

BUILDING REPLACEMENT VALUES

THEN AND NOW

CONTRASTING THECB METHODS OF CALCULATION

BUILDING REPLACEMENT VALUES

◆ Background

- Prior to 1998, replacement value used as one parameter of the university funding formula by THECB.
- Calculated by applying Market Chart inflation values to building cost information provided by institutions.

BUILDING REPLACEMENT VALUES

Building Value:

Initial Cost & Annual Capitalization Adjustments

Market Inflation by Year & Bldg. Type

Calculated Replacement Cost

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OFFICE OF INSTITUTIONAL STUDIES AND PLANNING
TEXAS A&M UNIVERSITY

BUILDING RECORD-1900/1901
RUN DATE 11/21/00

BUILDING NUMBER 0470

INSTITUTION CODE . . . 010366
BUILDING LOCATION . . . MAIN CAMPUS
OWNERSHIP OWNED IN FEE SIMPLE
CONDITION REMODELING-A...25 PER CENT
BUILDING TYPE GENERAL PURPOSE ACADEMIC BLDGS
CONSTRUCTION TYPE . . . REINFORCED CONCRETE FRAMES
OCCUPANCY DATE 1921
NUMBER OF FLOORS 03
GROSS AREA 39,887 SQ. FT.
PERIMETER 450 LIN. FT.

			HISTORY BUILDING		
	YEAR CONSTR	INITIAL COST	CONSTR CLASS	CONSTR COST FACTOR	ESTIMATED REPLACEMENT COST
INITIAL CONST	1921	\$226,118	1	20.960	\$4,739,433
ADDITION	1934	\$541	1	29.110	\$15,749
ADDITION	1940	\$3,076	1	22.970	\$70,656
ADDITION	1955	-\$1,710	1	8.100	\$13,851
ADDITION	1957	\$506	1	7.280	\$3,684
ADDITION	1958	\$45,490	1	7.030	\$319,795
ADDITION	1962	\$275	1	6.220	\$1,711
ADDITION	1963	\$128,643	1	6.020	\$774,431
ADDITION	1964	\$7,714	1	5.850	\$45,127
ADDITION	1965	\$10,565	1	5.690	\$60,115
ADDITION	1966	\$2,114	1	5.420	\$11,458
ADJUSTMENT	1967	\$4,004	1	5.150	\$20,621
ADDITION	1968	\$200	1	4.870	\$974
ADDITION	1969	\$10,932	1	4.530	\$49,522
ADDITION	1971	\$312	1	3.690	\$1,151
ADJUSTMENT	1971	\$437	1	3.690	\$1,613
ADDITION	1972	\$1,344	1	3.430	\$4,610
ADDITION	1974	\$305	1	2.940	\$897
ADDITION	1975	\$9,290	1	2.750	\$25,548
ADDITION	1976	\$2,408	1	2.510	\$6,044
ADDITION	1977	\$2,896	1	2.420	\$7,008
ADDITION	1977	\$10,542	1	2.420	\$25,512
ADDITION	1978	\$10,288	1	2.420	\$23,045
ADDITION	1979	\$661	1	2.070	\$1,368
ADDITION	1980	\$11,894	1	1.920	\$22,836
ADDITION	1981	\$6,387	1	1.750	\$11,177
ADDITION	1982	\$18,008	1	1.630	\$29,353
ADDITION	1983	\$8,417	1	1.540	\$12,962
ADDITION	1984	\$136,305	1	1.490	\$203,094
ADDITION	1985	\$10,119	1	1.450	\$14,673
ADDITION	1986	\$10,690	1	1.420	\$15,180
ADDITION	1989	\$11,038	1	1.310	\$14,460
ADDITION	1990	\$10,771	1	1.280	\$13,787
ADDITION	1993	\$1,192	1	1.220	\$1,454
ADJUSTMENT	1994	\$859	1	1.170	\$1,005
RECONCILE WITH	1995	\$10,846	1	1.130	\$12,256
ADDITION	1998	\$25,077	1	1.060	\$26,582
T O T A L		\$720,282			\$6,578,230

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◆ Background

- Required great deal of record keeping by THECB and the institutions.
- Yielded questionable results due to inconsistencies in how building additions and upgrades were capitalized over time and at different institutions.

BUILDING REPLACEMENT VALUES

◆ Background

- Legislature changed funding calculation method in 1998 so that it no longer incorporated replacement values derived from Market charts.
- THECB formed committee in 2000 to look at developing new method.

BUILDING REPLACEMENT VALUES

◆ Background

- Methodology proposed by committee that made use of THECB facilities file and historical construction costs on Texas campuses.
- THECB developed variation that it is now using.

BUILDING REPLACEMENT VALUES

◆ New Methodology

- 5 step process that uses THECB data on construction projects at Texas institutions and facilities inventories as well as information from R.S. Means for estimating a variety of construction costs.

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◆ New Methodology

- Step 1 – Identify average cost per GSF of 10 most recently approved buildings in the state that were in excess of 50,000 GSF. This value is calculated after adjustments to reflect what the building would cost if built in Houston in 2001 (using cost information from R.S. Means). This is called the Baseline Cost (BC) and is re-calculated annually. Current cost is **\$166.49** per GSF.

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◆ New Methodology

- Step 2 – Calculate a Location Adjustment Coefficient (LAC) for each institution. This factor reflects the difference in construction costs between Houston and another location according to Means. The LAC for College Station is .94 or 94% of Houston costs.
- This factor is re-calculated annually

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◆ New Methodology

- Step 3 - Calculate a Room Adjustment Coefficient (RAC) for each room type in the Facilities Inventory. This factor reflects the difference in construction costs between offices and other room types according to Means. An office has a RAC of 1.0, while a laboratory has a RAC of 1.37 since it costs 37% more to build. All room types have a RAC.
- This factor is re-calculated annually.

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◆ New Methodology

- Step 4 - Calculate the replacement cost for each room in a building.

$$\text{\$ per NASF} = (\text{Room NASF})(\text{BC})(\text{LAC})(\text{RAC}^*)$$

$$\text{\$ per GSF} = (\text{Room NASF})(\text{BC})(\text{LAC})(\text{RAC}^*)(\text{GSF}/\text{NASF})$$

* For that room type

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◆ New Methodology

- Step 5 – Calculate Building Replacement Cost by adding up the replacement costs of all the rooms in that building.

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