

CONSTRUCTION STATISTICS 2013

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES



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**CONSTRUCTION STATISTICS BASED ON BID OPENINGS
2013**

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Cover:
Bates Road Undercrossing
07-Ven,SB-101

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**DIVISION OF ENGINEERING SERVICES
BRIDGE SQUARE FOOT COST SUMMARY
2013**

Bridge Code	BRIDGE TYPE	TOTAL NUMBER OF BRIDGES	NUMBER OF BRIDGES WIDENED	SQFT OF DECK	TOTAL AMOUNT	AVERAGE COST/SQFT	FHWA AMOUNT	FHWA AVERAGE COST/SQFT
10	RC SLAB	9	0	48,010	\$16,785,692	\$350	\$11,415,400	\$238
20	RC T-BEAM	1	1	18,661	\$5,907,842	\$317	\$4,522,408	\$242
21	RC U GIRDER	0	0	0	\$0	\$0	\$0	\$0
22	RC BOX GIRDER	0	0	0	\$0	\$0	\$0	\$0
30	CIP/PS U GIRDER	0	0	0	\$0	\$0	\$0	\$0
31	CIP/PS BOX GIRDER	15	4	164,004	\$39,158,420	\$239	\$28,680,844	\$175
32	CIP/PS SLAB	4	0	48,197	\$8,049,585	\$167	\$6,495,006	\$135
40	PC/PS SLAB	1	0	2,772	\$958,967	\$346	\$692,150	\$250
41	PC/PS "I" GIRDER	1	0	9,317	\$2,670,409	\$287	\$2,212,984	\$238
42	PC/PS "T" GIRDER	0	0	0	\$0	\$0	\$0	\$0
43	PC/PS "INV T" GIRDER	0	0	0	\$0	\$0	\$0	\$0
44	PC/PS BOX GIRDER	3	3	11,145	\$4,483,748	\$402	\$2,784,106	\$250
45	PC/PS BULB TEE GIRDER	2	1	26,327	\$5,951,548	\$226	\$4,165,712	\$158
45A	WIDE FLANGE GIRDER	3	0	272,279	\$41,518,371	\$152	\$35,758,779	\$131
46	PC/PS BOX GIRDER-SEG	0	0	0	\$0	\$0	\$0	\$0
50	STEEL GIRDER	1	1	3,092	\$2,167,297	\$701	\$1,464,581	\$474
TOTALS		40	10	603,804	\$127,651,879		\$98,191,970	\$163

** "FHWA Amount" and "FHWA Average Cost/SQFT" are calculated using "Bridge Costs Only" as defined by the Federal Highway Administration. The "Bridge Cost Only" is the sum of the "Superstructure" and "Substructure" bridge items, listed in Chapter 11 of the Bridge Design Aids Manual, multiplied by the bid item price. The "Superstructure" and "Substructure" bridge items do not include items such as: time related overhead, mobilization, bridge removal, approach slabs, slope paving, soundwalls or retaining walls.

The "TOTAL AMOUNT" and "AVERAGE COST/SQFT" includes all bid items **excluded** from "Bridge Cost Only".

2013 CONTRACT UNIT PRICES

Contract Cost Data and Standard Item Codes can be found on the California Department of Transportation website:

<http://www.dot.ca.gov/>

CONTRACT COST DATA

<http://sv08data.dot.ca.gov/contractcost/>

STANDARD ITEM CODES

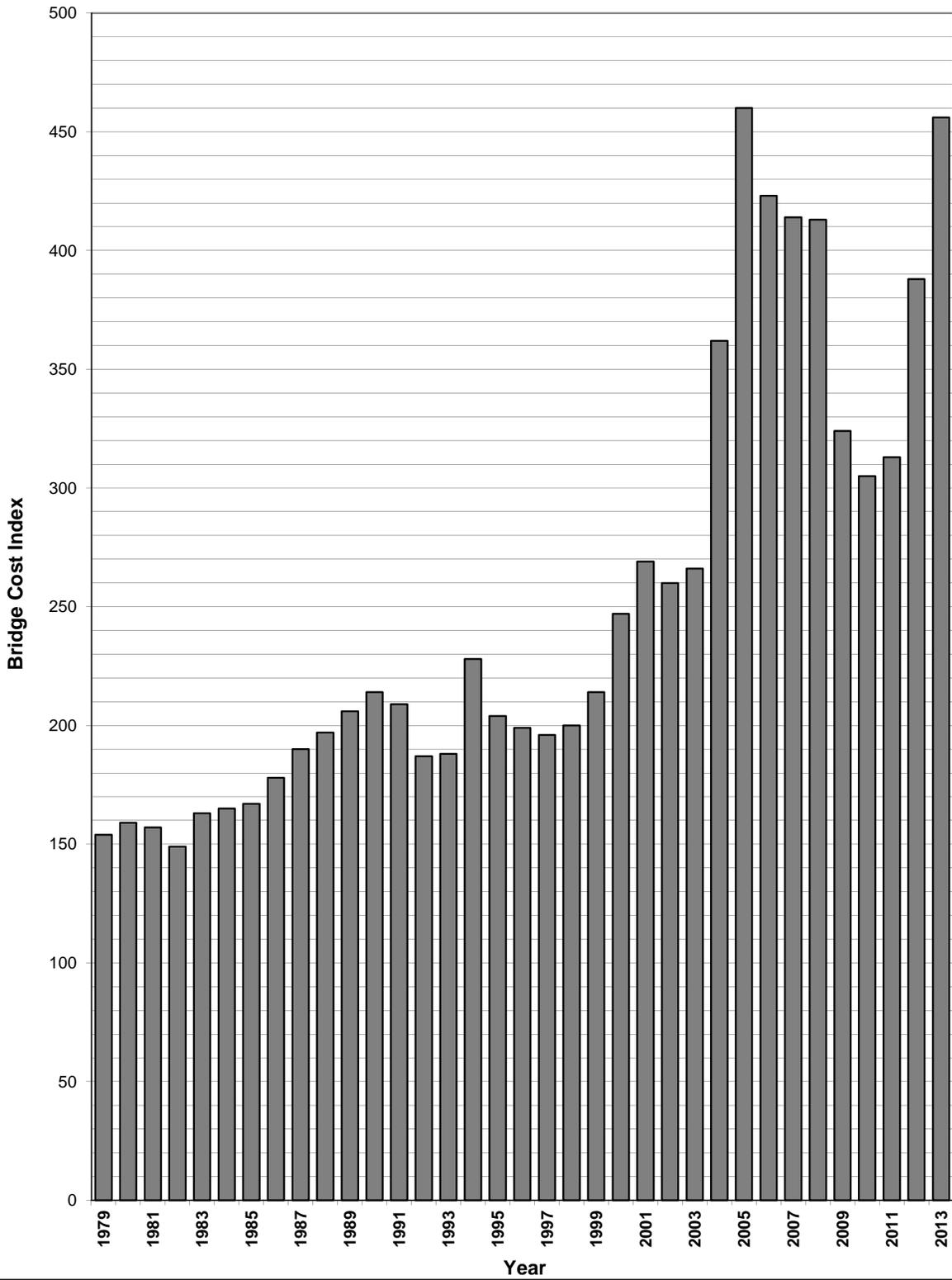
http://www.dot.ca.gov/hq/esc/oe/construction_standards.html

DIVISION OF ENGINEERING SERVICES

BRIDGE CONSTRUCTION COST INDEX

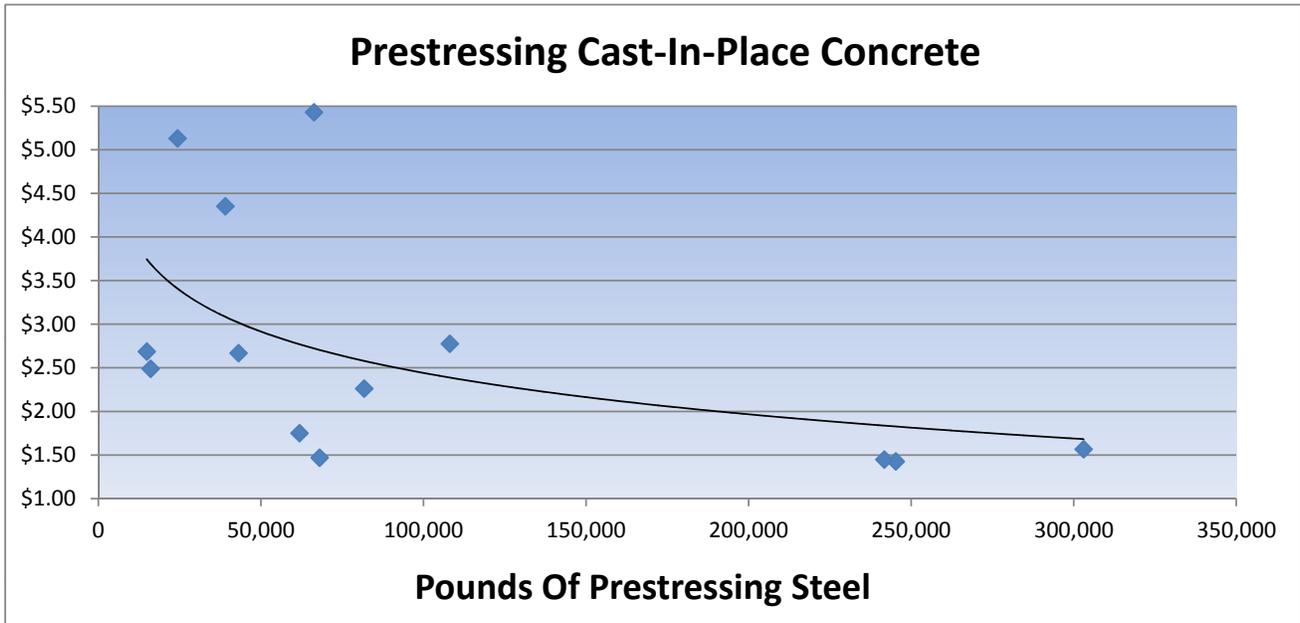
YEAR	1940 BASE	1967 BASE	1977 BASE
	INDEX VALUE	INDEX VALUE	INDEX VALUE
1940	100	105	45
1973	454	148	64
1974	689	225	97
1975	649	212	91
1976	646	212	91
1977	710	232	100
1978	809	264	114
1979	1093	357	154
1980	1129	369	159
1981	1115	364	157
1982	1058	346	149
1983	1157	378	163
1984	1172	383	165
1985	1186	387	167
1986	1264	413	178
1987	1349	441	190
1988	1399	457	197
1989	1463	478	206
1990	1519	496	214
1991	1484	485	209
1992	1328	434	187
1993	1335	436	188
1994	1619	529	228
1995	1448	473	204
1996	1413	462	199
1997	1392	455	196
1998	1420	464	200
1999	1519	496	214
2000	1754	573	247
2001	1910	624	269
2002	1846	603	260
2003	1889	617	266
2004	2570	840	362
2005	3266	1067	460
2006	3003	981	423
2007	2939	960	414
2008	2932	958	413
2009	2300	752	324
2010	2166	708	305
2011	2222	726	313
2012	2755	900	388
2013	3238	1058	456

**BRIDGE CONSTRUCTION COST INDEX
(1979 = 100)**



Prestressing Cast-In-Place Concrete

Bid Open Date	Contract Number	Contract Price	Approximate lbs PS Steel	Contract Price Per LB
02/05/13	05-330754	\$108,299.00	61,855	\$1.75
02/26/13	03-3E6204	\$100,000.00	68,054	\$1.47
03/26/13	06-342524	\$170,000.00	39,064	\$4.35
04/30/13	06-0H1804	\$185,000.00	81,767	\$2.26
05/30/13	11-264114	\$360,000.00	66,300	\$5.43
07/16/13	10-0G8004	\$40,000.00	16,070	\$2.49
09/05/13	11-056324	\$475,000.00	303,012	\$1.57
09/12/13	11-0223U4	\$350,000.00	245,225	\$1.43
10/09/13	02-360704	\$40,000.00	14,886	\$2.69
10/31/13	12-0F96E4	\$115,000.00	43,093	\$2.67
11/20/13	10-0S1104	\$300,000.00	108,084	\$2.78
11/20/13	04-0A5344	\$350,000.00	241,700	\$1.45
12/19/13	07-1170U4	\$125,000.00	24,362	\$5.13



COMPARATIVE BRIDGE COSTS

JANUARY 2014

The following tabular data gives some **general guidelines** for structure type selection and its relative cost. These costs should be used just for **preliminary estimates** until more detailed information is developed.

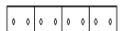
The following factors *must* be taken into account when determining a price within the cost range:

Factors for Lower end of Price Range

Factors for Higher end of Price Range

Short spans, Low Structure Height, No Environmental Constraints, Large Project, No Aesthetic Issues, Dry Conditions, No Bridge Skew	Long spans, High Structure Height, Environmental Constraints, Small Project, Aesthetic Issues, Wet Conditions (cofferdams required), Skewed Bridges
Urban Location	Remote Location
Seat Abutment	Cantilever Abutment
Spread Footing	Pile Footing (Large Diameter Piling)
No Stage Construction	2 Stage Construction

Factors that will increase the price over the high end of the Price Range 25%-150%

Structures with more than 2 construction stages			Unique substructure construction		
Widenings less than 15 Ft.					
STRUCTURAL SECTION	(STR. DEPTH / MAX SPAN)		COMMON SPAN RANGE feet	**COST RANGE \$/ Square foot	REMARKS
	SIMPLE	CONTINUOUS			
RC SLAB 	0.06	0.045	16 - 44	90-200	THESE ARE THE MOST COMMON TYPES AND ACCOUNT FOR ABOUT 75% OF BRIDGES ON CALIFORNIA STATE HIGHWAYS.
RC T-BEAM 	0.07	0.065	40 - 60	155-250	
RC BOX 	0.06	0.055	50 - 120	145-220	
CIP/PS SLAB 	0.03	0.03	40 - 65	115-200	
CIP/PS BOX 	0.045	0.04	100 - 250	100-300	
PC/PS SLAB 	0.03 (+3" AC)	0.03 (+3" AC)	20 - 50	200-300	NO FALSEWORK REQUIRED.
PC/PS T, TT, L 	0.06 (+3" AC)	0.055 (+3" AC)	30 - 120	No Current Cost Data	
BULB TEE GIRDER 	0.05	0.045	90 - 145	135-240	
WIDE FLANGE GIRDER 	0.045	0.04	90 - 180	100-200	
PC/PS I 	0.055	0.05	50 - 120	140-240	
PC/PS BOX 	0.06	0.045	120 - 200	220-270	
STRUCT STEEL I GIRDER 	0.045	0.04	60 - 300	250-450	

NOTE: Removal of a box girder structure costs from \$8 - \$15 per square foot.

"Cost/SQFT" are calculated using "Bridge Costs Only" as defined by the Federal Highway Administration. The "Bridge Cost Only" is the sum of the "Superstructure" and "Substructure" bridge items, listed in Chapter 11 of the Bridge Design Aids Manual, multiplied by the bid item price. The "Superstructure" and "Substructure" bridge items do not include items such as: time related overhead, mobilization, bridge removal, approach slabs, slope paving, soundwalls or retaining walls.