

Finance: Square Foot Cost Estimator Example

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About: This document provides a detailed cost breakdown for constructing a 22,500 square foot building, estimated based on national average costs. It covers various components of building construction, including substructure, shell, interiors, services, and equipment. The costs are divided into specific categories such as foundations, framing, electrical systems, and finishes, with each category further detailed into specific elements like the type of materials used, construction methods, and their associated costs per square foot.

Usage Description: The sample square foot estimate is intended to serve several purposes:

- **Budget Planning and Estimation:** Helps architects, builders, and developers in estimating the potential costs associated with constructing a building of similar type and size.
- **Financial Analysis:** Assists in financial planning and loan applications by providing a detailed cost framework.
- **Project Management:** Serves as a reference for project managers to monitor and control construction costs.
- **Stakeholder Communication:** Provides stakeholders with a transparent view of where investments are going and what components are most costly.

Square Foot Cost Estimate Report

Estimate Name	Sample Square Foot Estimate
Building Type	Apartment, 1-3 Story with Face Brick with Concrete Block Back-up / Steel Joists
Location	NATIONAL AVERAGE
Stories Count (L.F.)	3.00
Stories Height	10.00
Floor Area (S.F.)	22,500.00
LaborType	STD
Basement Included	No
Data Release	Year 2018
Cost Per Square Foot	\$172.47
Total Building Cost	\$3,880,500.00



Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.

****Note: This is a sample estimate only! Subscribe now for full export capability.**

	% of Total	Cost Per SF	Cost
A Substructure	4.5%	\$5.70	\$128,262.00
A1010 Standard Foundations		\$2.16	\$48,662.00
Strip footing, concrete, reinforced, load 5.1 KLF, soil bearing capacity 3 KSF, 12" deep x 24" wide		\$0.56	\$12,558.00
Strip footing, concrete, reinforced, load 18.4 KLF, soil bearing capacity 6 KSF, 12" deep x 40" wide		\$0.92	\$20,600.00
Spread footings, 3000 PSI concrete, load 150K, soil bearing capacity 6 KSF, 5' - 6" square x 18" deep		\$0.69	\$15,504.00
A1030 Slab on Grade		\$1.81	\$40,800.00
Slab on grade, 4" thick, non industrial, reinforced		\$1.81	\$40,800.00

		% of Total	Cost Per SF	Cost
A2010	Basement Excavation		\$0.11	\$2,400.00
	Excavate and fill, 10,000 SF, 4' deep, sand gravel, or common earth, on site storage		\$0.11	\$2,400.00
A2020	Basement Walls		\$1.62	\$36,400.00
	Foundation wall, CIP, 4' wall height, direct chute, .099 CY/LF, 4.8 PLF, 8" thick		\$0.13	\$3,000.00
	Foundation wall, CIP, 4' wall height, direct chute, .148 CY/LF, 7.2 PLF, 12" thick		\$1.48	\$33,400.00
B Shell		25.9%	\$33.03	\$743,152.00
B1010	Floor Construction		\$13.50	\$303,708.00
	Floor, concrete, slab form, open web bar joist @ 2' OC, on W beam and column, 25'x25' bay, 29" deep, 65 PSF superimposed load, 110 PSF total load		\$11.13	\$250,500.00
	Floor, concrete, slab form, open web bar joist @ 2' OC, on W beam and column, 25'x25' bay, 29" deep, 65 PSF superimposed load, 110 PSF total load, for columns add		\$1.00	\$22,500.00
	Fireproofing, gypsum board, fire rated, 3 layer, 1.5" thick, 8" steel column, 3 hour rating, 23 PLF		\$1.36	\$30,708.00
B1020	Roof Construction		\$3.46	\$77,925.00
	Floor, steel joists, beams, 1.5" 22 ga metal deck, on columns, 25'x25' bay, 20" deep, 40 PSF superimposed load, 60 PSF total load		\$2.87	\$64,500.00
	Floor, steel joists, beams, 1.5" 22 ga metal deck, on columns, 25'x25' bay, 20" deep, 40 PSF superimposed load, 60 PSF total load, add for column		\$0.60	\$13,425.00
B2010	Exterior Walls		\$11.19	\$251,856.00
	Brick veneer wall, standard face, 20 ga x 3-5/8" NLB @ 24" metal stud back-up, running bond		\$11.19	\$251,856.00
B2020	Exterior Windows		\$2.25	\$50,688.00
	Windows, aluminum, sliding, standard glass, 5' x 3'		\$2.25	\$50,688.00
B2030	Exterior Doors		\$0.36	\$8,080.00
	Door, steel 18 gauge, hollow metal, 1 door with frame, no label, 3'-6" x 7'-0" opening		\$0.36	\$8,080.00
B3010	Roof Coverings		\$2.26	\$50,895.00
	Roofing, asphalt flood coat, gravel, base sheet, 3 plies 15# asphalt felt, mopped		\$1.01	\$22,650.00
	Insulation, rigid, roof deck, composite with 2" EPS, 1" perlite		\$0.69	\$15,525.00
	Roof edges, aluminum, duranodic, .050" thick, 6" face		\$0.48	\$10,700.00
	Flashing, aluminum, no backing sides, .019"		\$0.09	\$2,020.00

		% of Total	Cost Per SF	Cost
C Interiors		24.1%	\$30.79	\$692,826.06
C1010	Partitions		\$6.25	\$140,712.00
	Metal partition, 5/8" fire rated gypsum board face, no base, 3 -5/8" @ 24" OC framing, same opposite face, no insulation		\$4.24	\$95,400.00
	1/2" fire rated gypsum board, taped & finished, painted on metal furring		\$2.01	\$45,312.00
C1020	Interior Doors		\$6.86	\$154,364.06
	Door, single leaf, wood frame, 3'-0" x 7'-0" x 1-3/8", birch, solid core		\$1.16	\$25,987.50
	Door, single leaf, wood frame, 3'-0" x 7'-0" x 1-3/8", birch, hollow core		\$5.71	\$128,376.56
C1030	Fittings		\$3.27	\$73,560.00
	Cabinets, residential, wall, two doors x 48" wide		\$3.27	\$73,560.00
C2010	Stair Construction		\$3.22	\$72,500.00
	Stairs, steel, cement filled metal pan & picket rail, 16 risers, with landing		\$3.22	\$72,500.00
C3010	Wall Finishes		\$2.60	\$58,460.00
	Painting, interior on plaster and drywall, walls & ceilings, roller work, primer & 2 coats		\$1.06	\$23,800.00
	Vinyl wall covering, fabric back, medium weight		\$0.90	\$20,200.00
	Ceramic tile, thin set, 4-1/4" x 4-1/4"		\$0.64	\$14,460.00
C3020	Floor Finishes		\$4.69	\$105,480.00
	Carpet tile, nylon, fusion bonded, 18" x 18" or 24" x 24", 24 oz		\$1.31	\$29,430.00
	Carpet tile, nylon, fusion bonded, 18" x 18" or 24" x 24", 35 oz		\$1.49	\$33,547.50
	Vinyl, composition tile, minimum		\$0.35	\$7,796.25
	Vinyl, composition tile, maximum		\$0.40	\$9,078.75
	Tile, ceramic natural clay		\$1.14	\$25,627.50
C3030	Ceiling Finishes		\$3.90	\$87,750.00
	Gypsum board ceilings, 5/8" fire rated gypsum board, painted and textured finish, 1-5/8" metal stud furring, 24" OC support		\$3.90	\$87,750.00
D Services		45.6%	\$58.25	\$1,310,538.10
D1010	Elevators and Lifts		\$4.82	\$108,500.00

		% of Total	Cost Per SF	Cost
	Hydraulic passenger elevator, 3500 lb., 3 floors, 10' story height, 125 FPM		\$4.82	\$108,500.00
D2010	Plumbing Fixtures		\$14.65	\$329,616.00
	Kitchen sink w/trim, countertop, PE on CI, 24" x 21", single bowl		\$2.14	\$48,048.00
	Laundry sink w/trim, PE on CI, black iron frame, 24" x 20", single compt		\$0.37	\$8,328.00
	Service sink w/trim, PE on CI, corner floor, 28" x 28", w/rim guard		\$0.63	\$14,160.00
	Bathroom, lavatory & water closet, 2 wall plumbing, stand alone		\$3.26	\$73,440.00
	Bathroom, three fixture, 2 wall plumbing, lavatory, water closet & bathtub, stand alone		\$8.25	\$185,640.00
D2020	Domestic Water Distribution		\$4.78	\$107,520.00
	Gas fired water heater, residential, 100< F rise, 30 gal tank, 32 GPH		\$4.78	\$107,520.00
D2040	Rain Water Drainage		\$0.50	\$11,148.00
	Roof drain, DWV PVC, 4" diam, diam, 10' high		\$0.30	\$6,648.00
	Roof drain, DWV PVC, 4" diam, for each additional foot add		\$0.20	\$4,500.00
D3010	Energy Supply		\$8.90	\$200,227.50
	Apartment building heating system, fin tube radiation, forced hot water, 20,000 SF area,200,000 CF vol		\$8.90	\$200,227.50
D3030	Cooling Generating Systems		\$9.62	\$216,562.50
	Packaged chiller, air cooled, with fan coil unit, medical centers, 20,000 SF, 46.66 ton		\$9.62	\$216,562.50
D4010	Sprinklers		\$3.59	\$80,844.75
	Wet pipe sprinkler systems, steel, light hazard, 1 floor, 5000 SF		\$1.64	\$36,976.50
	Wet pipe sprinkler systems, steel, light hazard, each additional floor, 5000 SF		\$1.95	\$43,868.25
D5010	Electrical Service/Distribution		\$2.14	\$48,200.00
	Service installation, includes breakers, metering, 20' conduit & wire, 3 phase, 4 wire, 120/208 V, 600 A		\$0.44	\$9,925.00
	Feeder installation 600 V, including RGS conduit and XHHW wire, 600 A		\$1.10	\$24,675.00
	Switchgear installation, incl switchboard, panels & circuit breaker, 600 A		\$0.60	\$13,600.00
D5020	Lighting and Branch Wiring		\$7.27	\$163,525.00
	Receptacles incl plate, box, conduit, wire, 10 per 1000 SF, 1.2 watts per SF		\$2.98	\$67,050.00

		% of Total	Cost Per SF	Cost
	Wall switches, 2.5 per 1000 SF		\$0.61	\$13,725.00
	Miscellaneous power, 2 watts		\$0.54	\$12,150.00
	Central air conditioning power, 3 watts		\$0.44	\$9,900.00
	Motor installation, three phase, 200 V, 15 HP motor size		\$0.16	\$3,550.00
	Incandescent fixtures recess mounted, type A, 1 watt per SF, 8 FC, 6 fixtures per 1000 SF		\$2.54	\$57,150.00
D5030	Communications and Security		\$1.78	\$40,032.75
	Communication and alarm systems, fire detection, addressable, 25 detectors, includes outlets, boxes, conduit and wire		\$0.92	\$20,775.00
	Fire alarm command center, addressable without voice, excl. wire & conduit		\$0.27	\$6,075.00
	Internet wiring, 2 data/voice outlets per 1000 S.F.		\$0.59	\$13,182.75
D5090	Other Electrical Systems		\$0.19	\$4,361.60
	Generator sets, w/battery, charger, muffler and transfer switch, gas/gasoline operated, 3 phase, 4 wire, 277/480 V, 7.5 kW		\$0.19	\$4,361.60
E Equipment & Furnishi		0.0%	\$0.00	\$0.00
E1090	Other Equipment		\$0.00	\$0.00
F Special Construction		0.0%	\$0.00	\$0.00
G Building Sitework		0.0%	\$0.00	\$0.00
Sub Total		100%	\$127.77	\$2,874,778.16
Contractor's Overhead & Profit		25.0 %	\$31.94	\$718,454.52
Architectural Fees		8.0 %	\$12.76	\$287,267.32
User Fees		0.0 %	\$0.00	\$0.00
Total Building Cost			\$172.47	\$3,880,500.00