



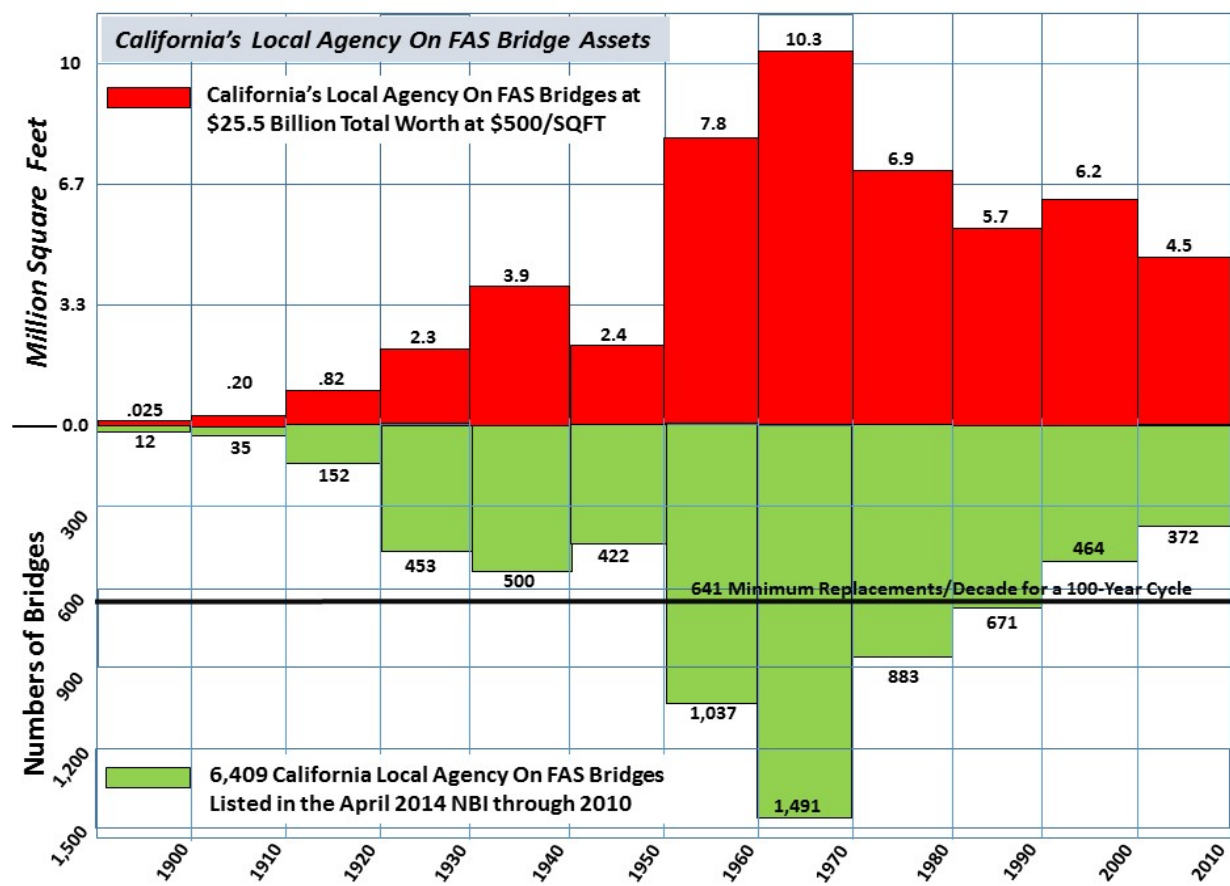
# ***State of the California Local Agency Bridge Program***

**Greg Kolle, PE**

**Senior Structures Engineer**

**California Division, FHWA**

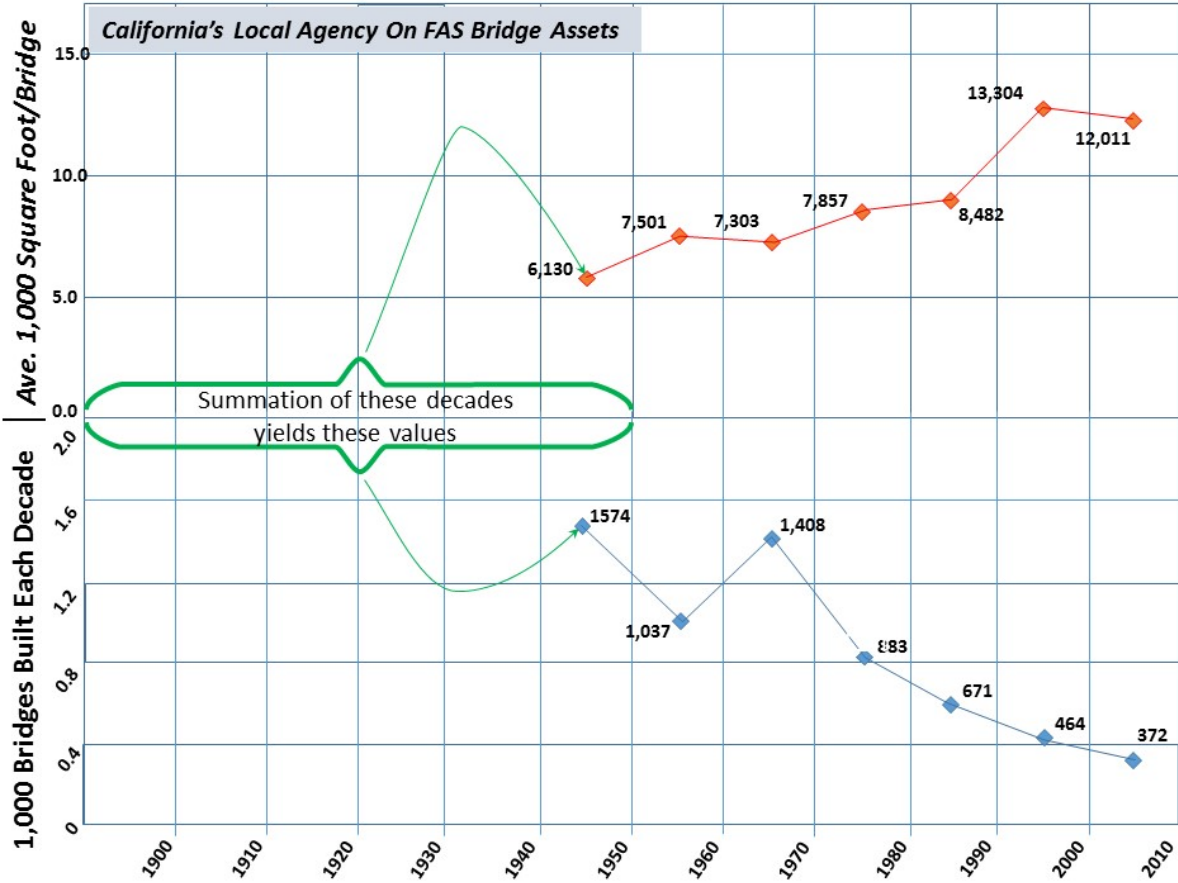
# State of the California Local Agency Bridge Program By the Numbers: On FAS





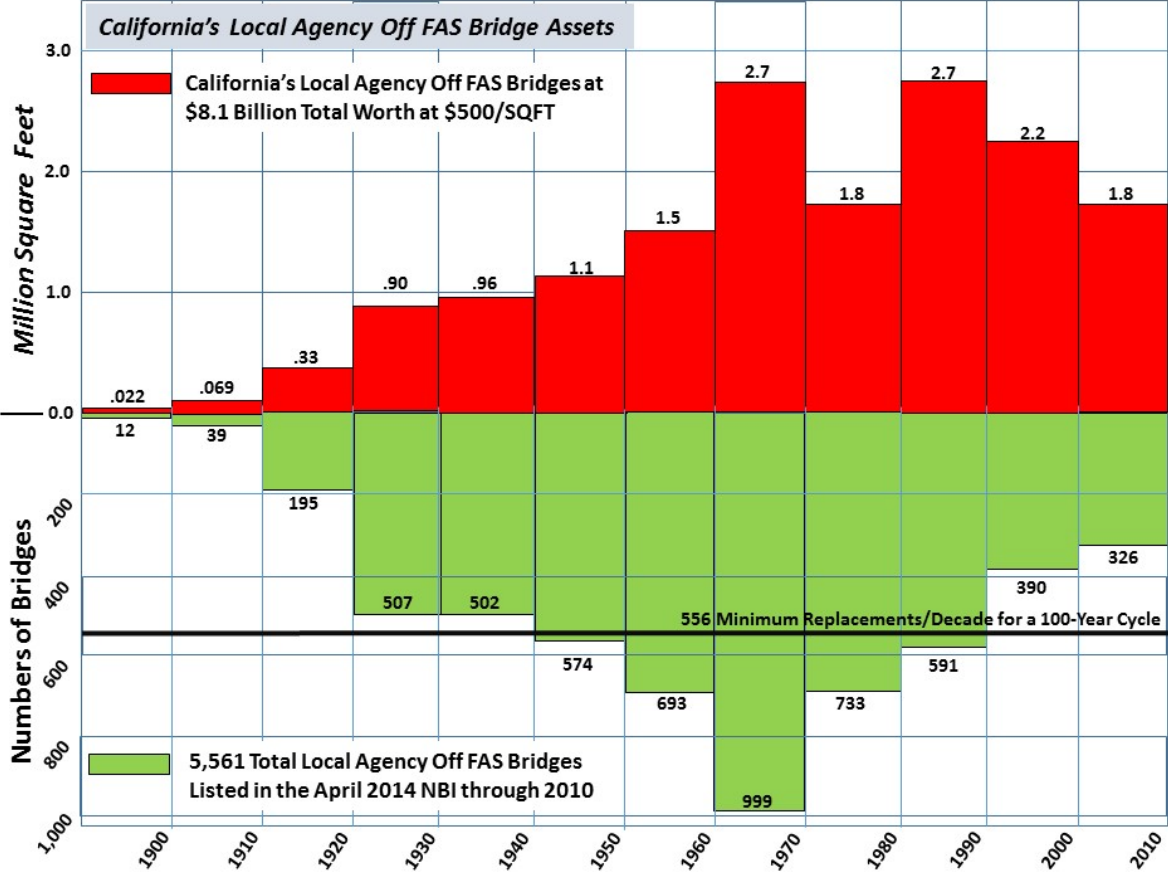
# State of the California Local Agency Bridge Program

## By the Numbers: On FAS



# State of the California Local Agency Bridge Program

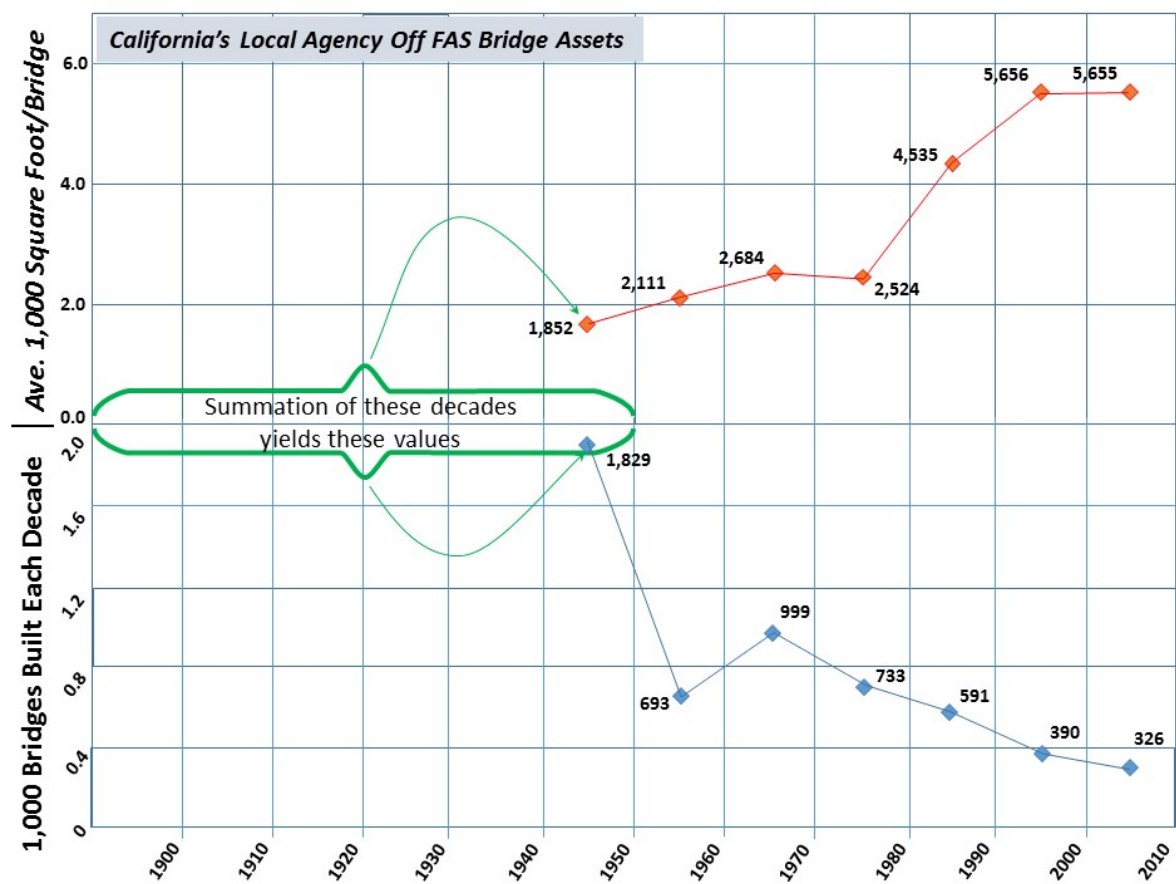
## By the Numbers: Off FAS



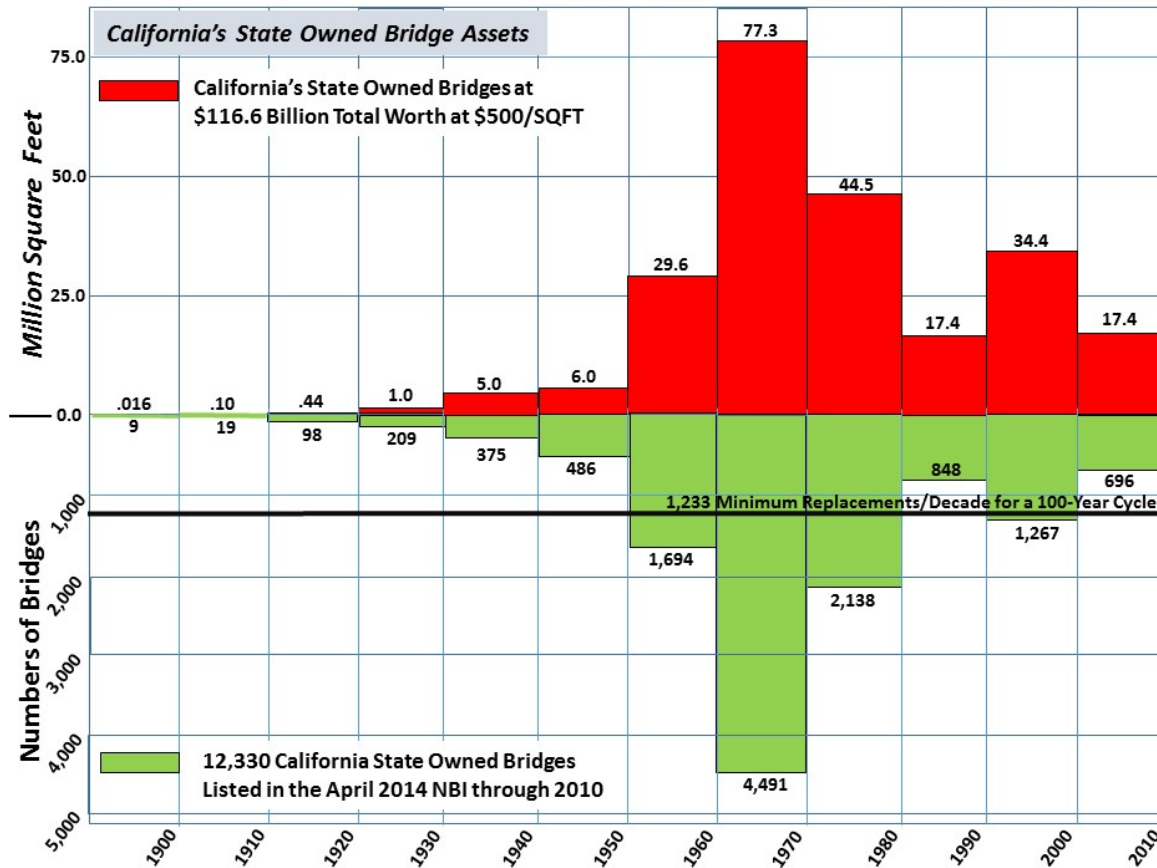


# State of the California Local Agency Bridge Program

## By the Numbers: Off FAS



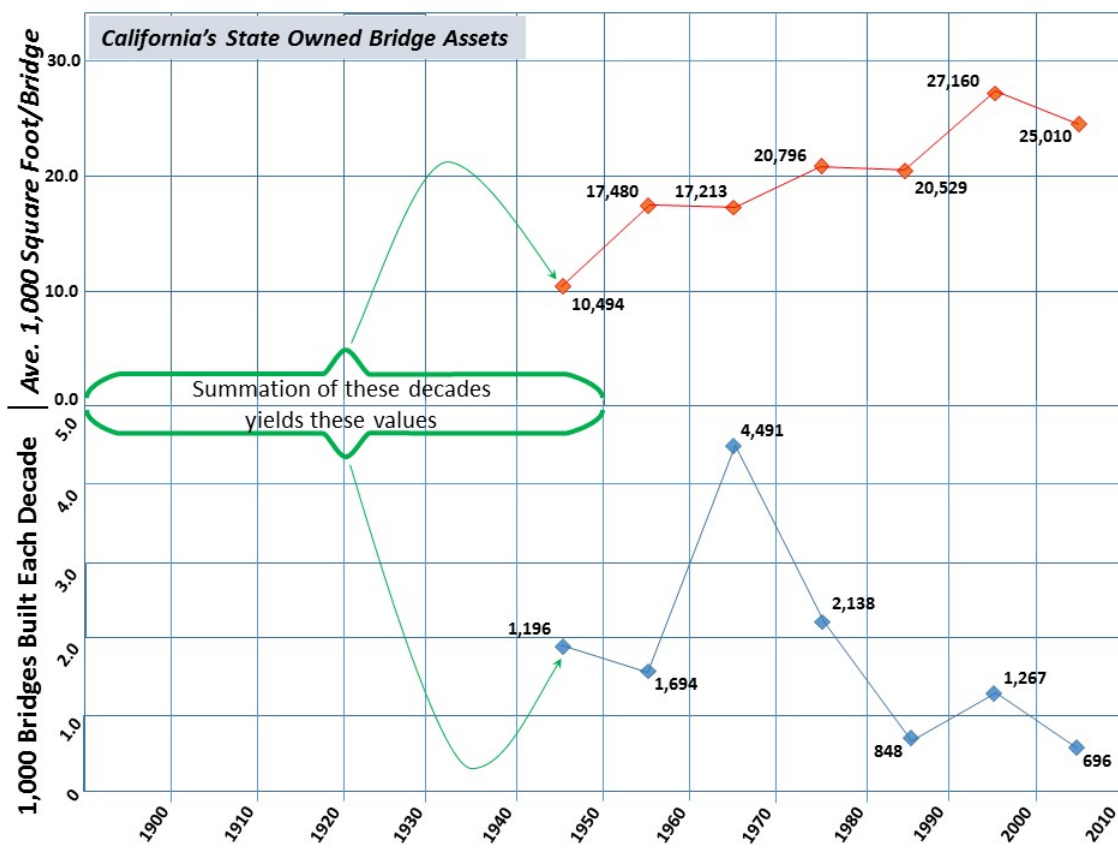
# State of the California Local Agency Bridge Program By the Numbers: State Owned



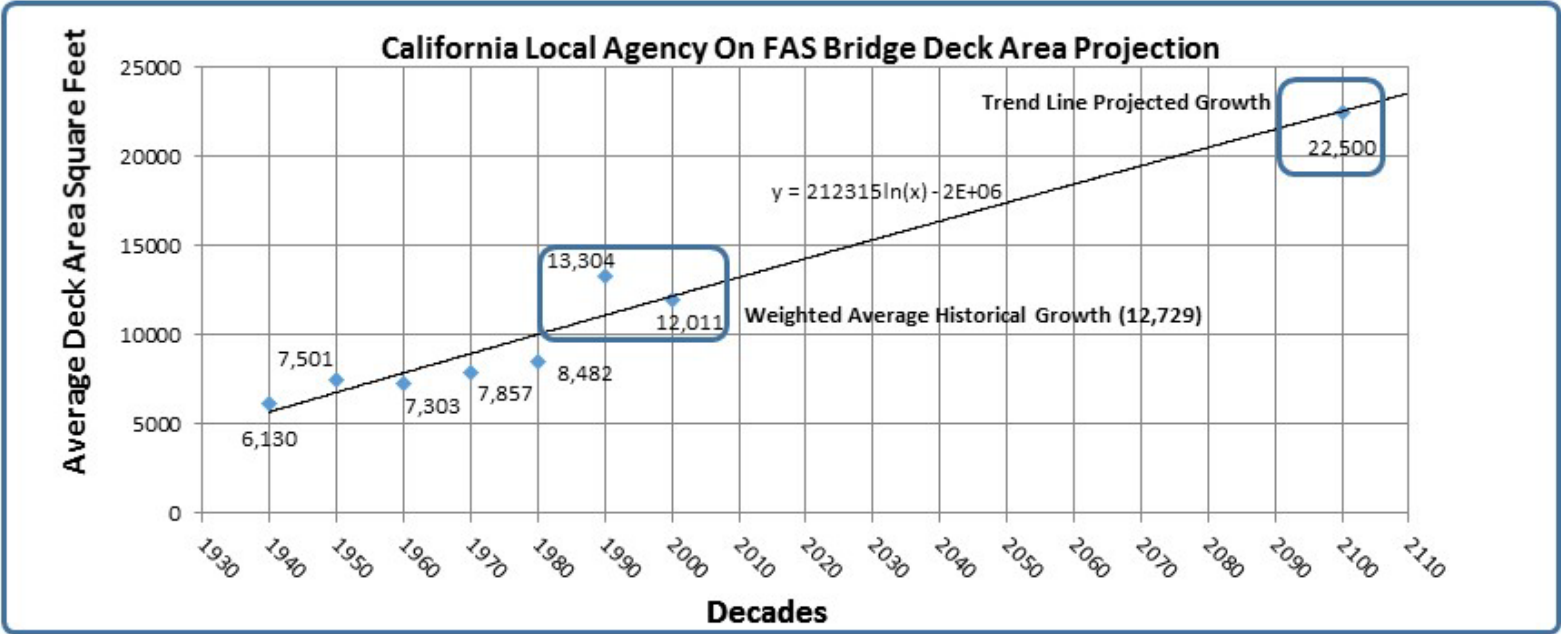


# State of the California Local Agency Bridge Program

## By the Numbers: State Owned



# State of the California Local Agency Bridge Program

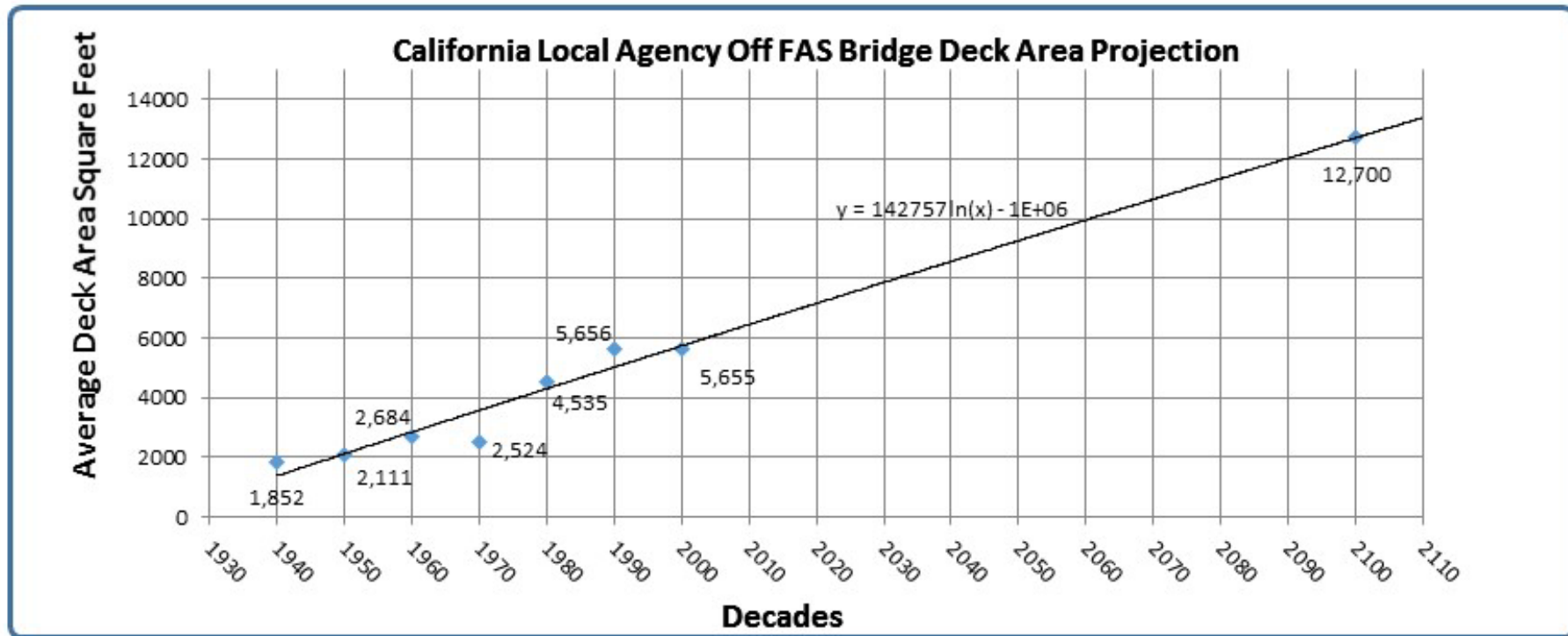


By the  
Numbers:  
On Deck Trend





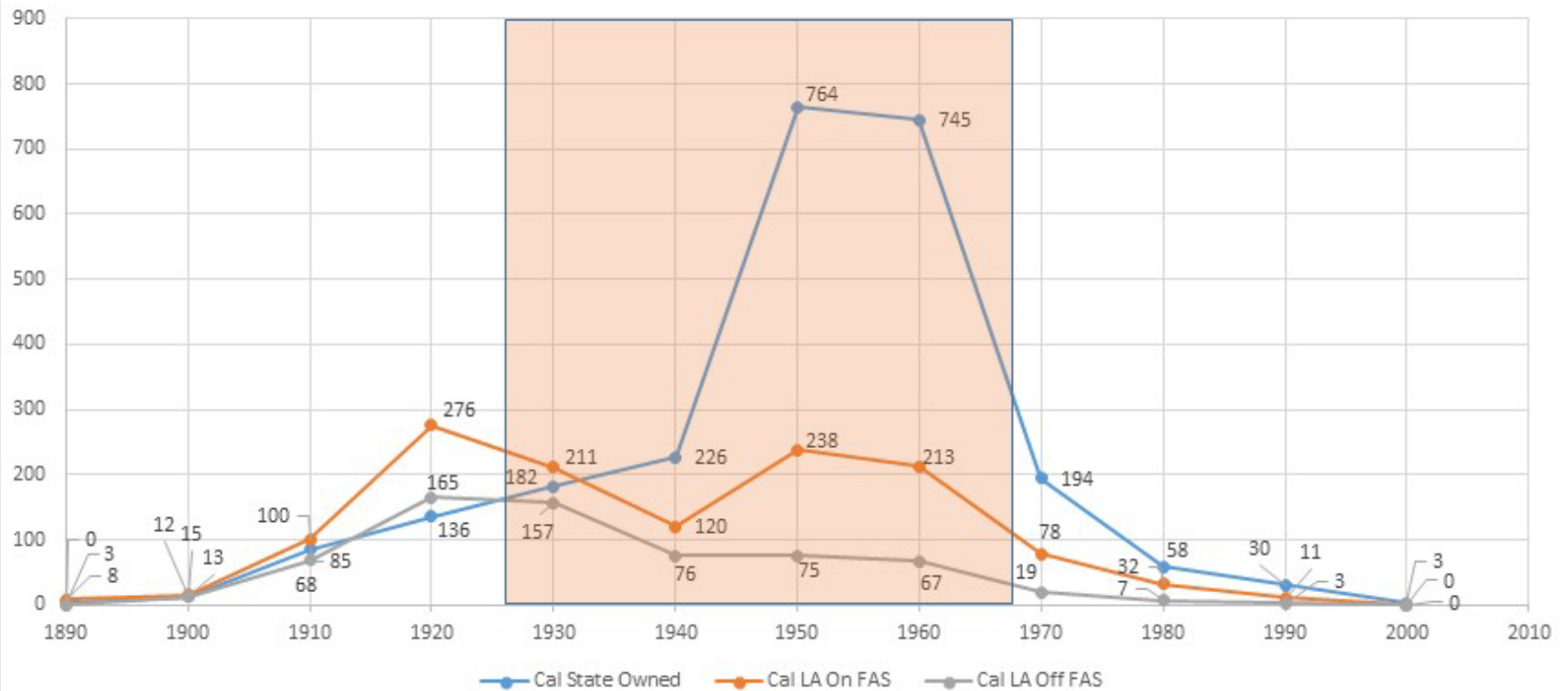
# State of the California Local Agency Bridge Program



By the  
Numbers:  
Off Deck



## California Rehabilitations



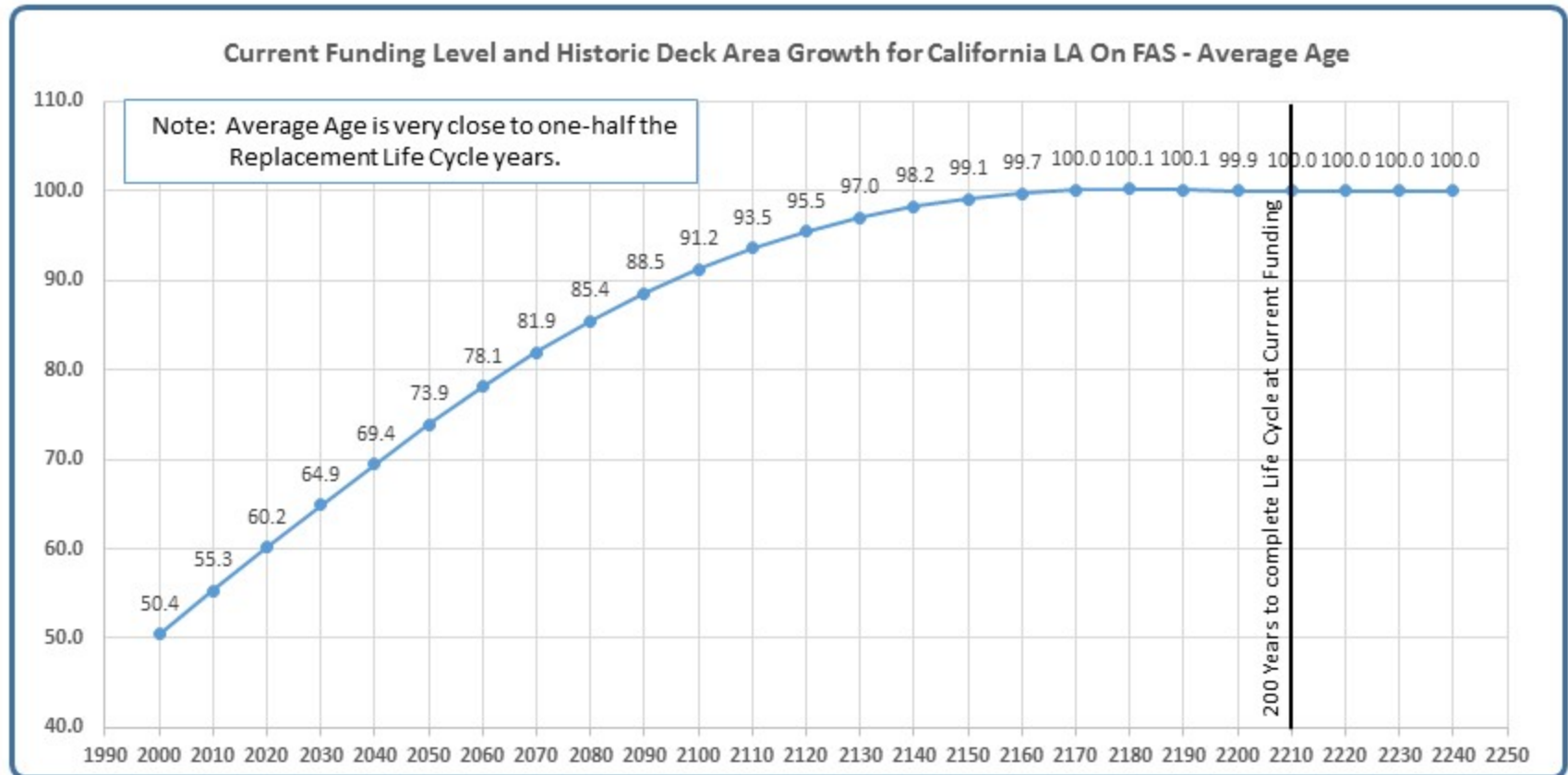
### Legend

Bridges built from 1931 to 1970 used for determining number of rehabilitated bridges per decade.





## At Current Annual \$300 Million Funding - the Life Cycle is 200 Years



Note: Based on 320 bridge replacements per decade.

# State of the California Local Agency Bridge Program

Using Projected Increase in Average Square Foot Area / Decade

Funds/year/Decade	Decade	Blt/Decade	<1950's	1950's	1960's	1970's	1980's	1990-2000's	Totals Projected Area FT <sup>2</sup>
\$721,125,000	1	641	3.67						14,422,500.0
\$721,125,000	2	641	3.67						14,422,500.0
\$328,500,000	3	292	3.67						6,570,000.0
\$392,625,000	3	349		3.00					7,852,500.0
\$721,125,000	4	641		3.00					14,422,500.0
\$52,875,000	5	47		3.00					1,057,500.0
\$668,250,000	5	594			3.08				13,365,000.0
\$721,125,000	6	641			3.08				14,422,500.0
\$194,625,000	7	173			3.08				3,892,500.0
\$526,500,000	7	468				2.86			10,530,000.0
\$466,875,000	8	415				2.86			9,337,500.0
\$254,250,000	8	226					2.65		5,085,000.0
\$500,625,000	9	445					2.65		10,012,500.0
\$220,500,000	9	196						1.69	4,410,000.0
\$720,000,000	10	640						1.87	14,400,000.0
\$72,101,250,000	Subtotal Funds for 100 years.							Total SQFT:	144,202,500.0
\$46,125,000	10	41	(Current Additional Beyond 2000 Decade)					1.87	922,500.0
\$72,147,375,000	Total Funds for 100 years for On FAS.								
\$35,623,500,000	Total Funds for 100 years for Off FAS.								
\$107,770,875,000	Total Funds for 100 years for Local Agency Bridge Replacements.								
\$1,077,708,750	Total Annual Fund Needs for Local Agency Bridge Replacements.								

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By the Numbers:  
On FAS





# State of the California Local Agency Bridge Program

By the Numbers:  
Off FAS

Using Projected Increase In Average Square Foot Area / Decade									
Funds/year/Decade	Decade	Blt/Decade	<1950's	1950's	1960's	1970's	1980's	1990-2000's	Totals Projected Area FT <sup>2</sup>
\$353,060,000	1	556	6.86						7,061,200.0
\$353,060,000	2	556	6.86						7,061,200.0
\$353,060,000	3	556	6.86						7,061,200.0
\$102,235,000	4	161	6.86						2,044,700.0
\$250,888,500	4	395		6.02					5,017,770.0
\$189,166,500	5	298		6.02					3,783,330.0
\$163,957,000	5	258			4.73				3,279,140.0
\$353,060,000	6	556			4.73				7,061,200.0
\$117,348,000	7	185			4.73				2,346,960.0
\$235,712,000	7	371				5.03			4,714,240.0
\$229,743,000	8	362				5.03			4,594,860.0
\$123,317,000	8	194					2.80		2,466,340.0
\$247,523,000	9	390					2.80		4,950,460.0
\$4,445,000	9	7					2.80		88,900.0
\$101,092,000	9	159						2.25	2,021,840.0
\$353,568,000	10	557						2.25	7,071,360.0
\$35,312,350,000.00	Subtotal Funds for 100 years.							Total SQFT:	70,624,700.0
\$31,115,000.00	10	49	(Current Additional Beyond 2000 Decade)					2.25	622,300
\$72,147,375,000	Total Funds for 100 years for On FAS.								
\$35,623,500,000	Total Funds for 100 years for Off FAS.								
\$107,770,875,000	Total Funds for 100 years for Local Agency Bridge Replacements.								
\$1,077,708,750	Total Annual Fund Needs for Local Agency Bridge Replacements.								2015 Aug 17





## National and California's Bridge Assets Annual Needs Summary

### Estimated Annual Costs for a 100 Year Life Cycle Bridge Program for the Nation

Using Historical Growth				Using Trend Line Projected Growth		
National	LA On FAS	LA Off FAS	State Owned	LA On FAS	LA Off FAS	State Owned
Replacement	\$2,620,204,555	\$2,351,453,555	\$20,493,312,332	\$3,878,497,000	\$3,927,070,150	\$45,733,914,385
Deck Widening	\$190,324,673	\$150,121,880	\$2,305,266,707	\$281,706,962	\$250,681,991	\$5,100,367,400
Rehab Only	\$101,550,460	\$80,718,994	\$1,336,148,631	\$101,550,460	\$80,718,994	\$1,336,148,631
Totals	\$2,912,079,687	\$2,582,294,428	\$24,134,727,670	\$4,261,754,422	\$4,258,471,134	\$52,170,430,416
	Local Agency, All:	\$5,494,374,116		Local Agency, All:	\$8,520,225,556	
		All Bridge Needs:	\$29,629,101,786		All Bridge Needs:	\$60,690,655,972

### Estimated Annual Costs for a 100 Year Life Cycle Bridge Program for California

Using Historical Growth				Using Trend Line Projected Growth		
California	LA On FAS	LA Off FAS	State Owned	LA On FAS	LA Off FAS	State Owned
Replacement	\$410,498,831	\$157,391,730	\$1,651,703,926	\$721,473,750	\$356,235,000	\$3,115,986,000
Deck Widening	\$31,605,254	\$5,136,537	\$194,411,620	\$55,865,993	\$11,533,596	\$366,758,795
Rehab Only	\$19,449,975	\$3,396,733	\$113,270,900	\$19,449,975	\$3,396,733	\$113,270,900
Totals	\$461,554,060	\$165,924,999	\$1,959,386,446	\$796,789,718	\$371,165,329	\$3,596,015,695
	Local Agency, All:	\$627,479,060		Local Agency, All:	\$1,167,955,046	
		All Bridge Needs:	\$2,586,865,506		All Bridge Needs:	\$4,763,970,741

Note:

\$500/SQFT for Replacements and \$250/SQFT for Rehabilitations used.

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***Questions?***



***Thank You!***