

CONSTRUCTION STATISTICS 2011

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES



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DIVISION OF ENGINEERING SERVICES

**CONSTRUCTION STATISTICS BASED ON BID OPENINGS
2011**

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Cover:
Pitkins Curve Bridge
05-MON-1

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**DIVISION OF ENGINEERING SERVICES
BRIDGE SQUARE FOOT COST SUMMARY
2011**

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	4	3	6,979	\$2,453,533	\$352	\$1,661,428	\$238
20	RC T-BEAM	4	4	13,865	\$3,244,037	\$234	\$2,149,666	\$155
21	RC U GIRDER	0	0	0	\$0	\$0	\$0	\$0
22	RC BOX GIRDER	8	4	141,258	\$26,613,309	\$188	\$18,143,409	\$128
30	CIP/PS U GIRDER	0	0	0	\$0	\$0	\$0	\$0
31	CIP/PS BOX GIRDER	38	19	1,172,039	\$269,235,064	\$230	\$209,409,416	\$179
32	CIP/PS SLAB	3	2	14,400	\$3,928,635	\$273	\$3,131,952	\$217
40	PC/PS SLAB	2	1	31,383	\$7,702,110	\$245	\$5,092,414	\$162
41	PC/PS "I" GIRDER	8	5	182,753	\$36,599,509	\$200	\$28,285,065	\$155
42	PC/PS "T" GIRDER	1	1	5,306	\$1,103,331	\$208	\$894,440	\$169
43	PC/PS "INV T" GIRDER	0	0	0	\$0	\$0	\$0	\$0
44	PC/PS BOX GIRDER	1	1	4,343	\$1,398,812	\$322	\$867,914	\$200
45	PC/PS BULB "T" GIRDER	7	2	111,587	\$18,708,995	\$168	\$13,880,739	\$124
46	PC/PS BOX GIRDER-SEG	0	0	0	\$0	\$0	\$0	\$0
50	STEEL GIRDER	0	0	0	\$0	\$0	\$0	\$0
TOTALS		76	42	1,683,913	\$370,987,335		\$283,516,443	\$168

**Average Cost/SQFT and Amount are calculated using "Bridge Costs Only"
as defined by the Federal Highway Administration

2011 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

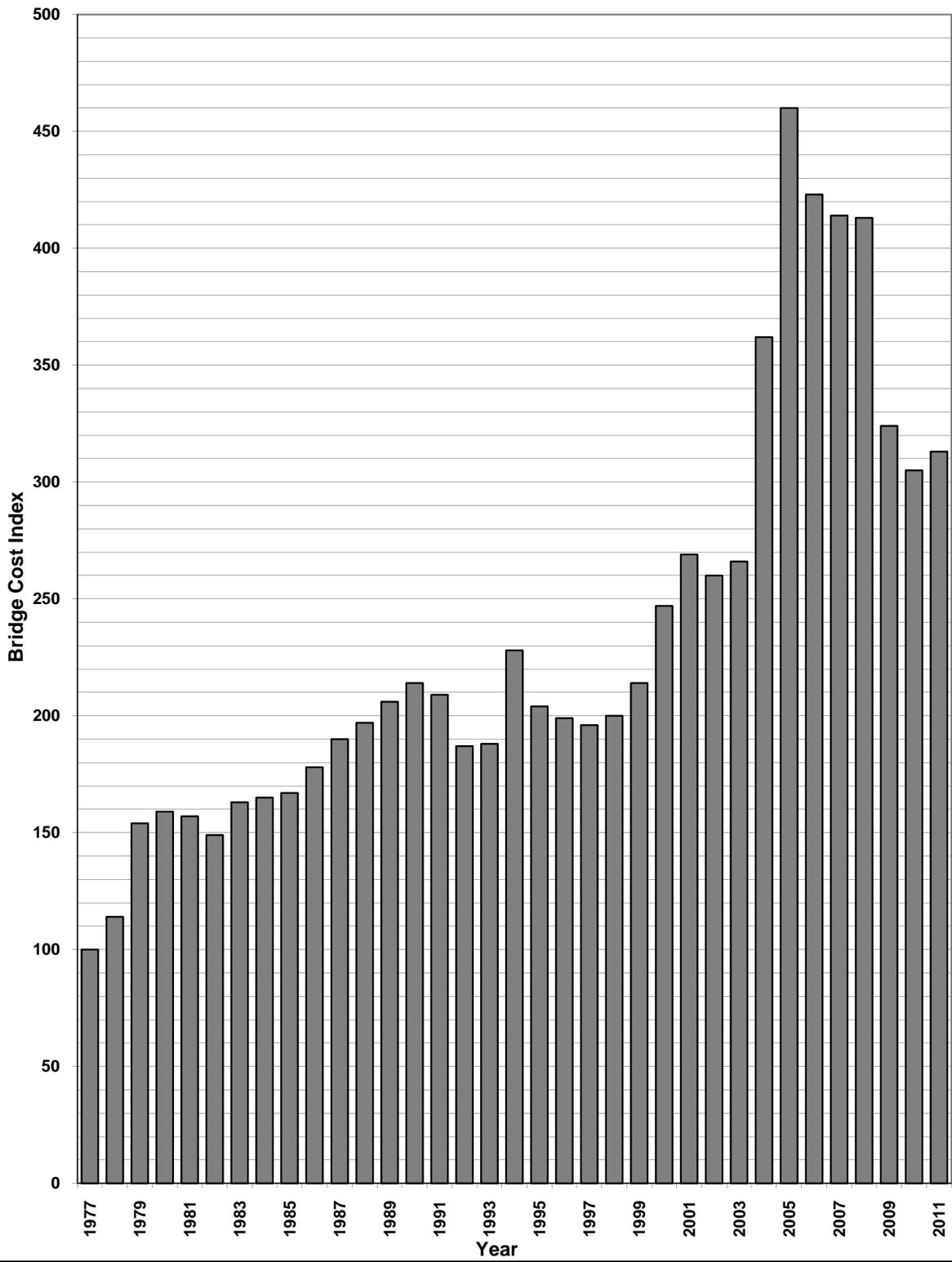
<http://www.dot.ca.gov/hq/esc/oe/awards/>

DIVISION OF ENGINEERING SERVICES

BRIDGE CONSTRUCTION COST INDEX

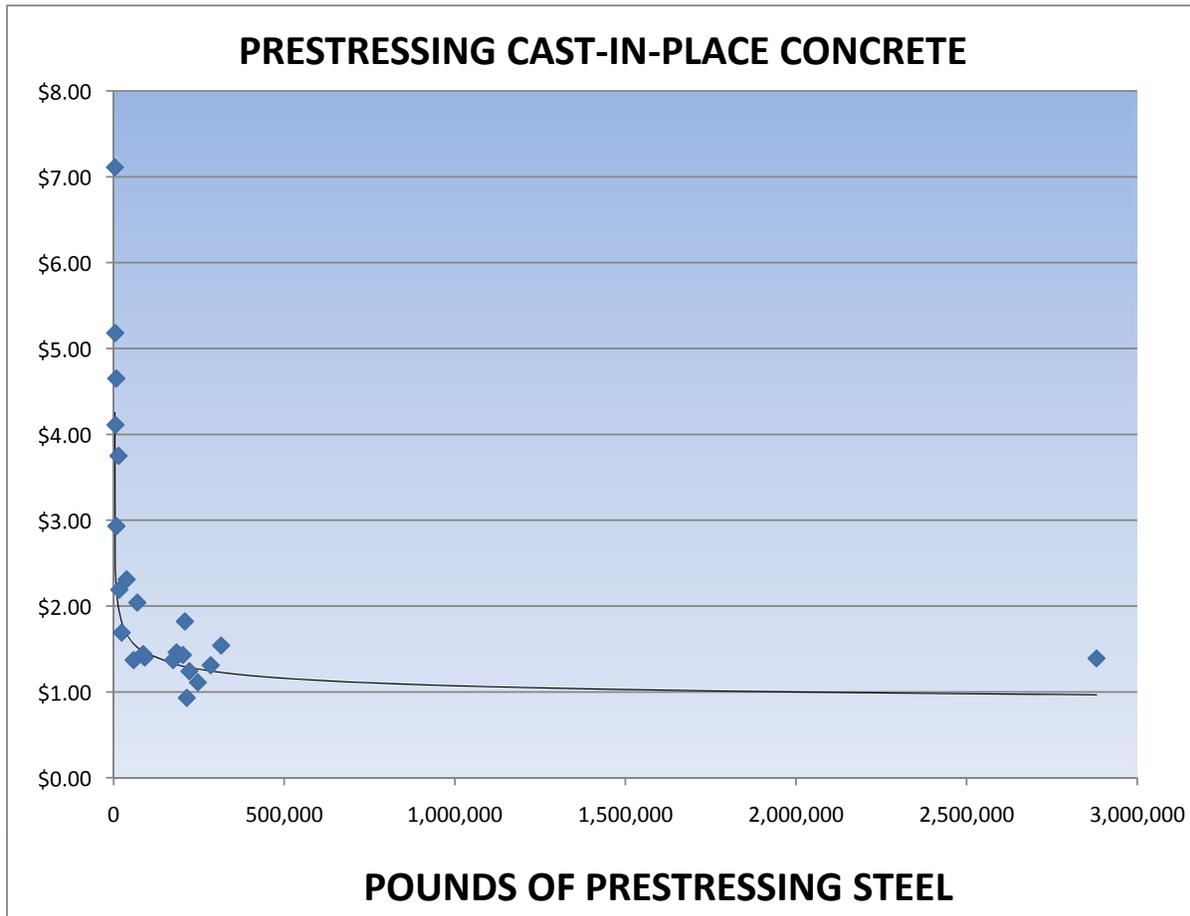
YEAR	1940 BASE	1967 BASE	1977 BASE
	INDEX VALUE	INDEX VALUE	INDEX VALUE
1940	100	105	45
1971	398	130	56
1972	419	137	59
1973	454	148	64
1974	689	225	97
1975	649	212	91
1976	646	212	91
1977	710	232	100
1978	809	264	114
1979	1093	357	154
1980	1129	369	159
1981	1115	364	157
1982	1058	346	149
1983	1157	378	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

BRIDGE CONSTRUCTION COST INDEX
(1977 = 100)



Prestressing Cast-In-Place Concrete

Bid Open Date	Contract Number	Contract Price	Approximate lbs PS Steel	Contract Price Per LB
01/13/11	08-449314	\$269,000.00	184,600	\$1.46
01/20/11	11-091834	\$24,000.00	8,200	\$2.93
02/03/11	12-0G9904	\$22,300.00	5,425	\$4.11
02/08/11	02-2C9904	\$36,000.00	7,736	\$4.65
04/06/11	10-0G4704	\$380,000.00	209,040	\$1.82
04/13/11	04-235634	\$27,000.00	3,800	\$7.11
04/14/11	12-0G3304	\$141,300.00	69,355	\$2.04
04/26/11	04-264064	\$80,000.00	58,560	\$1.37
04/28/11	07-241304	\$54,000.00	14,407	\$3.75
05/12/11	07-2159C4	\$240,000.00	174,551	\$1.37
05/26/11	07-138204	\$4,000,000.00	2,880,500	\$1.39
06/15/11	03-3797U4	\$290,000.00	203,057	\$1.43
06/29/11	03-1C12U4	\$36,750.00	16,769	\$2.19
08/16/11	01-310104	\$128,000.00	91,123	\$1.40
09/08/11	07-2332A4	\$372,000.00	284,551	\$1.31
09/14/11	04-2285E4	\$125,000.00	86,536	\$1.44
09/22/11	12-0F0404	\$40,000.00	23,620	\$1.69
10/27/11	07-215914	\$200,000.00	214,500	\$0.93
11/01/11	04-4A3304	\$25,000.00	4,824	\$5.18
11/16/11	10-340424	\$275,000.00	246,935	\$1.11
11/29/11	10-481004	\$275,000.00	222,129	\$1.24
12/01/11	07-260704	\$87,800.00	38,000	\$2.31
12/08/11	08-448404	\$485,500.00	315,102	\$1.54



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
DIVISION OF STRUCTURE EARTHQUAKE ENGINEERING & DESIGN SUPPORT
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COMPARATIVE BRIDGE COSTS

JANUARY 2012

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.

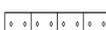
These costs reflect the "**bridge cost**" only and **do not** include items such as: time related overhead, mobilization, bridge removal, approach slabs, slope paving, soundwalls or retaining walls.

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

<u>Factors for Lower end of Price Range</u>	<u>Factors for Higher end of Price Range</u>
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	115-345	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	120-200	
RC BOX 	0.06	0.055	50 - 120	130-200	
CIP/PS SLAB 	0.03	0.03	40 - 65	100-240	
CIP/PS BOX 	0.045	0.04	100 - 250	100-225	
PC/PS SLAB 	0.03 (+3" AC)	0.03 (+3" AC)	20 - 50	125-250	NO FALSEWORK REQUIRED.
PC/PS 	0.06 (+3" AC)	0.055 (+3" AC)	30 - 120	120-230	
BULB T GIRDER 	0.05	0.045	90 - 145	110-200	
PC/PS I 	0.055	0.05	50 - 120	110-190	
PC/PS BOX 	0.06	0.045	120 - 200	140-250	
STRUCT STEEL I GIRDER 	0.045	0.04	60 - 300	170-425	NO FALSEWORK REQUIRED.

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

**Average Cost/SQFT are calculated using "Bridge Costs Only" as defined by the Federal Highway Administration