Historic Bridge Costs

Proposed unit costs for bridge construction vary by bridge type:

	$$/SF
basic	$150
complex	$200
flyover	$225
viaduct	$225

Considerations include:

	bridge type			
element	basic	complex	flyover	viaduct
spans	<= 3	>= 4	> 4	> 4
superstructure type	PS girder, tub	PS girder, tub	tub, segmental, steel	PS girder, tub, segmental
	unspliced	maybe spliced	maybe spliced	unspliced
abutment type	integral	stub, MSE	stub, MSE	stub, MSE
pier type	hammerhead	integral	hammerhead, integral	hammerhead, integral
skews	small or none	large, multiple	var	var
pier foundation	driven pile, caisson	multi caisson	caisson	caisson
pier height	low	low	tall	var
curved ?	no	no	yes	yes
design effort	low	medium	high	high
width (ft)	< 48	< 72, var	<= 42	<= 42
span lengths	balanced	unbalanced	balanced	balanced
	< 145 ft	< 145 ft	maybe > 145 ft	< 120 ft
bearings	simple	compound	compound	compound
water crossing	only single span	maybe	no	maybe
replacement structure	maybe	maybe	no	no
wildlife crossing	maybe	maybe	no	maybe

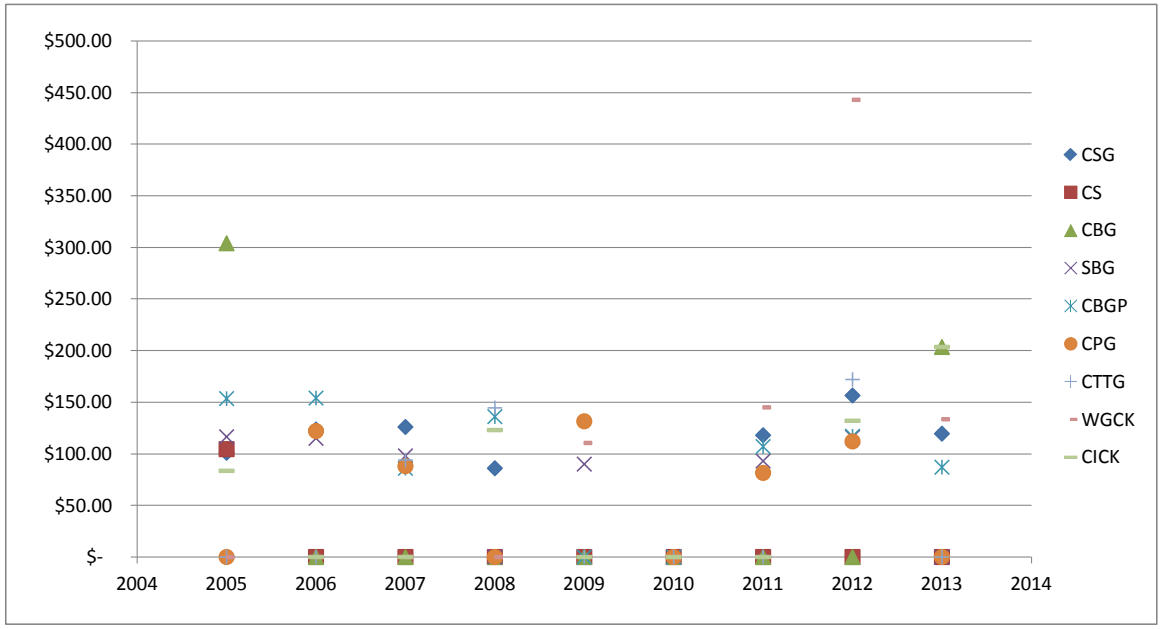
Initial cost data (from 2005 to 2013 Cost Data books)

general conclusion is that not enough data is available for mountain construction or for large enough pool of particular structure types

			concrete slab and girder	concrete slab bridge	post tensioned box girder	precast segmental box girder	prestressed box girder	prestressed I girder	prestressed TT-section girder	fabricated steel girder	rolled steel girder	pedestrian or bikeway bridge
2013	length (ft)	high	286		202		785			454	195	350
		low	80							430		
	width (ft)	high	93		43		128			63	41	13.5
		low	41								30	
		$$/sf	$ 119.50		$ 203.50		$ 87.00			$ 133.50	$ 203.50	$ 313.00
2012	length (ft)	high	412			278	1127	264	200	180	23	200
		low	126				103					
	width (ft)	high	43			85	82	47	66	75	27	10
		low					34					
		$$/sf	$ 156.50			$ 116.00	$ 117.00	$ 112.00	$ 172.00	$ 443.00	$ 132.00	$ 172.00
2011	length (ft)	high	508			1760	218	360		239		
		low	92			371		177				
	width (ft)	high	48			197	125	137		67		
		low	34			39		72				
		$$/sf	$ 118.00			$ 93.00	$ 107.00	$ 81.50		$ 145.00		
2010	length (ft)	high										
		low										
	width (ft)	high										
		low										
		$$/sf										

			concrete slab and girder	concrete slab bridge	post tensioned box girder	precast segmental box girder	prestressed box girder	prestressed I girder	prestressed TT-section girder	fabricated steel girder	rolled steel girder	pedestrian or bikeway bridge
2009	length (ft)	high				312		62		423		
		low				178						
	width (ft)	high				143		51		49		
		low				47		43				
		$$/sf				$ 90.00		$ 131.50		$ 110.50		
2008	length (ft)	high	371				239		151		270	
		low	205				120		57			
	width (ft)	high	135				43		55		60	
		low	41						51			
		$$/sf	$ 86.00				$ 136.00		$ 144.50		$ 123.00	
2007	length (ft)	high	127			348	265	314	271			
		low						293				
	width (ft)	high	67			123	39	67	76			
		low						39				
		$$/sf	$ 126.00			$ 98.00	$ 86.00	$ 88.00	$ 94.00			
2006	length (ft)	high	223			2112	215	185				
		low	89			384	94					
	width (ft)	high	68			52	92	24				
		low	32			27	20					
		$$/sf	$ 123.50			$ 115.00	$ 154.00	$ 122.00				
2005	length (ft)	high	345	87	620	250	126				470	
		low	131				120					
	width (ft)	high	41	43	73	56	43				44	
		low	38				40					
		$$/sf	$ 101.00	$ 104.50	$ 304.00	$ 116.50	$ 153.50				$ 83.50	

	CSG	CS	CBG	SBG	CBGP	CPG	CTTG	WGCK	CICK	PED
2013	$ 119.50	$ -	$ 203.50	$ -	$ 87.00	$ -	$ -	$ 133.50	$ 203.50	$ 313.00
2012	$ 156.50	$ -	$ -	$ 116.00	$ 117.00	$ 112.00	$ 172.00	$ 443.00	$ 132.00	$ 172.00
2011	$ 118.00	$ -	$ -	$ 93.00	$ 107.00	$ 81.50	$ -	$ 145.00	$ -	$ -
2010	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ 90.00	$ -	$ 131.50	$ -	$ 110.50	$ -	$ -
2008	$ 86.00	$ -	$ -	$ -	$ 136.00	$ -	$ 144.50	$ -	$ 123.00	$ -
2007	$ 126.00	$ -	$ -	$ 98.00	$ 86.00	$ 88.00	$ 94.00	$ -	$ -	$ -
2006	$ 123.50	$ -	$ -	$ 115.00	$ 154.00	$ 122.00	$ -	$ -	$ -	$ -
2005	$ 101.00	$ 104.50	$ 304.00	$ 116.50	$ 153.50	$ -	$ -	$ -	$ 83.50	$ -



CS	concrete slab
CSC	concrete slab continuous
CSG	concrete slab and girder
CSGC	concrete slab and girder continuous
CBG	concrete box girder
CBGC	concrete box girder continuous
CBGP	concrete box girder prestressed
CBGCP	concrete box girder continuous prestressed
CPG	concrete prestressed girder
CPGC	concrete prestressed girder continuous
CDTPG	concrete double tee prestressed girder
CI	concrete on I-beam
CIC	concrete on I-beam continuous
CIK	concrete on I-beam composite
CICK	concrete on I-beam continuous and composite
SBG	steel box girder
SBGC	steel box girder continuous
STG	steel through girder
WC	welded girder
WGC	welded girder continuous
WGK	welded girder composite
WGCK	welded girder continuous and composite
PED	prefab pedestrian

First cost data from Kosmiski from CDOT cost data base

conclusion is that data is inaccurate and incomplete

Structure ID	verified	added	year built	type	region	year bid	length	width	cost	$$/sf
B-17-BU			2012		4		128	47	$ 1,179,418.50	$ 194.68
B-17-DF	x		2013	CSG		2013	395	43	$ 2,279,983.00	$ 134.18
C-09-AU	x		2012			2013	202	43	$ 1,766,632.69	$ 203.43
C-17-FS		x	2012	GBGC		2012	177	47	$ 836,232.00	$ 100.81
C-22-BA	x		2013	CSG	4	2013	129	41	$ 624,423.18	$ 118.52
C-22-BB	x		2013	CSG	4	2013	129	41	$ 623,996.40	$ 118.44
C-22-BC	x		2013	CSG	4	2013	132	49	$ 635,210.29	$ 98.21
C-22-BD	x		2013	CSG	4	2013	132	49	$ 642,207.80	$ 99.29
C-22-BW	x		2013	CSG	4	2013	98	41	$ 528,318.09	$ 131.49
C-22-BX	x		2013	CSG	4	2013	98	41	$ 442,286.44	$ 110.08
C-22-BY	x		2013	CSG	4	2013	98	41	$ 504,647.04	$ 125.60
C-22-BZ	x		2013	CSG	4	2013	98	41	$ 445,374.04	$ 110.84
C-22-CA	x		2013	CSG	4	2013	129	41	$ 621,295.62	$ 117.93
C-22-CB	x		2013	CSG	4	2013	129	41	$ 635,204.21	$ 120.57
C-22-CE	x		2013	CSG	4	2013	228	58	$ 1,573,557.53	$ 118.99
C-22-CF	x		2013	CSG	4	2013	129	41	$ 642,960.41	$ 122.04
C-22-CG	x		2013	CSG	4	2013	129	41	$ 658,977.23	$ 125.08
D-16-DS			2011	CPGC	4		219	99	$ 1,767,767.80	$ 81.59
D-17-FK	x		2012	CPGC		2012	264	47	$ 1,388,741.00	$ 111.92
E-15-AM			2010				446	81	$ 3,363,174.90	$ 93.10
E-15-AN			2010	PED			143	10	$ 260,150.40	$ 182.56
E-16-YA			2011				239	67	$ 2,259,203.92	$ 142.15
E-16-YD	x		2012		1		187	82	$ 2,056,233.67	$ 134.10
E-16-YF			2010	CBGCP	6		222	90	$ 2,279,938.85	$ 113.90
E-17-ACR			2010				258	127	$ 2,630,716.40	$ 80.42
E-17-ADL	x		2011	CBGP	6	2009	178	143	$ 2,565,652.08	$ 100.80
E-17-ADP			2009	CBGCP	6		296	126	$ 3,204,934.21	$ 85.93
E-17-AEA	x		2010	CBGP	6	2009	195	131	$ 2,168,024.36	$ 84.87

Structure ID	verified	added	year built	type	region	year bid	length	width	cost	$$/sf
E-17-AEJ		x	2013	WGCK		2013	454	63	$ 3,775,774.00	$ 132.05
E-17-AEK		x	2013	WGCK		2013	431	63	$ 3,656,558.00	$ 134.75
E-17-AER	x		2011	CBGC	6	2009	230	164	$ 3,885,799.57	$ 103.02
E-17-AET	x		2011	CICK		2011	360	137	$ 3,527,917.34	$ 71.57
E-17-GF	x		2013	CSG		2013	286	43	$ 1,595,437.00	$ 129.58
F-09-AS			2012	CPGC	3		135	56	$ 1,427,012.74	$ 188.15
F-12-BW		x	2013	CSG		2013	80	93	$ 762,030.00	$ 102.42
F-14-AZ			2010	CBGP	1		125	40	$ 852,484.00	$ 170.50
F-16-XB	x		2011	SEG		2011	371	197	$ 6,901,208.84	$ 94.42
F-16-XQ	x		2011	CSGP	6	2011	218	125	$ 2,902,970.63	$ 106.78
F-16-XR	x		2011	SEG	6	2011	1,760	39	$ 6,691,921.76	$ 97.49
F-16-XS	x		2011	SEG		2011	547	149	$ 7,102,516.87	$ 87.14
F-16-XU			2012	CBGP	6		238	142	$ 3,755,231.55	$ 111.24
F-16-YE			2011	CBGCP	6		1,729	33	$ 5,441,000.00	$ 95.37
F-16-YQ			2012	CPGC		2011	259	116	$ 2,027,473.45	$ 67.59
F-16-YR			2012	CBGC	6		168	89	$ 2,463,885.72	$ 164.47
F-17-BS		x	2013	CICK		2013	195	41	$ 1,492,715.00	$ 186.71
F-17-F		x	2013	CICK		2013	195	30	$ 1,324,273.00	$ 226.37
F-17-QU			2012	CBGC	6		264	137	$ 2,595,562.52	$ 71.79
F-17-WS	x		2011	CICK		2011	177	72	$ 1,513,760.60	$ 118.78
F-17-XA			2011				1,127	33	$ 3,465,219.84	$ 92.10
F-17-YP		x	2013	CBGC			785	128	$ 8,712,796.00	$ 86.71
F-17-YP			2010	CBGC	6		138	106	$ 1,443,793.15	$ 98.79
F-19-BL			2012	CBGC			142	43	$ 765,988.00	$ 125.45
G-11-G			2011	CBGP	3		135	43	$ 1,869,531.80	$ 322.39
G-15-Q	x		2009	CICK	1	2009	62	51	$ 418,965.00	$ 132.50
G-15-R	x		2009	CICK	1	2009	62	43	$ 345,842.19	$ 129.72
H-18-AD			2012	CPGC	2		229	48	$ 905,429.05	$ 82.37
I-12-D			1937	CI	5		122	33	$ 814,308.37	$ 199.84
J-18-BP	x		2009	WGCK	2	2009	424	49	$ 2,290,765.96	$ 110.39
J-18-U		x	2011	CSG		2011	92	34	$ 301,502.33	$ 96.39
J-18-V		x	2011	CSG		2011	92	34	$ 301,502.33	$ 96.39
J-18-W		x	2011	CSG		2011	92	34	$ 301,502.33	$ 96.39

Structure ID	verified	added	year built	type	region	year bid	length	width	cost	$$/sf
K-16-AL	x		2012	CSG	2	2012	412	43	$ 2,783,670.03	$ 157.32
K-16-F			2012		2		110	43	$ 534,303.03	$ 112.96
L-04-H			2012		5		85	57	$ 666,444.47	$ 137.55
L-05-E			2012		5		126	60	$ 2,103,827.19	$ 281.18
L-19-Y	x		2010	CPGC	2	2009	195	38	$ 760,002.34	$ 102.56
L-22-CM		x	2012	CPGC		2012	103	43	$ 404,947.67	$ 91.88
L-22-CN		x	2012	CPGC		2012	103	43	$ 404,947.67	$ 91.88
L-22-CO		x	2012	CPGC		2012	103	43	$ 404,947.67	$ 91.88
L-28-H			2011	CPGC	2		508	43	$ 2,442,802.42	$ 111.83
M-06-K			2009	WGCK	5		145	40	$ 749,532.00	$ 129.23
M-21-F			2012	CBG	2		75	43	$ 317,669.27	$ 98.50
N-16-Q			2012	CBG	2		106	43	$ 711,639.00	$ 156.13
N-17-BU			2011	PCBC	2		146	43	$ 1,022,177.89	$ 162.82
O-19-H			1937	SLT	2		169	30	$ 1,102,356.58	$ 217.43

Second cost data from Kosmiski from CDOT cost data base

General conclusion that data is more accurate but incomplete and doesn't provide large enough pool of mountain construction

Region	Structure ID	prev	add	year built	type	length (ft)	width (ft)	area (sf)	cost	$$/sf	$$/sf avg	$$/sf wt avg
1	E-17-AEA	x		2009	CBGP	195	131	25,545	$ 2,168,024.36	$ 84.87		
1	E-17-ADP	x		2009	CBGCP	258	129	33,218	$ 3,204,934.21	$ 96.48		
1	E-17-ADL	x		2009	CBGP	178	143	25,454	$ 2,565,652.08	$ 100.80		
1	F-16-XU	x		2009	CBGP	239	142	33,914	$ 3,755,231.55	$ 110.73		
1	G-15-R	x		2009	CICK	64	43	2,763	$ 345,842.19	$ 125.18		
1	G-15-Q	x		2009	CICK	64	51	3,277	$ 418,965.00	$ 127.86	$ 107.65	$ 100.34
1	F-17-QU	x		2010	CBGC	264	137	36,145	$ 2,608,099.52	$ 72.16		
1	E-17-ACR	x		2010		258	127	32,713	$ 2,630,716.40	$ 80.42		
1	E-15-AM	x		2010		446	81	36,126	$ 3,363,174.90	$ 93.10		
1	F-16-YE	x		2010	CBGCP	1,729	33	57,051	$ 5,441,000.00	$ 95.37		
1	F-17-WP	x		2010	CBGC	138	106	14,615	$ 1,443,793.15	$ 98.79		
1	E-16-YF	x		2010	CBGCP	221	90	19,908	$ 2,279,938.85	$ 114.52		
1	E-15-AN	x		2010	PED	143	12	1,710	$ 260,150.40	$ 152.13		
1	F-14-AZ	x		2010	CBGP	120	43	5,179	$ 852,484.00	$ 164.61	$ 108.89	$ 92.80
1	E-17-AET	x		2011	CICK	360	137	49,291	$ 3,527,917.34	$ 71.57		
1	E-17-AER	x		2011	CBGC	330	164	54,120	$ 3,885,799.57	$ 71.80		
1	F-16-YQ	x		2011	CPGC	213	116	24,650	$ 2,027,473.45	$ 82.25		
1	F-16-XS	x		2011	SEG	547	149	81,478	$ 7,102,516.87	$ 87.17		
1	F-16-XB	x		2011	SEG	371	197	73,087	$ 6,901,208.84	$ 94.42		
1	F-16-XR	x		2011	SEG	1,754	39	68,406	$ 6,691,921.76	$ 97.83		
1	F-16-XQ	x		2011	CSGP	218	125	27,188	$ 2,902,970.63	$ 106.78		
1	F-17-WS	x		2011	CICK	181	75	13,575	$ 1,513,760.60	$ 111.51		
1	E-16-YA	x		2011		239	67	15,894	$ 2,259,203.92	$ 142.15		
1	F-16-YR	x		2011	CBGC	168	89	14,981	$ 2,463,885.72	$ 164.47	$ 103.00	$ 92.93
1	F-17-XA	x		2012		1,127	33	37,625	$ 3,465,219.84	$ 92.10		
1	F-17-JC		x	2012		278	85	23,630	$ 2,740,583.16	$ 115.98		
1	G-16-E		x	2012		80	90	7,156	$ 895,157.74	$ 125.10		
1	F-19-BL	x		2012	CBGC	142	43	6,106	$ 765,988.00	$ 125.45		
1	E-16-YD	x		2012		187	82	15,334	$ 2,056,233.67	$ 134.10		

1	G-16-F		x	2012		92	90	8,260	$	1,122,468.28	$	135.89		
1	F-16-KO		x	2012		113	64	7,242	$	1,113,400.00	$	153.74	$ 126.05	$ 115.41
1	F-17-YP			2013	CBGC	785	128	100,480	$	8,712,796.00	$	86.71		
1	E-17-VA		x	2013		343	79	27,058	$	2,431,312.02	$	89.86		
1	F-17-YB		x	2013		752	128	96,214	$	8,712,796.00	$	90.56		
1	F-12-BW	x		2013	CSG	80	93	7,440	$	762,030.00	$	102.42		
1	E-16-HE		x	2013		225	93	20,910	$	2,151,279.50	$	102.88		
1	F-17-WZ		x	2013		219	50	10,950	$	1,324,273.34	$	120.94		
1	F-17-XI		x	2013		219	56	12,264	$	1,492,715.27	$	121.72		
1	E-17-GF	x		2013	CSG	286	43	12,312	$	1,595,437.00	$	129.58		
1	E-17-AEJ	x		2013	WGCK	454	63	28,594	$	3,775,774.00	$	132.05		
1	E-17-AEK	x		2013	WGCK	431	63	27,136	$	3,656,558.00	$	134.75		
1	F-17-BS			2013	CICK	195	41	7,995	$	1,492,715.00	$	186.71		
1	F-17-F			2013	CICK	195	30	5,850	$	1,324,273.00	$	226.37	$ 130.71	$ 104.79
2	L-19-Y	x		2009	CPGC	195	42	8,190	$	760,002.34	$	92.80		
2	J-18-BP	x		2009	WGCK	424	49	20,752	$	2,290,765.96	$	110.39	$ 101.59	$ 105.41
2	N-16-Q	x		2010	CBG	111	43	4,773	$	711,639.00	$	149.10		
2	N-17-BU	x		2010	PCBC	146	43	6,278	$	1,022,177.89	$	162.82	$ 155.96	$ 156.89
2	H-18-AD	x		2011	CPGC	227	43	9,740	$	905,429.05	$	92.96		
2	J-18-U			2011	CSG	92	34	3,128	$	301,502.33	$	96.39		
2	J-18-V			2011	CSG	92	34	3,128	$	301,502.33	$	96.39		
2	J-18-W			2011	CSG	92	34	3,128	$	301,502.33	$	96.39		
2	L-28-H	x		2011	CPGC	508	43	21,844	$	2,442,802.42	$	111.83	$ 98.79	$ 103.81
2	L-22-CM			2012	CPGC	103	43	4,408	$	404,947.67	$	91.88		
2	L-22-CN			2012	CPGC	103	43	4,408	$	404,947.67	$	91.88		
2	L-22-CO			2012	CPGC	103	43	4,408	$	404,947.67	$	91.88		
2	M-21-F	x		2012	CBG	75	43	3,225	$	317,669.27	$	98.50		
2	K-16-F			2012		110	43	4,730	$	534,303.03	$	112.96		
2	K-16-AL	x		2012	CSG	412	43	17,695	$	2,783,670.03	$	157.32	$ 107.40	$ 124.78
2	O-16-R		x	2013		255	39	9,945	$	1,102,356.58	$	110.85	$ 110.85	$ 110.85
3	G-11-G	x		2010	CBGP	137	43	5,884	$	1,869,531.80	$	317.75	$ 317.75	$ 317.75
3	F-09-AS	x		2011	CPGC	135	59	7,991	$	1,427,012.74	$	178.58	$ 178.58	$ 178.58
3	C-09-AU	x		2013		203	43	8,729	$	1,766,632.69	$	202.39	$ 202.39	$ 202.39
4	D-16-DS	x		2009	CPGC	219	99	21,666	$	1,767,767.80	$	81.59	$ 81.59	$ 81.59
4	C-17-FK		x	2011		272	120	32,640	$	2,994,158.77	$	91.73	$ 91.73	$ 91.73
4	C-17-FS	x		2012	CBGC	177	43	7,590	$	836,232.00	$	110.18		
4	D-17-FK			2012	CPGC	264	47	12,408	$	1,388,741.00	$	111.92		

4	G-21-AP		x	2012	CPG	102	33	3,366	$	376,791.61	$	111.94		
4	D-28-U		x	2012		126	43	5,418	$	845,244.81	$	156.01		
4	B-17-BU	x		2012		129	47	6,082	$	1,179,418.50	$	193.92	$ 136.80	$ 132.70
4	C-22-BC	x		2013	CSG	132	49	6,468	$	635,210.29	$	98.21		
4	C-22-BD	x		2013	CSG	132	49	6,468	$	642,207.80	$	99.29		
4	C-22-BX	x		2013	CSG	98	41	4,018	$	442,286.44	$	110.08		
4	C-22-BZ	x		2013	CSG	98	41	4,018	$	445,374.04	$	110.84		
4	C-22-CA	x		2013	CSG	129	41	5,269	$	621,295.62	$	117.93		
4	C-22-BB	x		2013	CSG	129	41	5,269	$	623,996.40	$	118.44		
4	C-22-BA	x		2013	CSG	129	41	5,269	$	624,423.18	$	118.52		
4	C-22-CE	x		2013	CSG	228	58	13,224	$	1,573,557.53	$	118.99		
4	C-22-CB	x		2013	CSG	129	41	5,269	$	635,204.21	$	120.57		
4	C-22-CF	x		2013	CSG	129	41	5,269	$	642,960.41	$	122.04		
4	C-22-CG	x		2013	CSG	129	41	5,269	$	658,977.23	$	125.08		
4	C-22-BY	x		2013	CSG	98	41	4,018	$	504,647.04	$	125.60		
4	C-22-BW	x		2013	CSG	98	41	4,018	$	528,318.09	$	131.49		
4	B-17-DF	x		2013	CSG	395	43	16,992	$	2,279,983.00	$	134.18	$ 117.95	$ 128.70
5	M-06-K			2009	WGCK	145	40	5,800	$	749,532.00	$	129.23		
5	M-06-L		x	2009		113	43	4,859	$	749,532.00	$	154.26	$ 141.74	$ 140.64
5	L-06-B		x	2010		87	39	3,380	$	1,399,722.00	$	414.10	$ 414.10	$ 414.10
5	L-04-H	x		2012		89	57	5,045	$	666,444.47	$	132.11		
5	L-05-E	x		2012		126	60	7,482	$	2,103,827.19	$	281.18	$ 206.65	$ 221.15

Region		2009	2010	2011	2012	2013
1	results	6	8	10	7	12
	average	$ 107.65	$ 108.89	$ 103.00	$ 126.05	$ 130.71
2	results	2	2	5	6	1
	average	$ 101.59	$ 155.96	$ 98.79	$ 107.40	$ 110.85
3	results	-	1	1	-	1
	average		$ 317.75	$ 178.58		$ 202.39
4	results	1	-	1	5	14
	average	$ 81.59		$ 91.73	$ 136.80	$ 117.95
5	results	2	1	-	2	-
	average	$ 141.74	$ 414.10		$ 206.65	

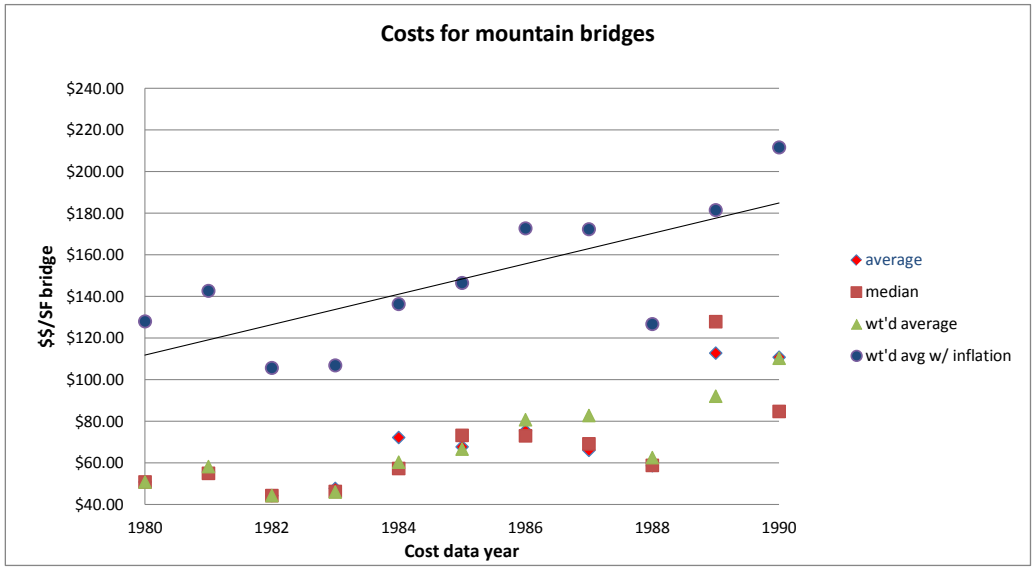
Info from CDOT Cost Data books 1980 -1990, when much of GWC bridge construction ws completed

Note that costs don't include approach slabs, per CDOT Cost Data notes
Mountain construction (as defined by Cost Data books) is distinguisher
All bridge types except CRF (concrete rigid frame) are considered
Inflation rate is reported average rate since year of construction (Bureau of Labor Statistics information)

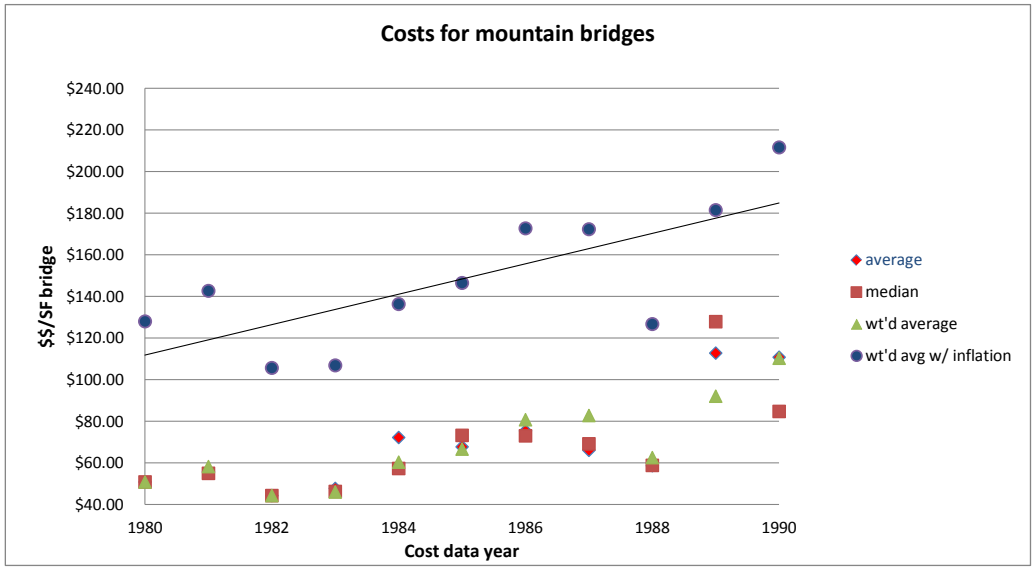
average inflation rate 2.75% since 1980

Structure ID	year built	type	length (ft)	width (ft)	area (sf)	cost	$$/sf	$$/sf avg	$$/sf median	$$/sf wt avg		$$/sf w/infl
											inflation	
I-07-P	1980	WGCK	298.8	42.5	12,699	$ 646,542.00	$ 50.91	$ 50.91	$ 50.91	$ 50.91	2.75%	$ 128.06
G-04-AL	1981	CBGC	236.5	34.5	8,159	$ 375,415.00	$ 46.01					
B-13-D	1981	CPG	95.2	42.5	4,046	$ 209,716.00	$ 51.83					
G-03-Q	1981	WGCK	614.1	40.5	24,871	$ 1,449,811.00	$ 58.29				inflation	
D-09-P	1981	WGCK	575.4	var	14,342	$ 963,229.00	$ 67.16	$ 55.82	$ 55.06	$ 58.31	2.75%	$ 142.74
											inflation	
I-07-Q	1982	WGCK	283.2	52.5	14,868	$ 659,732.00	$ 44.37	$ 44.37	$ 44.37	$ 44.37	2.75%	$ 105.71
B-16-FT	1983	CSGC	137.6	42.5	5,848	$ 196,897.00	$ 33.67					
F-08-AE	1983	CBGC	1206.5	var	49,983	$ 2,186,919.00	$ 43.75					
F-08-AY	1983	CBGC	302.3	22.0	6,651	$ 302,097.00	$ 45.42					
F-08-AD	1983	CBGC	1131.5	var	46,081	$ 2,099,243.00	$ 45.56					
F-08-AZ	1983	CBGC	375.7	22.0	8,265	$ 383,100.00	$ 46.35					
F-07-AP	1983	CBGC	221	37.8	8,354	$ 388,620.00	$ 46.52					
F-07-AQ	1983	CBGC	200	37.8	7,560	$ 401,049.00	$ 53.05					
F-07-AO	1983	CBGC	180	37.8	6,804	$ 361,595.00	$ 53.14				inflation	
F-08-BB	1983	CPGC	318.8	21.5	6,854	$ 431,779.00	$ 62.99	$ 47.83	$ 46.35	$ 46.12	2.75%	$ 106.93
F-07-AV	1984	CBGC	371.5	35.5	13,188	$ 683,790.00	$ 51.85					
F-07-AL	1984	CBGS	612.9	37.8	23,168	$ 1,221,706.00	$ 52.73					
F-08-AB	1984	CBGS	428.2	35.5	15,201	$ 815,116.00	$ 53.62					
F-08-AA	1984	CBGS	428.2	37.5	16,058	$ 875,137.00	$ 54.50					
F-07-AR	1984	CBGS	347.2	37.5	13,020	$ 743,978.00	$ 57.14					
F-07-AU	1984	CBGC	353.1	35.3	12,464	$ 715,380.00	$ 57.39					
F-07-AT	1984	CBGC	310.5	37.5	11,644	$ 673,130.00	$ 57.81					
F-07-AN	1984	WGCK	384.8	37.8	14,545	$ 866,777.00	$ 59.59					
F-07-AK	1984	CBGCP	219.9	37.8	8,312	$ 524,126.00	$ 63.05					
F-15-CO	1984	CPGC	91.0	42.5	3,868	$ 543,692.00	$ 140.58				inflation	
F-15-CP	1984	CPGC	77.0	42.5	3,273	$ 480,545.00	$ 146.84	$ 72.28	$ 57.39	$ 60.44	2.75%	$ 136.38
F-07-AW	1985	CBGC	338.3	35.5	12,010	$ 521,063.00	$ 43.39					
F-08-AA	1985	CBGS	553.0	52.2	28,867	$ 2,102,352.00	$ 72.83					
F-07-AX	1985	CBGP	106.8	35.5	3,791	$ 279,687.00	$ 73.77				inflation	
F-08-AB	1985	CBGS	242.6	22.0	5,337	$ 433,307.00	$ 81.19	$ 67.79	$ 73.30	$ 66.72	2.75%	$ 146.53
D-12-S	1986	CPGC	251.8	42.5	10,702	$ 477,046.00	$ 44.58					
F-08-AW	1986	CBGC	332.2	35.5	11,793	$ 692,745.00	$ 58.74					
F-08-AC	1986	CBGC	255.2	37.5	9,570	$ 640,240.00	$ 66.90					
F-08-AG	1986	CBGP	187.0	37.8	7,069	$ 516,611.00	$ 73.09					
F-08-AH	1986	SBGC	1498.6	35.5	53,200	$ 4,064,659.00	$ 76.40					
F-08-BC	1986	SBGC	1116.3	22.0	24,559	$ 2,247,658.00	$ 91.52				inflation	
F-08-BD	1986	WGCK	631.0	35.3	22,274	$ 2,609,619.00	$ 117.16	$ 75.48	$ 73.09	$ 80.83	2.75%	$ 172.76
K-11-H	1987	CSGP	60.2	42.5	2,559	$ 95,391.00	$ 37.28					
F-08-AK	1987	CBGCP	201.8	37.5	7,568	$ 490,471.00	$ 64.81					
F-08-AV	1987	CBGS	1320.0	35.5	46,860	$ 3,450,717.00	$ 73.64				inflation	
F-08-BH	1987	CBGS	3133.0	37.0	115,921	$ 10,288,787.00	$ 88.76	$ 66.12	$ 69.23	$ 82.85	2.75%	$ 172.35
F-14-AR	1988	CBGP	103.1	117.0	12,063	$ 620,955.00	$ 51.48					
E-14-BD	1988	CI	185.6	45.2	8,389	$ 493,946.00	$ 58.88				inflation	
F-08-AI	1988	SBGC	1462.5	35.5	51,919	$ 3,417,083.00	$ 65.82	$ 58.72	$ 58.88	$ 62.62	2.75%	$ 126.78
F-08-BJ	1989	CBGS	6398.3	35.5	227,140	$ 18,293,132.00	$ 80.54					
F-08-AR	1989	CBGS	1307.8	35.5	46,427	$ 5,939,467.00	$ 127.93				inflation	
F-08-AS	1989	CBGS	722.3	35.5	25,642	$ 3,334,272.00	$ 130.03	$ 112.83	$ 127.93	$ 92.13	2.75%	$ 181.53
F-08-AL	1990	WGCK	1528.7	41.6	63,609	$ 4,645,362.00	$ 73.03					
F-08-AN	1990	WGCK	695.4	28.0	19,472	$ 1,595,272.00	$ 81.93					
F-07-AZ	1990	CBGP	90.1	32.0	2,883	$ 236,254.00	$ 81.96					
F-08-AU	1990	CBGC	775.5	35.5	27,530	$ 2,412,715.00	$ 87.64					
F-08-AM	1990	WGCK	734.7	33.5	24,611	$ 3,898,490.00	$ 158.40				inflation	
F-08-BI	1990	WGCK	963.3	35.5	34,196	$ 6,229,503.00	$ 182.17	$ 110.85	$ 84.80	$ 110.37	2.75%	$ 211.66

	$$/sf avg	$$/sf median	$$/sf wt avg	$$/sf w/infl
1980	$ 50.91	$ 50.91	$ 50.91	$ 128.06
1981	$ 55.82	$ 55.06	$ 58.31	$ 142.74
1982	$ 44.37	$ 44.37	$ 44.37	$ 105.71
1983	$ 47.83	$ 46.35	$ 46.12	$ 106.93
1984	$ 72.28	$ 57.39	$ 60.44	$ 136.38
1985	$ 67.79	$ 73.30	$ 66.72	$ 146.53
1986	$ 75.48	$ 73.09	$ 80.83	$ 172.76
1987	$ 66.12	$ 69.23	$ 82.85	$ 172.35
1988	$ 58.72	$ 58.88	$ 62.62	$ 126.78
1989	$ 112.83	$ 127.93	$ 92.13	$ 181.53
1990	$ 110.85	$ 84.80	$ 110.37	$ 211.66



	$$/sf avg	$$/sf median	$$/sf wt avg	$$/sf w/infl
1980	$ 50.91	$ 50.91	$ 50.91	$ 128.06
1981	$ 55.82	$ 55.06	$ 58.31	$ 142.74
1982	$ 44.37	$ 44.37	$ 44.37	$ 105.71
1983	$ 47.83	$ 46.35	$ 46.12	$ 106.93
1984	$ 72.28	$ 57.39	$ 60.44	$ 136.38
1985	$ 67.79	$ 73.30	$ 66.72	$ 146.53
1986	$ 75.48	$ 73.09	$ 80.83	$ 172.76
1987	$ 66.12	$ 69.23	$ 82.85	$ 172.35
1988	$ 58.72	$ 58.88	$ 62.62	$ 126.78
1989	$ 112.83	$ 127.93	$ 92.13	$ 181.53
1990	$ 110.85	$ 84.80	$ 110.37	$ 211.66



Retaining Wall Costs

type	approx cost (UNDATED information)
block facing	avg about $40-45/sf, mtn avg $70-75/sf
Conc Cl B/D	avg $650-700 CY, no mtn
precast panel facing	wide variance, avg $70-80/sf, mtn avg ~$100/sf

Concrete Box Culverts

W (ft)	H (ft)	$$/lf (total)	no	$$/lf	avg
6	4	$ 882	1	$ 882	
6	4	$ 1,219	1	$ 1,219	
8	6	$ 897	1	$ 897	
10	8	$ 1,536	1	$ 1,536	
10	10	$ 2,072	1	$ 2,072	$ 1,804
12	6	$ 2,831	3	$ 944	
12	6	$ 2,644	2	$ 1,322	
12	8	$ 1,936	2	$ 968	
12	8	$ 1,677	1	$ 1,677	
12	10	$ 3,327	3	$ 1,109	$ 1,204
14	6	$ 3,753	2	$ 1,877	
14	6	$ 3,287	1	$ 3,287	
14	10	$ 7,579	1	$ 7,579	$ 4,248
16	4	$ 4,043	3	$ 1,348	
16	5	$ 1,443	1	$ 1,443	
16	6	$ 2,071	2	$ 1,036	
16	10	$ 3,380	2	$ 1,690	
16	10	$ 5,092	2	$ 2,546	$ 1,612
20	4	$ 1,187	1	$ 1,187	
20	8	$ 3,334	2	$ 1,667	
20	8	$ 3,472	1	$ 3,472	
20	8	$ 3,949	1	$ 3,949	
20	10	$ 6,795	3	$ 2,265	
20	10	$ 7,131	3	$ 2,377	
20	19	$ 14,671	3	$ 4,890	$ 2,830