25		
Shade structure fabric and fencing replacement	40		
Superstructure cleaning and painting	25		
Total cost (condition-based)		\$1,020,157	\$40,640

Sweeping Estimate Approach 1	Values		
Number of miles	48.1		
High sand accumulation months per year	4		
Contract cost per 200 hours	\$7,600		
Cost per hour	\$38		
Time per cycle		Peak sand accumulation	Off-peak period
Sweeper speed (mph)	3		
Proportion subject to sand		30%	
Miles subject to sand		14.4	48.1
For frequent peak period cycles only			
Time to sweep length of problem areas (hours)		5	
Deadhead travel time (hours)		1	
Total time per sweep cycle (hours)		6	
For full sweep cycles only			
Time to sweep full length (hours)		16	
Deadhead travel time (hours)		2	
Total time per sweep cycle (hours)		18	
Number of sweep cycles	Hrs/cycle	No. cycles	Frequency
Peak period / limited length sweep cycles	70	12	3
Full sweep cycles	216	12	12
Total	286	24	
Total cost of sweeping	\$10,873		
Administration	\$5,000	Cost per debris location	Number of debris locations
Debris removal	\$36,000	\$1,500	24
Total path sweeping cost (p.a.)	\$51,873		

Pavement Rehab Estimate

Item	Unit	Value
Off street length	mi	40.2
Off street length	ft	212256
Path area	SF	4245120
Current index value	SF	\$1.06
Load reduction factor		50%
Adjusted cost	SF	\$0.53
Maintenance interval	Years	20
Service life	Years	75
Number of occurrences		3
Escalation		3%
Total cost		\$20,149,506
Cost per year		\$268,700



Water Use Estimate

SF of landscaped area valley wide	331,920				
Water use per SF (gal)	23				
Water use per SF (gal)	29				

Assumes 50/50 mix of medium and low water use planting and no turf. CVWD Zone 5 Evaporative Transpiration Rate 93.9, and average of \$1.12 (west valley) and \$1.42 (east valley) unit rates per CCF

Water Use Scenario	Water use (gal)	Gals/ CCF	CCF	Unit rate	Cost per year
Water use per year estimated	7,634,160	748	10,205	1.27	\$13,000
Water use per year maximum	9,625,680		12,867		\$16,300



TABLE 23: CV LINK POWER CONSUMPTION ESTIMATE

Description	Quantity		Electrical Power		
	Number	Unit	kW Load	Total kW Load	Total kWh
Shade structure lighting	42	ea.	0.15	6.30	18,396
Shade structure power	42	ea.	0.18	7.56	22,075
8 kW solar system / shade structures	42	ea.			
Device charging receptacles	42	ea.	0.18	7.56	22,075
Wifi equipment / shade structures	42	ea.	0.05	2.10	6,132
Security camera / shade structures	42	ea.	0.05	2.10	6,132
240V cart charging station / shade structures	42	ea.	1.00	42.00	122,640
Big belly trash system	200	ea.	0.50	100.00	292,000
Bollard lighting	200	ea.	0.04	7.00	20,440
Light tubes	200	ea.	0.50	100.00	292,000
In-ground traffic counters	42	ea.	0.10	4.20	12,264
Traffic volume display poles	2	ea.	0.20	0.40	1,168
Restroom building lighting & dryers	4	ea.	0.36	1.44	4,205
Electrical meter pedestals	42	ea.			
Lighting control system	42	ea.			
Sub-total			3.31	280.66	819,527
			kW Load	Total kW Load	Total kWh
					819,527
2 kW solar system energy production	42	ea.	8	336	735,840
Project sub-total					83,687
			Cost of power		\$0.15
			Total annual energy cost		\$12,553.08
			Total monthly energy cost		\$298.88

Bear Creek Trail/Nature Preserve La Quinta

- **Edie Hylton – Community Service Director**
- 2.6 Miles concrete trail – 8 feet wide
- 28 acres of landscaped and natural areas
- 4 rest areas
- \$90,000 annual O&M budget







Santa Ana River Trail & Parkway

- **Scott Bangle – Superintendent RivCo Parks**
- **Patricia Lock-Dawson – Principal Consultant**
- 58 miles constructed – 110 miles planned
- Different managers for different sections
- Equestrian Uses
- Natural Areas
- Trailheads

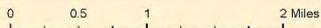


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SANTA ANA RIVER TRAIL & PARKWAY

	Trailhead		Trail Route		Santa Ana River
	Picnic Area		Parking		Restrooms
	Hiking		Bicycle Shop		Restaurant/Store
	Water Fountain		Nature Viewing		Equestrian Trail
	Historic Site		Fishing		Mile Marker
	Off-leash Dog Area		Camping		Trail Access



MAP IS NOT TO SCALE

All City or County Parks shown have varying hours, regulations and fees may apply. State license required for fishing. Weekday users may experience some construction/detour changes to the route. This map is intended for general information only and is subject to change without notice. It is recommended that users call ahead for verification before visiting a particular site. For more information call the City of Riverside Information and services line at 826-5311.







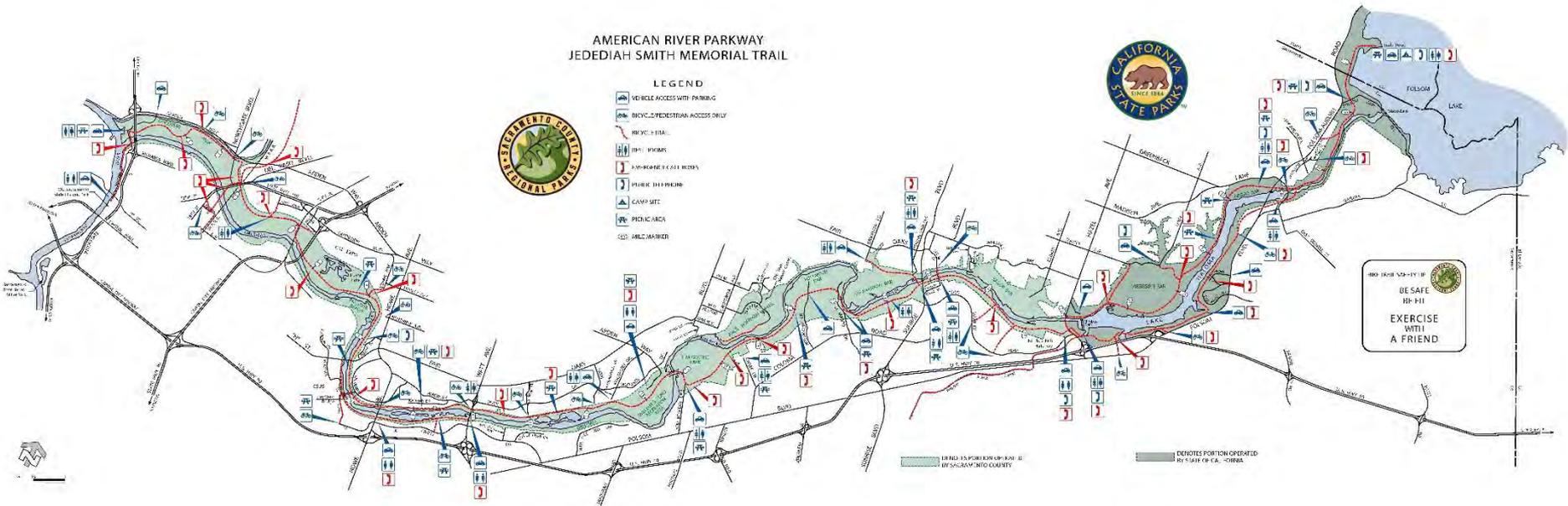


Santa Ana River Trail O&M

- Riverside County
 - No dedicated O&M funding source
 - No deferred maintenance budget
- Orange County
 - \$9,200 per mile per year
 - Does not include cleaning restrooms, asphalt and grading repairs, utilities, or security



American River Parkway Sacramento County



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The Jewel of Sacramento

- 4900 acres (606 developed)
- 82 miles of trail (26 equestrian + 26 bikeway + 20 walking + 10 service roads)
- \$6.3 million annual O&M
- 5 million visitors a year
- 5 developed parks
- 6 boat ramps



Thousands of Acres of Parkland



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Hundreds of Bridges and Culverts





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AMERICAN RIVER
PARKWAY

PARKWAY HALF MARATHON

Sacfit

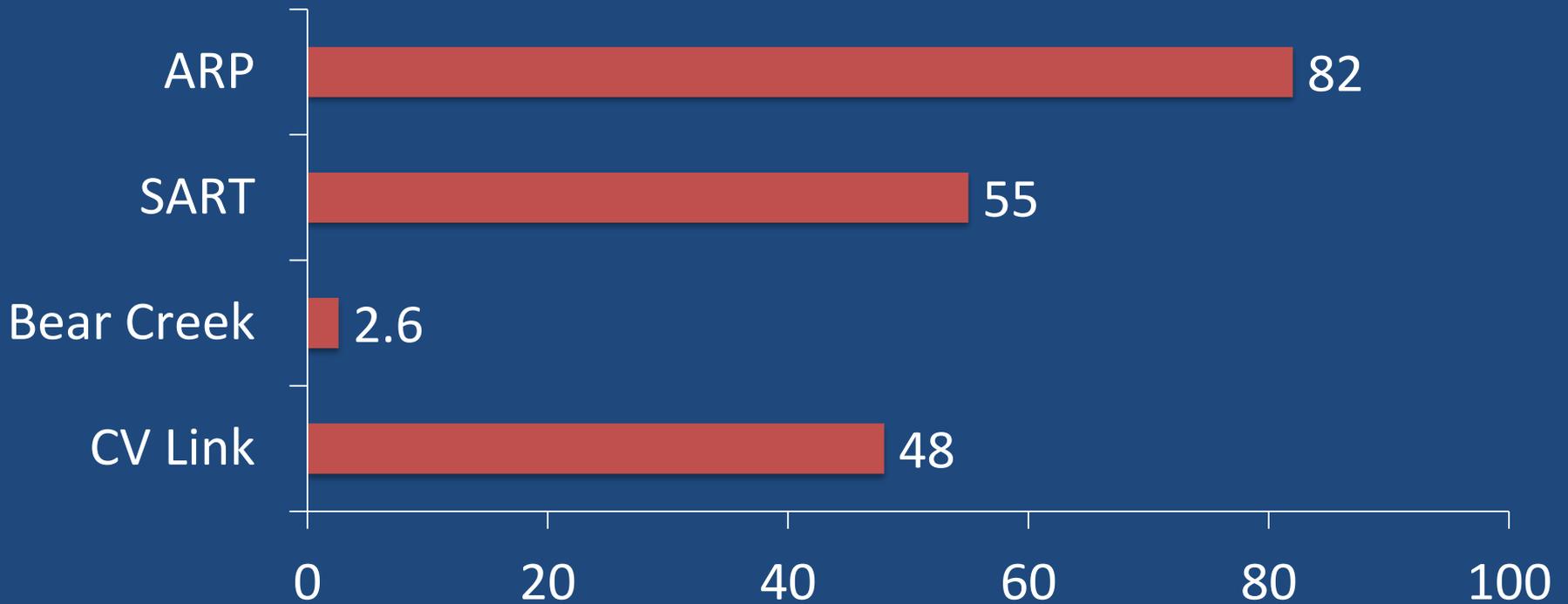
RUN START / FINISH



The fun running and walking club

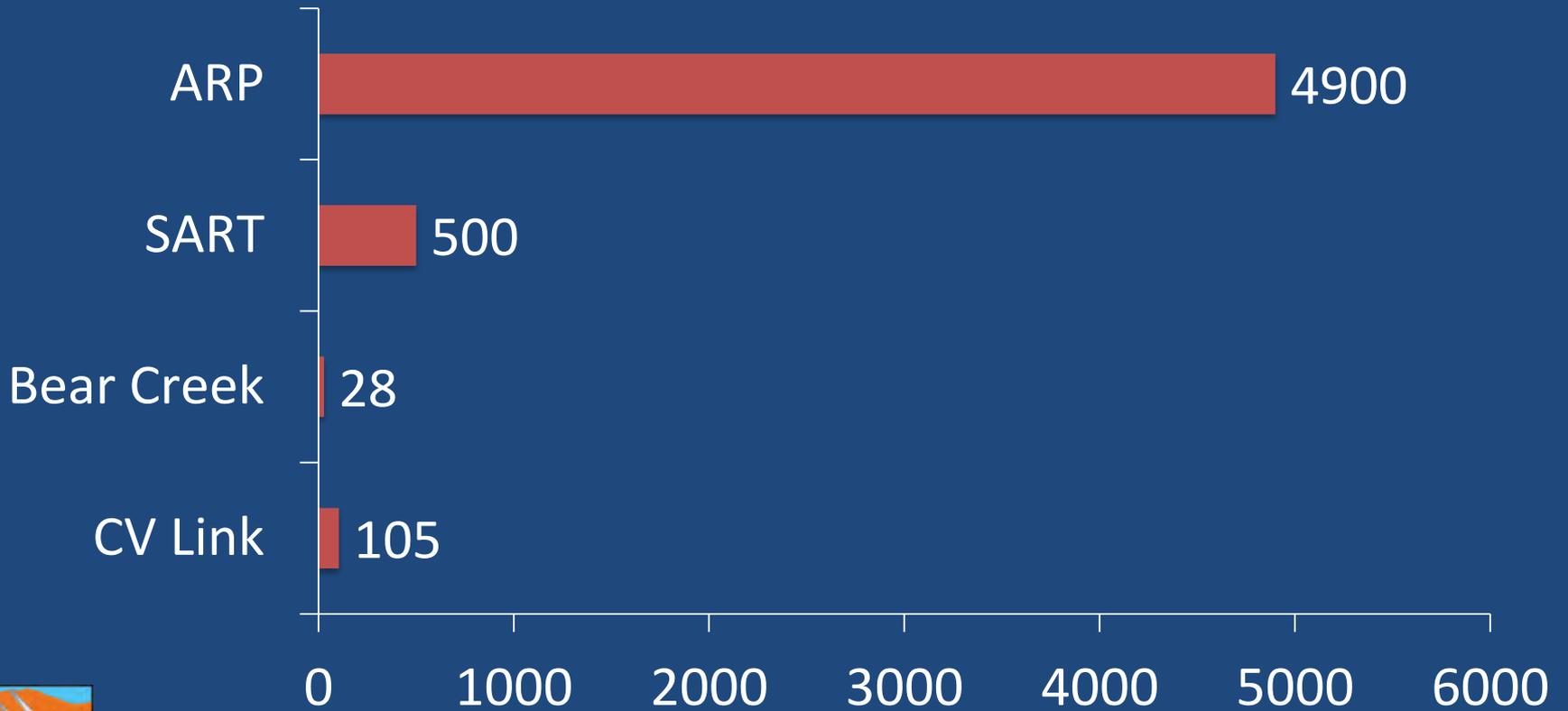
LENGTH

MILES



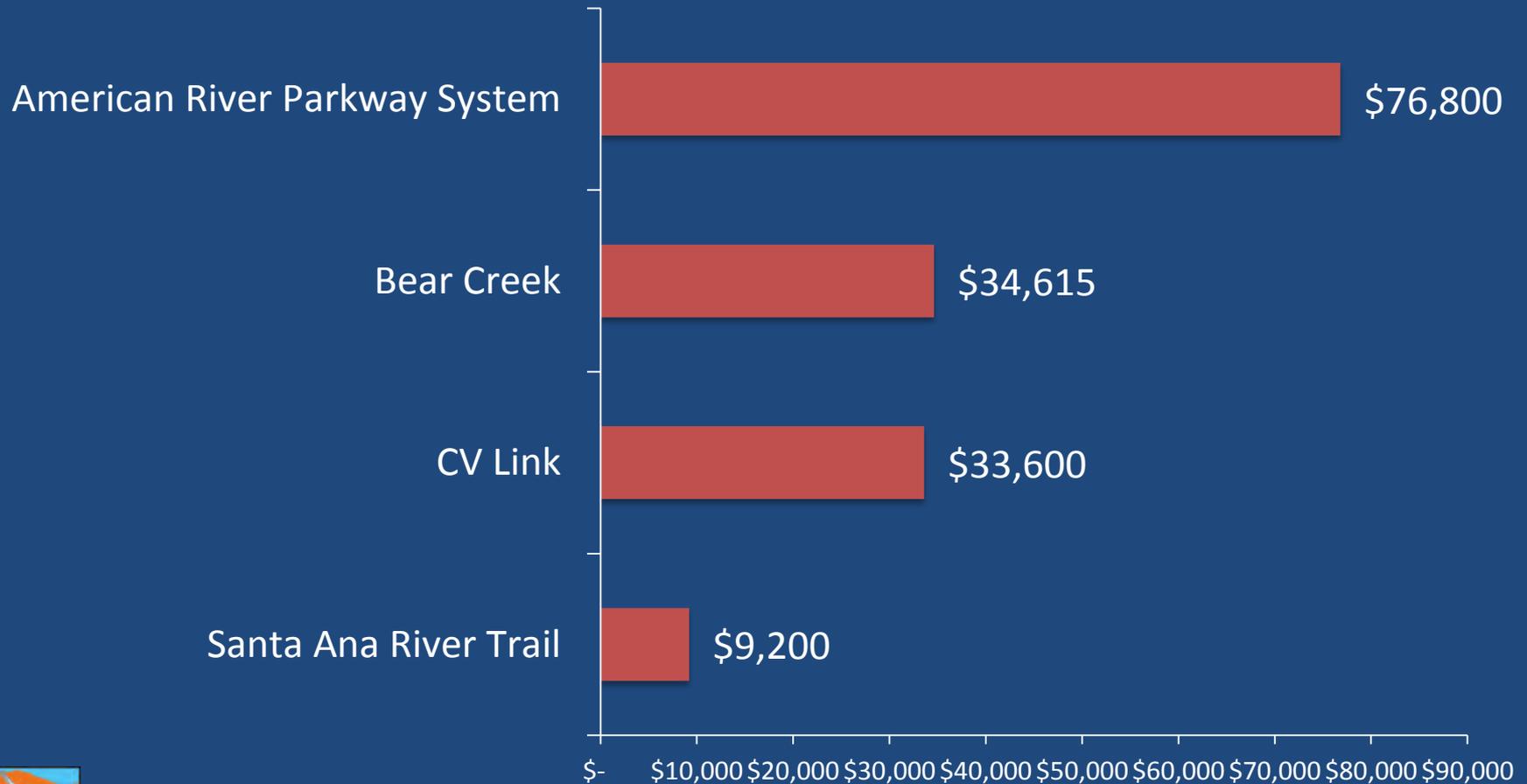
AREA

ACRES



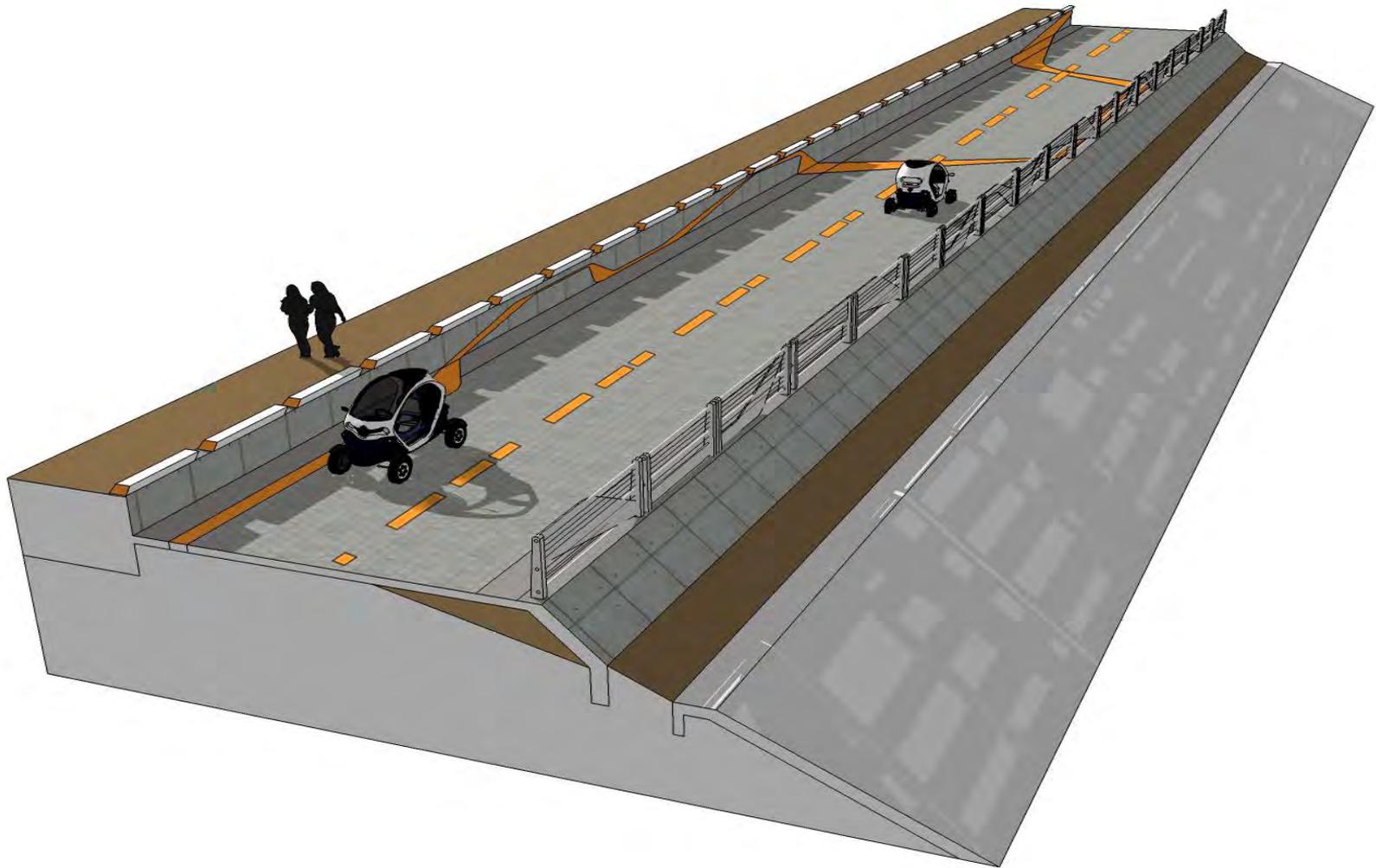
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Trail O&M Cost / Mile / Year



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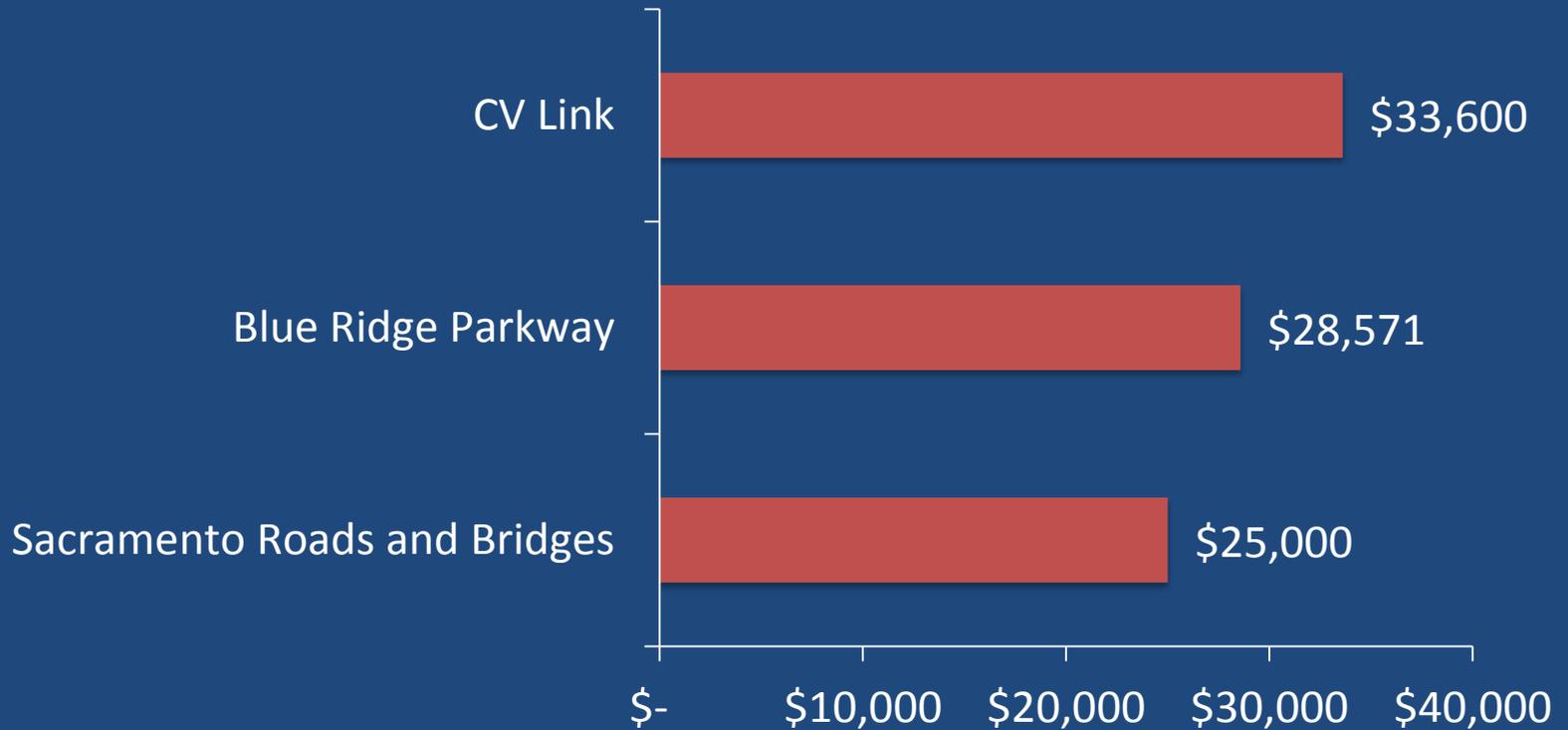
CV Link "Roadway"



CV Link “Roadway”



CV Link vs. Roadway



Levels of Service Options

- Too high, too low, just right?
- Volunteers
- Security
- Less hours of operation
- Less landscaping
- Less hardscaping
- No rangers



CV LINK OPERATIONS AND MAINTENANCE PROJECTED COSTS DISCUSSION

