

## INDUSTRIAL – COLD STORAGE FACILITIES



**GOOD/EXCELLENT CLASS C**



**AVERAGE CLASS C**

**OCCUPANCY DESCRIPTION:** Cold storage facilities are designed to keep stored commodities at various temperature levels. Some production or process areas are included in the better qualities.

Sharp freezers, freezer rooms, offices, production or process areas are included in the better qualities. The front elevation will have some ornamental detail and an office/storefront-type entry. Lower qualities have cooler storage area, few partitions and small

office areas that are very plain with little or no front entry trim or ornamentation.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit.

**NOT INCLUDED IN COSTS:** Sprinklers, special climate-control equipment, dock levelers or material-handling equipment.

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
<b>A-B</b>	Good	\$117.63	Face brick, concrete panels, good facade, heavily insulated	Frozen foods, some good offices or production, sharp freeze, cooler areas	Good lighting and plumbing, outlets and drains	Complete H.V.A.C.
	Average	85.31	Brick, block, concrete panels, storefront entry, fully insulated	Chilled and freezer rooms, good offices and support areas	Adequate lighting, plumbing and drains, some power outlets	Complete H.V.A.C.
<b>C</b>	Excellent	132.75	Best block, tilt-up, good storefront, heavy floor, wall, roof insulation	Frozen foods, some good offices or production, sharp freeze, cooler areas	Good lighting and plumbing, outlets and drains	Complete H.V.A.C.
	Good	95.38	Tilt-up, steel frame, good block, or tapered girders, heavily insulated	Chilled and freezer rooms, good offices and support areas	Good lighting, adequate plumbing and drains, some power outlets	Complete H.V.A.C.
	Average	69.27	Steel or wood frame or bearing walls, block or tilt-up, insulated	Cooler and chilled rooms, some distribution offices and finish	Adequate lighting and plumbing	Complete H.V.A.C.
	Fair	58.06	Block tilt-up, sealed ceiling and wall insulation	Cooler, controlled atmosphere, sealed rooms and slab, small office	Adequate electrical, minimum plumbing	Complete low-cost H.V.A.C.
	Low cost	50.64	Block, tilt-up, very plain, light construction, exposed ceiling insulation	Cooler storage, unfinished, few partitions, small office	Minimum lighting and plumbing	Complete H.V.A.C.
<b>D</b>	Average	64.94	Stucco on wood frame, wood trusses, fully insulated	Cooler and chilled rooms, some distribution offices and finish	Adequate lighting and plumbing	Complete H.V.A.C.
	Low cost	47.21	Stucco or siding on wood, insulated, exposed ceiling insulation	Cooler storage, unfinished, few partitions, small office	Minimum lighting and plumbing	Complete H.V.A.C.
<b>D POLE</b>	Average	60.14	Pole frame, good insulated siding or sandwich panels, good roof	Cooler and chilled rooms, some distribution offices and finish	Adequate lighting and plumbing	Complete H.V.A.C.
	Low cost	43.38	Pole frame, metal siding, lined, exposed ceiling insulation	Cooler storage, unfinished, few partitions, small office	Minimum lighting and plumbing	Complete H.V.A.C.
<b>S</b>	Excellent	134.25	Good steel frame, insulated panel walls & roof, good facade	Frozen foods, some good offices or production, sharp freeze, cooler areas	Good lighting and plumbing, outlets and drains	Complete H.V.A.C.
	Good	93.64	Good steel frame, sandwich panels, fenestration, heavily insulated	Chilled and freezer rooms, good offices and support areas	Good lighting, adequate plumbing and drains, some power outlets	Complete H.V.A.C.
	Average	66.22	Rigid steel frame, insulated siding or sandwich panels, good roof	Cooler and chilled rooms, some distribution offices and finish	Adequate lighting and plumbing	Complete H.V.A.C.
	Fair	54.80	Pre-engineered metal lined and sealed wall and ceiling insulation	Cooler, controlled atmosphere, sealed rooms and slab, small office	Adequate electrical, minimum plumbing	Complete low-cost H.V.A.C.
	Low	47.28	Pre-engineered frame, metal siding, lined, exposed ceiling insulation	Cooler storage, unfinished, few partitions, small office	Minimum lighting and plumbing	Complete H.V.A.C.

# INDUSTRIAL – COLD STORAGE FACILITIES

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

<p><b>1</b></p> <p><b>ELEVATORS:</b> A small freight elevator with simple call system and push-button control, four-passenger cab, and two or three stops, \$56,250 to \$77,250. For greater detail, see Section UIP 8.</p> <p><b>For loading docks, see Page CAL 398.</b></p>	<b>SPRINKLERS:</b> Apply to area covered by sprinklers.				
	<b>Sq. Ft.</b>	<b>LOW</b>	<b>AVG.</b>	<b>GOOD</b>	<b>EXCL.</b>
	5,000	\$2.86	\$3.79	\$5.01	\$6.63
	10,000	2.58	3.38	4.44	5.82
	20,000	2.32	3.02	3.93	5.11
	30,000	2.18	2.83	3.66	4.74
	40,000	2.09	2.70	3.48	4.49
	50,000	2.02	2.60	3.35	4.31
	80,000	1.88	2.41	3.08	3.95
	100,000	1.82	2.32	2.96	3.79
200,000	1.64	2.07	2.63	3.33	
400,000	1.47	1.85	2.33	2.92	
<p><b>DOCK HEIGHT FLOORS:</b> Add \$1.64 to \$6.20 per square foot to base cost of first floor.</p>					

<p><b>2</b></p> <p><b>COLD STORAGE HEATING, COOLING AND AIR CONDITIONING</b></p> <p>These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Section UIP 8.</p> <p><b>COMPLETE H.V.A.C. (All classes)</b></p> <p><b>ENVIRONMENTAL REFRIGERATION</b></p>	<b>Sq. Ft.</b>	
	<b>Costs</b>	
	Excellent (freezer/sharp freeze) . . . . .	\$21.30
	Good (chiller/freezer) . . . . .	18.25
	Average (cooler/chilled air) . . . . .	15.85
	Low (cooled air only) . . . . .	13.60
	Fruits, conditioned and cooled air . . . . .	27.75
	Vegetables,	
	high to precise humidity . . . . .	54.00
	warm and cool . . . . .	69.00

<p><b>3</b></p> <p><b>HEIGHT REFINEMENTS</b></p> <p><b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.</p>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>
	8	.885	20	1.133	45	1.788
	10	.921	22	1.181	50	1.930
	12	.960	24	1.231	55	2.075
	14	1.000 (base)	30	1.382	60	2.225
	16	1.041	35	1.515	70	2.530
	18	1.086	40	1.650	80	2.845

<p><b>4</b></p>	<b>Average Floor Area Sq.Ft./Story</b>	<b>AVERAGE PERIMETER</b>													<b>Average Floor Area Sq.Ft./Story</b>	
		<b>300</b>	<b>400</b>	<b>500</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>1200</b>	<b>1400</b>	<b>1600</b>	<b>1800</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>	<b>3000</b>	
	<b>5,000</b>	1.083	1.168	1.252	----	----	----	----	----	----	----	----	----	----	----	<b>5,000</b>
	<b>10,000</b>	----	.996	1.040	1.083	1.168	----	----	----	----	----	----	----	----	----	<b>10,000</b>
	<b>14,000</b>	----	.945	.977	1.008	1.071	1.132	----	----	----	----	----	----	----	----	<b>14,000</b>
	<b>20,000</b>	----	----	.926	.949	.996	1.040	1.083	----	----	----	----	----	----	----	<b>20,000</b>
	<b>25,000</b>	----	----	.907	.924	.959	.996	1.032	1.066	----	----	----	----	----	----	<b>25,000</b>
	<b>30,000</b>	----	----	----	.907	.935	.965	.995	1.025	----	----	----	----	----	----	<b>30,000</b>
	<b>40,000</b>	----	----	----	----	.907	.926	.949	.972	.995	1.019	----	----	----	----	<b>40,000</b>
	<b>50,000</b>	----	----	----	----	.891	.907	.924	.942	.959	.977	.996	1.015	----	----	<b>50,000</b>
	<b>80,000</b>	----	----	----	----	----	.875	.887	.898	.907	.916	.926	.937	.949	.984	<b>80,000</b>
	<b>100,000</b>	----	----	----	----	----	.863	.872	.882	.891	.899	.907	.916	.924	.950	<b>100,000</b>
<b>200,000</b>	----	----	----	----	----	----	.846	.850	.855	.859	.863	.868	.873	.887	<b>200,000</b>	
<b>400,000</b>	----	----	----	----	----	----	----	----	.835	.838	.841	.843	.846	.853	<b>400,000</b>	

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**

# INDUSTRIAL – ENGINEERING



GOOD CLASS C



AVERAGE CLASS C

**OCCUPANCY DESCRIPTION:** This occupancy is similar to the industrial manufacturing building, at least in terms of exteriors. However, the interiors have a larger amount of office area and finished space than the manufacturing occupancy while containing some manufacturing and assembly areas. The best structures will approach good office buildings in cost, with many partitions, best lighting, elevators or escalators and fine detail. If the design appears closer to office use than to industrial, the office costs should be used.

Better quality exteriors have high-cost features and ornamentation. Interiors at most qualities are plaster or drywall with fluorescent lighting and adequate plumbing for the personnel. The quality of the fixtures is consistent with the quality of the structure.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit. Elevators are included in costs designated with an asterisk (\*).

**NOT INCLUDED IN COSTS:** Sprinklers, furnishings or power feeds and special utilities for manufacturing machinery.

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
A	Excellent	\$195.18	Good curtain walls, good brick and glass, with ornamentation	Plaster, acoustic ceilings, finished floor, many offices	*Fluorescent lighting, many outlets, good plumbing	Hot and chilled water (zoned)
	Good	139.00	Face brick, metal panels, good glass, ornamentation	Gypsum or plaster, some trim, carpet and resilient flrs., good offices	*Good fluorescent lighting, good plumbing	Warm and cool air (zoned)
	Average	102.15	Brick on block or tile, concrete or metal panels, good front	Gypsum walls and ceilings, resilient floors, half office buildout	*Adequate lighting and plumbing	Package A.C.
	Low cost	78.81	Brick, precast concrete, block, little trim, small storefront entry	Low-cost fin., acoustic tile, vinyl comp. tile, plain offices, 20% – 30% buildout	*Minimum lighting and plumbing, few extras	Package A.C.
B	Excellent	184.65	Good curtain walls, good brick and glass, with ornamentation	Plaster, acoustic ceilings, finished floor, much office space	*Fluorescent lighting, many outlets, good plumbing	Hot and chilled water (zoned)
	Good	130.72	Face brick, concrete curtain wall, some ornamentation	Gypsum or plaster, some trim, carpet & resilient floors, good offices	*Good fluorescent lighting, good plumbing	Warm and cool air (zoned)
	Average	95.67	Brick, formed concrete or pre-cast walls, good front	Gypsum walls and ceilings, resilient floors, half office buildout	*Adequate lighting and plumbing	Package A.C.
	Low cost	73.75	Brick, precast concrete, block, little trim, small storefront entry	Low-cost fin., acoustic tile, vinyl comp. tile, plain offices, 20% – 30% buildout	*Minimum lighting and plumbing, few extras	Package A.C.
A-B	Office bsmt.	105.40	Plaster interior	Average office finish, acoustic tile, vinyl composition	Adequate office lighting and plumbing	Warm and cool air (zoned)
	Office mezz.	67.34	In building cost	Enclosed, average, industrial office finish, plaster soffit	Average office lighting and plumbing	Included in building cost
C	Excellent	165.41	Steel or concrete frame, ornamented mason., entr. & lobby	Plaster walls, acoustic ceilings, carpet & resilient floors, mostly off.	Office-type lighting, many outlets, good plumbing	Hot and chilled water (zoned)
	Good	108.96	Steel frame, bar or web joists, good masonry or curtain walls	Gypsum or plaster walls, good office areas, acoustic ceilings	Good fluorescent lighting, good plumbing	Warm and cool air (zoned)
	Average	74.50	Bearing wall or frame, brick, concrete panels, good front	Finished walls, finished floors and ceilings, half office buildout	Adequate lighting and plumbing	Package A.C.
	Low cost	54.69	Brick, block, tilt-up panels, bearing walls, wood joists, little trim	Painted walls, acous. tile/drywall, vinyl comp. tile, plain off., 20% – 30% buildout	Minimum lighting and plumbing	Package A.C.
D	Excellent	145.77	Heavy frame, good metal and glass, stone and brick veneer	Plaster or gypsum, acoustic ceilings, carpet & resilient tile, mostly offices	Office-type lighting, many outlets, good plumbing	Warm and cool air (zoned)
	Good	103.06	Steel frame, web joists, good metal, glass, stucco, brick ven.	Plaster or gypsum, acoustic ceilings, good office areas	Good fluorescent lighting, good plumbing	Warm and cool air (zoned)
	Average	69.75	Wood studs/light frame, stucco, wood, brick ven., good front	Drywall, walls and ceilings, resilient tile, half office buildout	Adequate lighting and plumbing	Package A.C.
	Low cost	50.94	Wood frame, stucco or siding, little ornamentation, small front	Drywall, acoustic tile, vinyl comp. tile, plain offices, 20% – 30% buildout	Mlimum lighting and plumbing	Package A.C.
S	Excellent	149.87	Heavy frame, best sandwich panels, orn. entry & lobby	Plaster or gypsum, acoustic ceilings, carpet & resilient tile, mostly offices	Office-type lighting, many outlets, good plumbing	Warm and cool air (zoned)
	Good	105.17	Steel frame, good metal and glass, good storefront and trim	Plaster or gypsum, acoustic ceilings, good office areas	Good fluorescent lighting, good plumbing	Warm and cool air (zoned)
	Average	70.74	Steel frame & light panels with steel trusses/joists, good front	Enameled walls and exposed trusses, finished floors, half offices	Exposed conduit, fluorescent lighting, adequate plumbing	Package A.C.
	Low cost	51.33	Pre-engineered, finished interior, insulation, small front	Drywall, acoustic tile, vinyl comp. tile, plain offices, 20% – 30% buildout	Minimum lighting and plumbing	Package A.C.
CDS†	Office bsmt.	66.99	Plaster or drywall interior	Average office finish, acoustic tile, vinyl composition	Typical office lighting and plumbing	Forced air
	Office mezz.	47.42	In building cost	Enclosed, average, industrial office finish, acoustic tile soffit	Average office lighting and plumbing	Included in building cost

†For fire-resistant Type I basement, with concrete slab separation under Class C, D or S units, add \$5.95 per square foot.

**MEZZANINES:** Do not use story height or area/perimeter multipliers with mezzanine costs.

# INDUSTRIAL – ENGINEERING

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

<b>1</b>	<p><b>ELEVATORS:</b> Buildings whose base costs include service elevators are marked with an asterisk (*). If the building under consideration has no elevators, deduct the following from the base costs so marked. For detailed costs, see Section UIP 8.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Classes A/B</th> <th style="text-align: right;">Sq. Ft. Costs</th> </tr> <tr> <td>Excellent . . . . .</td> <td style="text-align: right;">\$3.90</td> </tr> <tr> <td>Good . . . . .</td> <td style="text-align: right;">3.08</td> </tr> <tr> <td>Average . . . . .</td> <td style="text-align: right;">2.49</td> </tr> <tr> <td>Low cost . . . . .</td> <td style="text-align: right;">2.01</td> </tr> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p>A small passenger elevator with simple call system and pushbutton control, four passenger cab and two or three stops, costs \$56,250 to \$77,250.</p>	Classes A/B	Sq. Ft. Costs	Excellent . . . . .	\$3.90	Good . . . . .	3.08	Average . . . . .	2.49	Low cost . . . . .	2.01	<p><b>SPRINKLERS:</b> Apply to area covered by sprinklers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sq. Ft.</th> <th style="text-align: right;">LOW</th> <th style="text-align: right;">AVG.</th> <th style="text-align: right;">GOOD</th> <th style="text-align: right;">EXCL.</th> </tr> <tr> <td>5,000</td> <td style="text-align: right;">\$2.86</td> <td style="text-align: right;">\$3.79</td> <td style="text-align: right;">\$5.01</td> <td style="text-align: right;">\$6.63</td> </tr> <tr> <td>10,000</td> <td style="text-align: right;">2.58</td> <td style="text-align: right;">3.38</td> <td style="text-align: right;">4.44</td> <td style="text-align: right;">5.82</td> </tr> <tr> <td>20,000</td> <td style="text-align: right;">2.32</td> <td style="text-align: right;">3.02</td> <td style="text-align: right;">3.93</td> <td style="text-align: right;">5.11</td> </tr> <tr> <td>30,000</td> <td style="text-align: right;">2.18</td> <td style="text-align: right;">2.83</td> <td style="text-align: right;">3.66</td> <td style="text-align: right;">4.74</td> </tr> <tr> <td>50,000</td> <td style="text-align: right;">2.02</td> <td style="text-align: right;">2.60</td> <td style="text-align: right;">3.35</td> <td style="text-align: right;">4.31</td> </tr> <tr> <td>80,000</td> <td style="text-align: right;">1.88</td> <td style="text-align: right;">2.41</td> <td style="text-align: right;">3.08</td> <td style="text-align: right;">3.95</td> </tr> <tr> <td>100,000</td> <td style="text-align: right;">1.82</td> <td style="text-align: right;">2.32</td> <td style="text-align: right;">2.96</td> <td style="text-align: right;">3.79</td> </tr> <tr> <td>200,000</td> <td style="text-align: right;">1.64</td> <td style="text-align: right;">2.07</td> <td style="text-align: right;">2.63</td> <td style="text-align: right;">3.33</td> </tr> <tr> <td>400,000</td> <td style="text-align: right;">1.47</td> <td style="text-align: right;">1.85</td> <td style="text-align: right;">2.33</td> <td style="text-align: right;">2.92</td> </tr> </table> <p><b>DOCK HEIGHT FLOORS:</b> Add \$1.64 to \$6.20 per square foot to base cost of first floor.</p> <p><b>For loading docks, see Page CAL 398.</b></p>	Sq. Ft.	LOW	AVG.	GOOD	EXCL.	5,000	\$2.86	\$3.79	\$5.01	\$6.63	10,000	2.58	3.38	4.44	5.82	20,000	2.32	3.02	3.93	5.11	30,000	2.18	2.83	3.66	4.74	50,000	2.02	2.60	3.35	4.31	80,000	1.88	2.41	3.08	3.95	100,000	1.82	2.32	2.96	3.79	200,000	1.64	2.07	2.63	3.33	400,000	1.47	1.85	2.33	2.92
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<b>2</b>	<b>HEATING AND COOLING</b>			
	<p>These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.</p>			
	Sq. Ft. Costs	Sq. Ft. Costs	Sq. Ft. Costs	Sq. Ft. Costs
	<b>HEATING ONLY</b>	<b>HEATING &amp; COOLING</b>	<b>COOLING ONLY</b>	
	Electric cable or baseboard . . . . .	Package A.C. (short ductwork) . . . . .	Central refrigeration (zoned) . . . . .	\$11.50
	Electric wall heaters . . . . .	Warm and cool air (zoned) . . . . .	package (short ductwork) . . . . .	7.63
	Forced air furnace . . . . .	Hot/chilled water (zoned) . . . . .	Central evaporative . . . . .	4.77
	Hot water, baseboard/convactor . . . . .	Heat pump system . . . . .	Pkg. refrig. . . \$1,660 to \$2,180 per ton capacity	
	Space heaters, with fan . . . . .		Evap. coolers . . \$235 to \$385 per MCFM capacity	
	radiant . . . . .			
	Steam (including boiler) . . . . .	Small indiv. heat pumps cost \$1,600 to \$2,160	<b>VENTILATION ONLY</b>	
	without boiler . . . . .	per ton of rated capacity.	Vent. (blowers/ducts) . . . . .	\$2.04

<b>3</b>	<b>HEIGHT REFINEMENTS</b>					
	<p><b>MULTISTORY BUILDINGS:</b> Add .5% (1/2%) for each story over three, above ground, to all base costs.</p> <p><b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.</p>					
	Average Wall Height	Square Foot Multiplier	Average Wall Height	Square Foot Multiplier	Average Wall Height	Square Foot Multiplier
	8	.885	20	1.133	45	1.788
	10	.921	22	1.181	50	1.930
	12	.960	24	1.231	55	2.075
	14	1.000 (base)	30	1.382	60	2.225
	16	1.041	35	1.515	70	2.530
	18	1.086	40	1.650	80	2.845

<b>4</b>	Average Floor Area	<b>AVERAGE PERIMETER</b>												Average Floor Area		
	Sq. Ft./Story	300	400	500	600	800	1000	1200	1400	1600	1800	2000	2200	2400	3000	Sq. Ft./Story
	5,000	1.083	1.168	1.252	----	----	----	----	----	----	----	----	----	----	----	5,000
	10,000	----	.996	1.040	1.083	1.168	----	----	----	----	----	----	----	----	----	10,000
	14,000	----	.945	.977	1.008	1.071	1.132	----	----	----	----	----	----	----	----	14,000
	20,000	----	----	.926	.949	.996	1.040	1.083	----	----	----	----	----	----	----	20,000
	25,000	----	----	.907	.924	.959	.996	1.032	1.066	----	----	----	----	----	----	25,000
	30,000	----	----	----	.907	.935	.965	.995	1.025	----	----	----	----	----	----	30,000
	40,000	----	----	----	----	.907	.926	.949	.972	.995	1.019	----	----	----	----	40,000
	50,000	----	----	----	----	.891	.907	.924	.942	.959	.977	.996	1.015	----	----	50,000
	80,000	----	----	----	----	----	.875	.887	.898	.907	.916	.926	.937	.949	.984	80,000
	100,000	----	----	----	----	----	.863	.872	.882	.891	.899	.907	.916	.924	.950	100,000
	200,000	----	----	----	----	----	----	.846	.850	.855	.859	.863	.868	.873	.887	200,000
	400,000	----	----	----	----	----	----	----	.835	.838	.841	.843	.846	.853	.853	400,000

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**

## INDUSTRIAL – FLEX (MALL) LOFT BUILDINGS



**LOW-COST CLASS C**



**GOOD CLASS C**

**OCCUPANCY DESCRIPTION:** Industrial flex mall buildings are the modern multi-tenant loft structures, typically of low rise construction. The lower qualities are purely neighborhood light industrial buildings having minimal subdivisions and finish per shop space user with overhead door entries. The better qualities have fully finished customer service areas with storefront entries. Display office areas in the higher qualities have finished floors and ceilings with good restroom facilities, generally for large space users.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit.

**NOT INCLUDED IN COSTS:** Sprinklers, furnishings or special utilities for industrial equipment.

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
<b>C</b>	Good	\$75.03	Masonry or concrete, wood or steel frame, good entries & trim	Finished floors, ceilings and display rooms, some extras	Fluorescent lighting, adequate restroom and plumbing	Package A.C.
	Average	52.07	Brick, concrete block, tilt-up, small storefronts	Reception finish and detail, small office or display areas	Adequate lighting and plumbing per space	Forced air
	Low cost	36.65	Low-cost block, tilt-up, light roof, shop door entries	Unfinished, slab, open shop areas only	Minimum lighting and plumbing per space	Space heaters
<b>D</b>	Average	48.14	Metal or wood studs, stucco, siding, small storefronts	Reception finish and detail, small office or display areas	Adequate lighting and plumbing per space	Forced air
	Low cost	33.49	Low-cost stucco or siding, shop door entries	Unfinished, slab, open shop areas only	Minimum lighting and plumbing per space	Space heaters
<b>D POLE</b>	Average	44.14	Pole frame, good metal siding, lined, small storefronts	Reception finish and detail, small office or display areas	Adequate lighting and plumbing per space	Forced air
	Low cost	30.36	Pole frame, metal siding, shop door entries	Unfinished, slab, open shop areas only	Minimum lighting and plumbing per space	Space heaters
<b>S</b>	Good	71.53	Steel frame, sandwich panels, good entries and trim	Finished floors, ceilings and display rooms, some extras	Fluorescent lighting, adequate restroom and plumbing	Package A.C.
	Average	48.57	Pre-engineered, steel siding, small storefronts	Reception finish and detail, small office or display areas	Adequate lighting and plumbing per space	Forced air
	Low cost	33.40	Light steel frame, siding, shop door entries	Unfinished, slab, open shop areas only	Minimum lighting and plumbing per space	Space heaters
<b>CDS</b>	Office mezzanine	47.42	In building cost	Enclosed, average industrial office finish, acoustic tile soffit	Average office lighting and plumbing	Included in building cost
	Display mezzanine	57.84	In building cost	Showroom finish, plaster or drywall soffit, vinyl composition	Average loft lighting and plumbing	Included in building cost
	Avg. stor. mezzanine	21.05	In building cost	Heavy plywood or plank on wood or light steel structure, no partitions	Minimum lighting, no plumbing	Included in building cost
	Low stor. mezzanine	15.70	In building cost	Light storage on plywood, minimum supports, no soffit	Minimum lighting	Included in building cost

**MEZZANINES:** Do not use story height or area/perimeter multipliers with mezzanine costs.

**NOTE:** Basements are listed on Page CAL 150, under Lofts.

# INDUSTRIAL – FLEX (MALL) LOFT BUILDINGS

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

**1**

**SPRINKLERS:** Apply to area covered by sprinklers.

Sq. Ft.	LOW	AVG.	GOOD	EXCL.
5,000	\$2.86	\$3.79	\$5.01	\$6.63
10,000	2.58	3.38	4.44	5.82
15,000	2.42	3.16	4.13	5.40
20,000	2.32	3.02	3.93	5.11
30,000	2.18	2.83	3.66	4.74
40,000	2.09	2.70	3.48	4.49
50,000	2.02	2.60	3.35	4.31
80,000	1.88	2.41	3.08	3.95
100,000	1.82	2.32	2.96	3.79
150,000	1.71	2.17	2.76	3.51

**DOCK HEIGHT FLOORS:** Add \$1.64 to \$6.20 per square foot to base cost of first floor.

**2**

**HEATING AND COOLING**

These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.

	Sq. Ft. Costs		Sq. Ft. Costs		Sq. Ft. Costs
<b>HEATING ONLY</b>		<b>HEATING &amp; COOLING</b>		<b>COOLING ONLY</b>	
Electric cable or baseboard . . .	\$ 6.21	Package A.C. (short ductwork) . . . . .	\$13.65	Central refrigeration (zoned) . . . . .	\$11.50
Electric wall heaters . . . . .	2.53	Warm and cool air (zoned) . . . . .	18.65	package (short ductwork) . . . . .	7.63
Forced air furnace . . . . .	7.01	Hot/chilled water (zoned) . . . . .	31.25	Central evaporative . . . . .	4.77
Hot water, baseboard/convactor	12.40	Heat pump system . . . . .	17.10	Pkg. refrig. . . \$1,660 to \$2,180 per ton capacity	
Space heaters, with fan . . . . .	3.54			Evap. coolers . . \$235 to \$385 per MCFM capacity	
radiant . . . . .	3.96				
Steam (including boiler) . . . . .	10.80	Small indiv. heat pumps cost \$1,600 to \$2,160		<b>VENTILATION ONLY</b>	
without boiler . . . . .	9.42	per ton of rated capacity.		Vent. (blowers/ducts) . . . . .	\$2.04

**3**

**HEIGHT REFINEMENTS**

**MULTISTORY BUILDINGS:** Add .5% (1/2%) for each story over three, above ground, to all base costs.

**STORY HEIGHT MULTIPLIERS:** Multiply base cost by following multipliers for any variation in average story height.

Average Wall Height	Square Foot Multiplier	Average Wall Height	Square Foot Multiplier
8	.885	16	1.041
10	.921	18	1.086
12	.960	20	1.133
14	1.000 (base)		

**4**

Average Floor Area Sq. Ft./Story	AVERAGE PERIMETER														Average Floor Area Sq. Ft./Story
	100	150	200	250	300	400	500	600	700	800	900	1000	1200	1500	
1,000	1.252	1.468	----	----	----	----	----	----	----	----	----	----	----	----	1,000
2,000	----	1.147	1.252	1.360	----	----	----	----	----	----	----	----	----	----	2,000
4,000	----	----	1.040	1.094	1.147	1.252	----	----	----	----	----	----	----	----	4,000
5,000	----	----	.996	1.040	1.083	1.168	1.252	----	----	----	----	----	----	----	5,000
8,000	----	----	----	----	.984	1.040	1.094	1.147	1.199	1.252	----	----	----	----	8,000
10,000	----	----	----	----	----	.996	1.040	1.083	1.125	1.168	1.210	----	----	----	10,000
14,000	----	----	----	----	----	.945	.977	1.008	1.040	1.071	1.102	1.132	----	----	14,000
20,000	----	----	----	----	----	----	.926	.949	.972	.996	1.019	1.040	1.083	----	20,000
25,000	----	----	----	----	----	----	----	.907	.924	.942	.959	.977	.996	1.032	25,000
30,000	----	----	----	----	----	----	----	----	----	.907	.921	.935	.949	.965	30,000
40,000	----	----	----	----	----	----	----	----	----	----	.899	.907	.916	.926	40,000
50,000	----	----	----	----	----	----	----	----	----	----	----	.891	.898	.907	50,000

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**

# INDUSTRIAL – HEAVY MANUFACTURING



**EXCELLENT CLASS C**



**GOOD CLASS C**

**OCCUPANCY DESCRIPTION:** Buildings designed for heavy manufacturing processes and power or utility service plants. An average amount of office and support space consistent with the quality is included, typically between 4 and 12 percent. These facilities are characterized by their typically heavy frames, craneways, walls and floors. The structural support will greatly influence the cost and quality selection. Exterior finishes are thick masonry or concrete, or heavy-gauge metal siding. The interiors, except for the office, stores or shop areas, usually have minimal interior partitions and are large open areas.

Lighting may consist of many heavy duty or spark-proof fixtures.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit. Elevators are included in costs designated with an asterisk (\*). All the power leads to the building and industrial sewer and drainage lines.

**NOT INCLUDED IN COSTS:** Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists, cranes or personnel lifts.

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
<b>A</b>	Excellent	\$260.53	Heavy structural frame and masonry or concrete walls	Extra heavy floors, partitions and craneways, specialized plant	*Excellent lighting and plumbing, spark-proof fixtures	Hot and chilled water (zoned)
	Good	211.55	Good curtain walls, good brick and glass, with ornamentation	Finished walls and ceilings, some finished floors, heavy craneways	*Good fluorescent lighting, good plumbing, some extras	Hot and chilled water (zoned)
	Average	160.45	Face brick, metal panels, industrial glass, ornamentation	Plaster walls, some trim, heavy-duty floors, good offices, craneways	*Good fluorescent lighting, adequate plumbing, locker rooms	Warm and cool air (zoned)
	Low cost	123.91	Brick on block or tile, concrete or metal panels, little trim	Painted walls and ceilings, heavy-duty floors, open fabrication	*Adequate lighting and plumbing	Hot water
<b>B</b>	Excellent	246.30	Heavy concrete frame and masonry or concrete walls	Extra heavy floors, partitions and craneways, specialized plant	*Excellent lighting and plumbing, spark-proof fixtures	Hot and chilled water (zoned)
	Good	200.09	Good curtain walls, good brick and glass, with ornamentation	Finished walls and ceilings, some finished floors, heavy craneways	*Good fluorescent lighting, good plumbing, some extras	Hot and chilled water (zoned)
	Average	151.23	Face brick, concrete curtain walls, some ornamentation	Plaster walls, some trim, heavy-duty floors, good offices, craneways	*Good fluorescent lighting, adequate plumbing, locker rooms	Warm and cool air (zoned)
	Low cost	116.49	Brick, formed concrete, or precast walls, little trim	Painted walls and ceilings, heavy-duty floors, open fabrication	*Adequate lighting and plumbing	Hot water
<b>A-B</b>	Good basement	64.39	Reinforced concrete; semi-finished, painted interior	Some partitions, heavy floor, good storage or manufacturing	Adequate lighting and plumbing, good drains	Space heaters
	Average basement	47.83	Reinforced concrete, unfinished interior	Unfinished storage areas, some partitions	Minimum lighting and plumbing, drains	None
	Finished mezzanine	44.01	In building cost	Partially open and enclosed stores and supply rooms	Average lighting, minimum plumbing	In building cost
	Good stor. mezzanine	52.12	In building cost	Metal grating on good steel structure	Minimum lighting, no plumbing	In building cost
	Avg. stor. mezzanine	25.15	In building cost	Metal deck and concrete on good steel structure, no partitions	Minimum lighting, no plumbing	In building cost
<b>C</b>	Good	156.10	Heavy steel or concrete frame, good masonry walls	Heavy floors, grating, good partitions and craneways	Good fluorescent lighting, good plumbing, some extras	Warm and cool air (zoned)
	Average	116.13	Structural frame, brick, concrete panels	Heavy slab floors, offices, stores, some heavy assembly, craneways	Good fluorescent lighting, adequate plumbing, locker rooms	Hot water
	Low cost	81.89	Steel or glulam frame, brick, block, or tilt-up, some trim	Painted walls and exposed frame, small finished offices, good slab	Exposed conduit, fluorescent lighting, adequate plumbing	Space heaters
<b>CMILL</b>	Good	98.92	Mill-type construction, brick walls, wood or steel trusses	Finished walls and ceilings, some floor finish, heavy mill-type floors	*Fluorescent lighting, modernized plumbing	Steam
	Average	76.24	Mill-type construction, brick walls, wood trusses	Painted walls, few small offices, mill-type floors	*Average lighting and plumbing	Steam
<b>D</b>	Average	100.93	Heavy wood frame, wood or stucco siding	Heavy slab or mill-type floors, finished office area, some heavy assembly	Good lighting, adequate plumbing and locker rooms	Space heaters
	Low cost	77.99	Wood frame, stucco or siding	Finished office area, good slab, some floor finish, open fabrication	Adequate lighting and plumbing	Space heaters
<b>S</b>	Good	151.67	Structural steel, heavy steel siding, transite, sandwich panels	Heavy floors, grating, good partitions and craneways	Good fluorescent lighting and plumbing, some extras	Warm and cool air (zoned)
	Average	104.41	Heavy steel frame, transite or metal siding, sandwich panels	Heavy slab floors, offices, stores, some heavy assembly, craneways	Good lighting, exposed conduit, adequate plumbing, locker rooms	Space heaters
	Low cost	80.10	Steel frame, steel or aluminum siding, some trim	Finished office area, good slab, some floor finish, open fabrication	Adequate lighting and plumbing	Space heaters
<b>CDS</b> <sup>†</sup>	Average basement	31.03	Reinforced concrete, unfinished interior	Unfinished storage area	Minimum lighting and drains	None
	Finished mezzanine	31.02	In building cost	Partially open and enclosed stores and supply rooms	Average lighting, minimum plumbing	In building cost
	Avg. stor. mezzanine	21.05	In building cost	Heavy plywood or plank on wood or light steel structure	Minimum lighting, no plumbing	In building cost
	Low stor. mezzanine	15.70	In building cost	Light storage on plywood, minimum supports, no soffit	Minimum lighting	In building cost

<sup>†</sup>For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add \$5.95 per square foot.

**MEZZANINES:** Do not use story height or area/perimeter multipliers with mezzanine costs.

# INDUSTRIAL – HEAVY MANUFACTURING

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

<b>1</b>	<p><b>ELEVATORS:</b> Buildings whose base costs include service elevators are marked with an asterisk (*). If the building under consideration has no elevators, deduct the following from the base costs so marked. For detailed costs, see Section UIP 8.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Classes A/B</th> <th style="text-align: right;">Sq. Ft. Costs</th> </tr> </thead> <tbody> <tr> <td>Excellent .....</td> <td style="text-align: right;">\$3.73</td> </tr> <tr> <td>Good .....</td> <td style="text-align: right;">2.96</td> </tr> <tr> <td>Average .....</td> <td style="text-align: right;">2.36</td> </tr> <tr> <td>Low cost .....</td> <td style="text-align: right;">1.78</td> </tr> </tbody> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p>A small passenger elevator with simple call system and pushbutton control, four passenger cab and two or three stops, costs \$56,250 to \$77,250.</p>	Classes A/B	Sq. Ft. Costs	Excellent .....	\$3.73	Good .....	2.96	Average .....	2.36	Low cost .....	1.78	<p><b>SPRINKLERS:</b> Apply to area covered by sprinklers.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Sq. Ft.</th> <th style="text-align: right;">LOW</th> <th style="text-align: right;">AVG.</th> <th style="text-align: right;">GOOD</th> <th style="text-align: right;">EXCL.</th> </tr> </thead> <tbody> <tr><td>5,000</td><td style="text-align: right;">\$2.86</td><td style="text-align: right;">\$3.79</td><td style="text-align: right;">\$5.01</td><td style="text-align: right;">\$6.63</td></tr> <tr><td>10,000</td><td style="text-align: right;">2.58</td><td style="text-align: right;">3.38</td><td style="text-align: right;">4.44</td><td style="text-align: right;">5.82</td></tr> <tr><td>20,000</td><td style="text-align: right;">2.32</td><td style="text-align: right;">3.02</td><td style="text-align: right;">3.93</td><td style="text-align: right;">5.11</td></tr> <tr><td>30,000</td><td style="text-align: right;">2.18</td><td style="text-align: right;">2.83</td><td style="text-align: right;">3.66</td><td style="text-align: right;">4.74</td></tr> <tr><td>50,000</td><td style="text-align: right;">2.02</td><td style="text-align: right;">2.60</td><td style="text-align: right;">3.35</td><td style="text-align: right;">4.31</td></tr> <tr><td>80,000</td><td style="text-align: right;">1.88</td><td style="text-align: right;">2.41</td><td style="text-align: right;">3.08</td><td style="text-align: right;">3.95</td></tr> <tr><td>100,000</td><td style="text-align: right;">1.82</td><td style="text-align: right;">2.32</td><td style="text-align: right;">2.96</td><td style="text-align: right;">3.79</td></tr> <tr><td>200,000</td><td style="text-align: right;">1.64</td><td style="text-align: right;">2.07</td><td style="text-align: right;">2.63</td><td style="text-align: right;">3.33</td></tr> <tr><td>400,000</td><td style="text-align: right;">1.47</td><td style="text-align: right;">1.85</td><td style="text-align: right;">2.33</td><td style="text-align: right;">2.92</td></tr> </tbody> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p><b>DOCK HEIGHT FLOORS:</b> Add \$1.64 to \$6.20 per square foot to base cost of first floor.</p> <p>For loading docks, see Page CAL 398.</p>	Sq. Ft.	LOW	AVG.	GOOD	EXCL.	5,000	\$2.86	\$3.79	\$5.01	\$6.63	10,000	2.58	3.38	4.44	5.82	20,000	2.32	3.02	3.93	5.11	30,000	2.18	2.83	3.66	4.74	50,000	2.02	2.60	3.35	4.31	80,000	1.88	2.41	3.08	3.95	100,000	1.82	2.32	2.96	3.79	200,000	1.64	2.07	2.63	3.33	400,000	1.47	1.85	2.33	2.92
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<b>2</b>	<b>HEATING AND COOLING</b>							
<p>These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.</p>								
		<b>Sq. Ft. Costs</b>			<b>Sq. Ft. Costs</b>			
<b>HEATING ONLY</b>			<b>HEATING &amp; COOLING</b>			<b>COOLING ONLY</b>		
Electric cable or baseboard ..	\$ 6.21		Package A.C. (short ductwork) ....	\$13.65	Central refrigeration (zoned) ....	\$11.50		
Electric wall heaters .....	2.53		Warm and cool air (zoned) .....	18.65	package (short ductwork) ....	7.63		
Forced air furnace .....	7.01		Hot/chilled water (zoned) .....	31.25	Central evaporative .....	4.77		
Hot water, baseboard/convactor	12.40		Heat pump system .....	17.10	Pkg. refrig. . \$1,660 to \$2,180 per ton capacity			
Space heaters, with fan .....	3.54				Evap. coolers . \$235 to \$385 per MCFM capacity			
radiant .....	3.96							
Steam (including boiler) .....	10.80		Small indiv. heat pumps cost \$1,600 to \$2,160		<b>VENTILATION ONLY</b>			
without boiler .....	9.42		per ton of rated capacity.		Vent. (blowers/ducts) .....	\$2.04		

<b>3</b>	<b>HEIGHT REFINEMENTS</b>					
<p><b>MULTISTORY BUILDINGS:</b> Add .5% (1/2%) for each story over three, above ground, to all base costs.</p> <p><b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.</p>						
	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>
	8	.885	20	1.133	45	1.788
	10	.921	22	1.181	50	1.930
	12	.960	24	1.231	55	2.075
	14	1.000 (base)	30	1.382	60	2.225
	16	1.041	35	1.515	70	2.530
	18	1.086	40	1.650	80	2.845

<b>4</b>	<b>Average Floor Area</b>	<b>AVERAGE PERIMETER</b>														<b>Average Floor Area</b>
	<b>Sq. Ft./Story</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>1200</b>	<b>1400</b>	<b>1600</b>	<b>1800</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>	<b>3000</b>	<b>Sq. Ft./Story</b>
	<b>5,000</b>	1.083	1.168	1.252	----	----	----	----	----	----	----	----	----	----	----	<b>5,000</b>
	<b>10,000</b>	----	.996	1.040	1.083	1.168	----	----	----	----	----	----	----	----	----	<b>10,000</b>
	<b>14,000</b>	----	.945	.977	1.008	1.071	1.132	----	----	----	----	----	----	----	----	<b>14,000</b>
	<b>20,000</b>	----	----	.926	.949	.996	1.040	1.083	----	----	----	----	----	----	----	<b>20,000</b>
	<b>25,000</b>	----	----	.907	.924	.959	.996	1.032	1.066	----	----	----	----	----	----	<b>25,000</b>
	<b>30,000</b>	----	----	----	.907	.935	.965	.995	1.025	----	----	----	----	----	----	<b>30,000</b>
	<b>40,000</b>	----	----	----	----	.907	.926	.949	.972	.995	1.019	----	----	----	----	<b>40,000</b>
	<b>50,000</b>	----	----	----	----	.891	.907	.924	.942	.959	.977	.996	1.015	----	----	<b>50,000</b>
	<b>80,000</b>	----	----	----	----	----	.875	.887	.898	.907	.916	.926	.937	.949	.984	<b>80,000</b>
	<b>100,000</b>	----	----	----	----	----	.863	.872	.882	.891	.899	.907	.916	.924	.950	<b>100,000</b>
	<b>200,000</b>	----	----	----	----	----	----	.846	.850	.855	.859	.863	.868	.873	.887	<b>200,000</b>
	<b>400,000</b>	----	----	----	----	----	----	----	.835	.838	.841	.843	.846	.853	.853	<b>400,000</b>

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**



## INDUSTRIAL – LIGHT MANUFACTURING



**GOOD CLASS C**



**GOOD CLASS S**

**OCCUPANCY DESCRIPTION:** Buildings designed to shelter manufacturing processes. An average amount of office and support space consistent with the quality is included, for light industrials typically between 4 and 25 percent. This includes suitable locker, break and lunch room facilities to accommodate personnel. Offices may be single-story or stacked. Single-story offices may have a soft-wood flooring storage mezzanine overhead as part of the office area costs.

Exterior finishes are masonry or concrete, typically tilt-up panels, or metal siding. Frames are typically light, open, metal or Glulam structures. The interiors, except for the office area, will usually have little or no interior finish. Fluorescent lighting is found throughout both the office and shop, with the office area having better quality fixtures.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit. Elevators are included in costs designated with an asterisk (\*). All the power leads to the building and industrial sewer and drainage lines.

**NOT INCLUDED IN COSTS:** Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.

### SQUARE FOOT COST TABLE

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
<b>A</b>	Average	\$85.32	Brick on block or tile, concrete or metal panels, storefront entry	Painted walls and ceilings, finished floors and ceilings in offices	*Adequate lighting and plumbing	Hot water
	Low cost	57.58	Low-cost brick or block, little fenestration, precast floors	Painted walls, few offices, very plain and open	*Minimum lighting and plumbing	Space heaters
<b>B</b>	Average	79.07	Brick, formed concrete, or precast walls, little trim, storefront entry	Painted walls and ceilings, finished floors and ceilings in offices	*Adequate lighting and plumbing	Hot water
	Low cost	52.82	Low-cost brick or block, little fenestration, precast floors	Painted walls, few offices, very plain and open	*Minimum lighting and plumbing	Space heaters
<b>C</b>	Good	70.40	Bearing walls or frame, brick, concrete panels, good glass storefront	Some finished walls, finished floors and ceilings in offices	Good fluorescent lighting, adequate plumbing	Space heaters
	Average	51.13	Light frame or bearing walls, brick, block or tilt-up, some trim	Painted walls and exposed frame, small finished offices	Exposed conduit, fluorescent lighting, adequate plumbing	Space heaters
	Low cost	37.45	Very plain, brick, block, or tilt-up, few openings	Small office area, unfinished floors and ceilings	Minimum lighting and plumbing	Space heaters
<b>D</b>	Good	65.05	Good frame with stucco or siding, some ornamentation	Some good offices and interior finish	Good lighting, exposed conduit, adequate plumbing	Space heaters
	Average	46.70	Wood studs, stucco, wood rafters and sheathing, some trim	Drywall, finished office area, exposed rafters or trusses	Adequate lighting and plumbing	Space heaters
	Low cost	33.84	Wood studs or frame, cheap stucco or siding	Unfinished, low-cost slab, small office, minimum code	Minimum lighting and plumbing	Space heaters
<b>D POLE</b>	Good	58.06	Pole frame, metal siding, lined and insulated, some trim, glass entry	Some good offices and interior finish	Good lighting, exposed conduit, adequate plumbing	Space heaters
	Average	42.01	Pole frame, metal siding, fully lined and insulated	Finished office area, slab, some floor finish	Adequate lighting and plumbing	Space heaters
	Low cost	30.71	Pole frame, metal siding, insulated, few openings	Low-cost slab, few partitions, small office	Minimum code, factory lighting	Space heaters
<b>S</b>	Good	65.99	Steel frame, sandwich panels, good glass storefront entry and trim	Some good offices and interior finish	Good lighting, exposed conduit, adequate plumbing	Space heaters
	Average	46.99	Steel frame, steel or aluminum siding, some trim	Finished office area, slab, some floor finish	Adequate lighting and plumbing	Space heaters
	Low cost	33.80	Light steel frame, steel or aluminum siding, few openings	Low-cost slab, unfinished interior, small office	Minimum code, factory lighting	Space heaters

**NOTE:** Basements and mezzanines are listed on the Heavy Manufacturing Page CAL 144.

# INDUSTRIAL – LIGHT MANUFACTURING

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

**1**

<p><b>ELEVATORS:</b> Buildings whose base costs include service elevators are marked with an asterisk (*). If the building under consideration has no elevators, deduct the following from the base costs so marked. For detailed costs, see Section UIP 8.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;"><b>Classes A/B</b></td> <td style="text-align: right;"><b>Sq. Ft.</b></td> </tr> <tr> <td></td> <td style="text-align: right;"><b>Costs</b></td> </tr> <tr> <td>Average .....</td> <td style="text-align: right;">\$2.26</td> </tr> <tr> <td>Low cost .....</td> <td style="text-align: right;">1.72</td> </tr> </table>		<b>Classes A/B</b>	<b>Sq. Ft.</b>		<b>Costs</b>	Average .....	\$2.26	Low cost .....	1.72	<p><b>SPRINKLERS:</b> Apply to area covered by sprinklers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;"><b>Sq. Ft.</b></td> <td style="text-align: right;"><b>LOW</b></td> <td style="text-align: right;"><b>AVG.</b></td> <td style="text-align: right;"><b>GOOD</b></td> <td style="text-align: right;"><b>EXCL.</b></td> </tr> <tr> <td style="text-align: right;">5,000</td> <td style="text-align: right;">\$2.86</td> <td style="text-align: right;">\$3.79</td> <td style="text-align: right;">\$5.01</td> <td style="text-align: right;">\$6.63</td> </tr> <tr> <td style="text-align: right;">10,000</td> <td style="text-align: right;">2.58</td> <td style="text-align: right;">3.38</td> <td style="text-align: right;">4.44</td> <td style="text-align: right;">5.82</td> </tr> <tr> <td style="text-align: right;">20,000</td> <td style="text-align: right;">2.32</td> <td style="text-align: right;">3.02</td> <td style="text-align: right;">3.93</td> <td style="text-align: right;">5.11</td> </tr> <tr> <td style="text-align: right;">30,000</td> <td style="text-align: right;">2.18</td> <td style="text-align: right;">2.83</td> <td style="text-align: right;">3.66</td> <td style="text-align: right;">4.74</td> </tr> <tr> <td style="text-align: right;">50,000</td> <td style="text-align: right;">2.02</td> <td style="text-align: right;">2.60</td> <td style="text-align: right;">3.35</td> <td style="text-align: right;">4.31</td> </tr> <tr> <td style="text-align: right;">80,000</td> <td style="text-align: right;">1.88</td> <td style="text-align: right;">2.41</td> <td style="text-align: right;">3.08</td> <td style="text-align: right;">3.95</td> </tr> <tr> <td style="text-align: right;">100,000</td> <td style="text-align: right;">1.82</td> <td style="text-align: right;">2.32</td> <td style="text-align: right;">2.96</td> <td style="text-align: right;">3.79</td> </tr> <tr> <td style="text-align: right;">200,000</td> <td style="text-align: right;">1.64</td> <td style="text-align: right;">2.07</td> <td style="text-align: right;">2.63</td> <td style="text-align: right;">3.33</td> </tr> <tr> <td style="text-align: right;">400,000</td> <td style="text-align: right;">1.47</td> <td style="text-align: right;">1.85</td> <td style="text-align: right;">2.33</td> <td style="text-align: right;">2.92</td> </tr> </table>					<b>Sq. Ft.</b>	<b>LOW</b>	<b>AVG.</b>	<b>GOOD</b>	<b>EXCL.</b>	5,000	\$2.86	\$3.79	\$5.01	\$6.63	10,000	2.58	3.38	4.44	5.82	20,000	2.32	3.02	3.93	5.11	30,000	2.18	2.83	3.66	4.74	50,000	2.02	2.60	3.35	4.31	80,000	1.88	2.41	3.08	3.95	100,000	1.82	2.32	2.96	3.79	200,000	1.64	2.07	2.63	3.33	400,000	1.47	1.85	2.33	2.92
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**2**

<b>HEATING AND COOLING</b>					
<p>These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.</p>					
<b>HEATING ONLY</b>	<b>Sq. Ft.</b>	<b>HEATING &amp; COOLING</b>	<b>Sq. Ft.</b>	<b>COOLING ONLY</b>	<b>Sq. Ft.</b>
	<b>Costs</b>		<b>Costs</b>		<b>Costs</b>
Electric cable or baseboard ..	\$ 6.21	Package A.C. (short ductwork) . . . .	\$13.65	Central refrigeration (zoned) . . . .	\$11.50
Electric wall heaters .....	2.53	Warm and cool air (zoned) .....	18.65	package (short ductwork) . . . .	7.63
Forced air furnace .....	7.01	Hot/chilled water (zoned) .....	31.25	Central evaporative .....	4.77
Hot water, baseboard/convector	12.40	Heat pump system .....	17.10	Pkg. refriger. . \$1,660 to \$2,180 per ton capacity	
Space heaters, with fan .....	3.54			Evap. coolers . . \$235 to \$385 per MCFM capacity	
radiant .....	3.96				
Steam (including boiler) .....	10.80	Small indiv. heat pumps cost \$1,600 to \$2,160		<b>VENTILATION ONLY</b>	
without boiler .....	9.42	per ton of rated capacity.		Vent. (blowers/ducts) .....	\$2.04

**3**

<b>HEIGHT REFINEMENTS</b>					
<p><b>MULTISTORY BUILDINGS:</b> Add .5% (1/2%) for each story over three, above ground, to all base costs.</p> <p><b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.</p>					
<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>
8	.885	20	1.133	45	1.788
10	.921	22	1.181	50	1.930
12	.960	24	1.231	55	2.075
14	1.000 (base)	30	1.382	60	2.225
16	1.041	35	1.515	70	2.530
18	1.086	40	1.650	80	2.845

**4**

<b>Average Floor Area</b>	<b>AVERAGE PERIMETER</b>														<b>Average Floor Area</b>	
	<b>Sq.Ft./Story</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>1200</b>	<b>1400</b>	<b>1600</b>	<b>1800</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>		<b>3000</b>
<b>5,000</b>	1.083	1.168	1.252	----	----	----	----	----	----	----	----	----	----	----	----	<b>5,000</b>
<b>10,000</b>	----	.996	1.040	1.083	1.168	----	----	----	----	----	----	----	----	----	----	<b>10,000</b>
<b>14,000</b>	----	.945	.977	1.008	1.071	1.132	----	----	----	----	----	----	----	----	----	<b>14,000</b>
<b>20,000</b>	----	----	.926	.949	.996	1.040	1.083	----	----	----	----	----	----	----	----	<b>20,000</b>
<b>25,000</b>	----	----	.907	.924	.959	.996	1.032	1.066	----	----	----	----	----	----	----	<b>25,000</b>
<b>30,000</b>	----	----	----	.907	.935	.965	.995	1.025	----	----	----	----	----	----	----	<b>30,000</b>
<b>40,000</b>	----	----	----	----	.907	.926	.949	.972	.995	1.019	----	----	----	----	----	<b>40,000</b>
<b>50,000</b>	----	----	----	----	.891	.907	.924	.942	.959	.977	.996	1.015	----	----	----	<b>50,000</b>
<b>80,000</b>	----	----	----	----	----	.875	.887	.898	.907	.916	.926	.937	.949	.984	----	<b>80,000</b>
<b>100,000</b>	----	----	----	----	----	.863	.872	.882	.891	.899	.907	.916	.924	.950	----	<b>100,000</b>
<b>200,000</b>	----	----	----	----	----	----	.846	.850	.855	.859	.863	.868	.873	.887	----	<b>200,000</b>
<b>400,000</b>	----	----	----	----	----	----	----	----	.835	.838	.841	.843	.846	.853	----	<b>400,000</b>

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**

## INDUSTRIAL – LIGHT MANUFACTURING/WAREHOUSE (ALTERNATE METHOD)

**OCCUPANCY DESCRIPTION Shell:** This occupancy, together with occupancy Interior Space, Industrial Building allows you to individually price the shell and the office/support space costs for an industrial building. This provides an alternative to occupancies, which include both the shell and office/support space costs: Industrial Light Manufacturing, Storage Warehouse and Distribution Warehouse.

These building shells are designed to shelter stored materials or light manufacturing processes. There is no office and support space included. To include these costs, use occupancy Interior Space, Industrial Building in a separate section of the report.

Exterior finishes are masonry or concrete, typically tilt-up panels, or metal siding. Frames are typically light open metal or glulam structures. Adequate lighting is found throughout the storage or shop area commensurate with the quality.

**Interior Build-out** This occupancy, together with occupancy Shell, Industrial Building, allows you to individually price the shell and the office/support space costs for an industrial building (in separate sections of the report). This provides an alternative to the following occupancies, which include both the shell and office/support space costs Industrial Light Manufacturing, Storage Warehouse and Distribution Warehouse.

Industrial office build-out costs include typical partition density and finish commensurate with the quality. This includes suitable locker, break and lunchroom facilities to accommodate the personnel load. Offices are single story.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit. Elevators are included in costs designated with an asterisk (\*). All the power leads to the building and industrial sewer and drainage lines.

**NOT INCLUDED IN COSTS:** Power panel, power wiring or industrial piping to the fixtures or equipment used in the manufacturing process, hoists or cranes.

## LIGHT INDUSTRIAL/WAREHOUSE SHELL BUILDINGS

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING AND PLUMBING	HEAT
<b>C</b>	Good	\$48.82	Good frame and wall panels, elastomeric roof, good fenestration	6" – 7" hardened slab, painted walls	Good fluorescent or high bay factory lighting and utilities	None
	Average	35.18	Light frame or bearing walls, block or tilt up, some trim, storefront, windows	5" – 6" slab, sealer, exposed insulation	Adequate general warehouse lighting and utilities	None
	Low cost	25.38	Light block or tilt-up, built-up cover, panelized roof, small storefront entry	Light concrete slab, no interior paint	Minimum single-tube fluorescent or high bay (18 f.c.), sewer and water service	None
<b>D</b>	Good	45.08	Good frame with stucco or siding, some ornamentation	6" – 7" hardened slab, painted walls	Good fluorescent or high bay factory lighting and utilities	None
	Average	32.23	Wood studs, stucco, wood rafters and sheathing, some trim	5" – 6" slab, sealer, exposed insulation	Adequate general warehouse lighting and utilities	None
<b>D POLE</b>	Average	25.99	Pole frame, metal siding, lined and insulated, some trim, storefront, windows	5" – 6" slab, sealer, exposed insulation	Adequate general warehouse lighting and utilities	None
	Low cost	18.65	Pole frame, metal siding, little fenestration, exposed insulation	Light concrete slab	Minimum single-tube fluorescent or high bay (18 f.c.), sewer and water service	None
	Cheap	14.50	Pole frame, light metal utility siding, minimal openings, no storefront	Unfinished, light utility slab, exposed frame	Minimum utility lighting and rough plumbing	None
<b>S</b>	Good	44.82	Good steel frame, heavy metal siding, sandwich panels, good fenestration, trim	6" – 7" hardened slab, some finished wainscot or liner	Good fluorescent or high bay factory lighting and utilities	None
	Average	31.79	Steel frame, siding or sandwich panels, some trim, storefront entry, windows	5" – 6" slab, sealer, exposed insulation	Adequate general warehouse lighting and utilities	None
	Low cost	22.57	Light steel frame, metal siding, little fenestration, exposed insulation	Light concrete slab, no interior liner	Minimum single-tube fluorescent or high bay (18 f.c.), sewer and water service	None
	Cheap	17.11	Light pre-eng. frame, light metal utility siding, minimal openings, no storefront	Unfinished, light utility slab, exposed frame	Minimum utility or high bay lighting and rough plumbing	None

## INDUSTRIAL, INTERIOR OFFICE BUILD-OUT (SQUARE FOOT OF OFFICE FINISH)

TYPE	COST/ SQ. FT.	INTERIOR FINISH	LIGHTING AND PLUMBING	HEAT
Excellent	\$139.36	Good executive suites, cafeteria, glazed finishes, hardwoods	Good fixtures, kitchen, some extras	Heat pump
Good	89.29	Good plaster, partitions, paneling, suspended acoustic, carpet, tile or vinyl, good meeting or showroom space	Good fluorescent lighting, good restrooms and fixtures, some tile	Package A.C.
Average	53.80	Average drywall or plaster, acoustic tile, vinyl composition or carpet, adequate shelving and counters	Adequate lighting and outlets, average restrooms and fixtures	Forced Air
Low cost	31.48	Low-cost partitions, paint, suspended ceiling, vinyl composition, minimal counters and shelving	Minimum lighting and plumbing, few extras, small restroom	Electric wall heaters
Good office mezzanine structure	29.15	Metal structure and concrete deck over offices, stairs and railings	Included in office cost	Included in office cost
Average office mezzanine structure	22.99	Wood structure and deck over offices, stairs and railings	Included in office cost	Included in office cost

# INDUSTRIAL – LIGHT MANUFACTURING/WAREHOUSE (ALTERNATE METHOD)

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

**1**

<p><b>ELEVATORS:</b> Buildings whose base costs include service elevators are marked with an asterisk (*). If the building under consideration has no elevators, deduct the following from the base costs so marked. For detailed costs, see Section UIP 8.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Classes A/B</b></td> <td style="width: 20%;"><b>Sq. Ft.</b></td> <td style="width: 50%;"><b>Costs</b></td> </tr> <tr> <td>Average .....</td> <td>\$2.26</td> <td></td> </tr> <tr> <td>Low cost .....</td> <td>1.72</td> <td></td> </tr> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p>A small passenger elevator with simple call system and push button control, four passenger cab and two or three stops, costs \$56,250 to \$77,250.</p>	<b>Classes A/B</b>	<b>Sq. Ft.</b>	<b>Costs</b>	Average .....	\$2.26		Low cost .....	1.72		<p><b>SPRINKLERS:</b> Apply to area covered by sprinklers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Sq. Ft.</b></td> <td style="width: 15%;"><b>LOW</b></td> <td style="width: 15%;"><b>AVG.</b></td> <td style="width: 15%;"><b>GOOD</b></td> <td style="width: 15%;"><b>EXCL.</b></td> </tr> <tr> <td>5,000</td> <td>\$2.86</td> <td>\$3.79</td> <td>\$5.01</td> <td>\$6.63</td> </tr> <tr> <td>10,000</td> <td>2.58</td> <td>3.38</td> <td>4.44</td> <td>5.82</td> </tr> <tr> <td>20,000</td> <td>2.32</td> <td>3.02</td> <td>3.93</td> <td>5.11</td> </tr> <tr> <td>30,000</td> <td>2.18</td> <td>2.83</td> <td>3.66</td> <td>4.74</td> </tr> <tr> <td>50,000</td> <td>2.02</td> <td>2.60</td> <td>3.35</td> <td>4.31</td> </tr> <tr> <td>80,000</td> <td>1.88</td> <td>2.41</td> <td>3.08</td> <td>3.95</td> </tr> <tr> <td>100,000</td> <td>1.82</td> <td>2.32</td> <td>2.96</td> <td>3.79</td> </tr> <tr> <td>200,000</td> <td>1.64</td> <td>2.07</td> <td>2.63</td> <td>3.33</td> </tr> <tr> <td>400,000</td> <td>1.47</td> <td>1.85</td> <td>2.33</td> <td>2.92</td> </tr> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p><b>DOCK HEIGHT FLOORS:</b> Add \$1.64 to \$6.20 per square foot to base cost of first floor.</p> <p><b>For loading docks, see Page CAL 398.</b></p>	<b>Sq. Ft.</b>	<b>LOW</b>	<b>AVG.</b>	<b>GOOD</b>	<b>EXCL.</b>	5,000	\$2.86	\$3.79	\$5.01	\$6.63	10,000	2.58	3.38	4.44	5.82	20,000	2.32	3.02	3.93	5.11	30,000	2.18	2.83	3.66	4.74	50,000	2.02	2.60	3.35	4.31	80,000	1.88	2.41	3.08	3.95	100,000	1.82	2.32	2.96	3.79	200,000	1.64	2.07	2.63	3.33	400,000	1.47	1.85	2.33	2.92
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<b>HEATING AND COOLING</b>					
These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.					
	<b>Sq. Ft.</b>		<b>Sq. Ft.</b>		<b>Sq. Ft.</b>
<b>HEATING ONLY</b>	<b>Costs</b>	<b>HEATING &amp; COOLING</b>	<b>Costs</b>	<b>COOLING ONLY</b>	<b>Costs</b>
Electric cable or baseboard ..	\$ 6.21	Package A.C. (short ductwork) ....	\$13.65	Central refrigeration (zoned) ....	\$11.50
Electric wall heaters .....	2.53	Warm and cool air (zoned) .....	18.65	package (short ductwork) ....	7.63
Forced air furnace .....	7.01	Hot/chilled water (zoned) .....	31.25	Central evaporative .....	4.77
Hot water, baseboard/convector	12.40	Heat pump system .....	17.10	Pkg. refriger. . \$1,660 to \$2,180 per ton capacity	
Space heaters, with fan .....	3.54			Evap. coolers . . \$235 to \$385 per MCFM capacity	
radiant .....	3.96				
Steam (including boiler) .....	10.80	Small indiv. heat pumps cost \$1,600 to \$2,160		<b>VENTILATION ONLY</b>	
without boiler .....	9.42	per ton of rated capacity.		Vent. (blowers/ducts) .....	\$2.04

**3**

<b>HEIGHT REFINEMENTS</b>					
<b>MULTISTORY BUILDINGS:</b> Add .5% (1/2%) for each story over three, above ground, to all base costs.					
<b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.					
<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>	<b>Average Wall Height</b>	<b>Square Foot Multiplier</b>
8	.885	20	1.133	45	1.788
10	.921	22	1.181	50	1.930
12	.960	24	1.231	55	2.075
14	1.000 (base)	30	1.382	60	2.225
16	1.041	35	1.515	70	2.530
18	1.086	40	1.650	80	2.845

**4**

	<b>AVERAGE PERIMETER</b>														
	<b>Average Floor Area</b>														
<b>Sq.Ft./Story</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>1200</b>	<b>1400</b>	<b>1600</b>	<b>1800</b>	<b>2000</b>	<b>2200</b>	<b>2400</b>	<b>3000</b>	<b>Sq. Ft./Story</b>
<b>5,000</b>	1.083	1.168	1.252	----	----	----	----	----	----	----	----	----	----	----	<b>5,000</b>
<b>10,000</b>	----	.996	1.040	1.083	1.168	----	----	----	----	----	----	----	----	----	<b>10,000</b>
<b>14,000</b>	----	.945	.977	1.008	1.071	1.132	----	----	----	----	----	----	----	----	<b>14,000</b>
<b>20,000</b>	----	----	.926	.949	.996	1.040	1.083	----	----	----	----	----	----	----	<b>20,000</b>
<b>25,000</b>	----	----	.907	.924	.959	.996	1.032	1.066	----	----	----	----	----	----	<b>25,000</b>
<b>30,000</b>	----	----	----	.907	.935	.965	.995	1.025	----	----	----	----	----	----	<b>30,000</b>
<b>40,000</b>	----	----	----	----	.907	.926	.949	.972	.995	1.019	----	----	----	----	<b>40,000</b>
<b>50,000</b>	----	----	----	----	.891	.907	.924	.942	.959	.977	.996	1.015	----	----	<b>50,000</b>
<b>80,000</b>	----	----	----	----	----	.875	.887	.898	.907	.916	.926	.937	.949	.984	<b>80,000</b>
<b>100,000</b>	----	----	----	----	----	.863	.872	.882	.891	.899	.907	.916	.924	.950	<b>100,000</b>
<b>200,000</b>	----	----	----	----	----	----	.846	.850	.855	.859	.863	.868	.873	.887	<b>200,000</b>
<b>400,000</b>	----	----	----	----	----	----	----	----	.835	.838	.841	.843	.846	.853	<b>400,000</b>

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**

## INDUSTRIAL – LOFTS



**AVERAGE CLASS A-B**



**AVERAGE CLASS C**

**OCCUPANCY DESCRIPTION:** These are light industrial buildings usually designed for multiple occupancy by relatively small space users. Due to display areas, extra partitioning and plumbing, they are intermediate buildings between industrial and office construction. Ceilings may be acoustical or painted drywall. The higher qualities have a large amount of office and good display areas and floor coverings. The lower qualities are more open with little detail associated with the displays or office space.

**INCLUDED IN COSTS:** Architects' fees and contractors' overhead and profit. Elevators are included where designated with an asterisk (\*).

**NOT INCLUDED IN COSTS:** Sprinklers, furnishings or special utilities for industrial equipment.

**SQUARE FOOT COST TABLE**

CLASS	TYPE	COST/ SQ. FT.	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT
<b>A-B</b>	Excellent	\$161.33	Good curtain walls, good brick and glass, with ornamentation	Plaster, acoustic ceilings, finished floor, much office space	*Fluorescent lighting, many outlets, good plumbing	Warm and cool air (zoned)
	Good	122.94	Face brick, metal panels, good glass, ornamentation	Drywall or plaster, finished floors, good display rooms and offices	*Good lighting, many outlets, adequate plumbing	Package A.C.
	Average	96.25	Brick, block, concrete panels, low-cost metal and glass	Painted walls and ceilings, few partitions, office and display rooms	*Fluorescent lighting, many outlets, adequate plumbing	Hot water
	Low cost	75.24	Low-cost brick, structural tile, block, concrete panels	Painted walls, large open areas, office and display rooms	*Incandescent or cheap fluorescent, minimum plumbing	Steam
<b>A-B</b>	Good storage bsmt.	64.39	Reinforced concrete, semifinished, painted interior	Some partitions, heavy floor, good storage or manufacturing	Adequate display lighting, minimal plumbing	Warm and cool air (zoned)
	Storage basement	47.83	Reinforced concrete, unfinished interior	Unfinished storage areas, some partitions	Minimum lighting and plumbing, good drains	Space heaters
	Display basement	90.52	Plaster interior	Display finish, acoustic tile, vinyl composition, storage, shop area	Adequate display lighting, minimal plumbing	Warm and cool air (zoned)
	Storage mezzanine	25.15	In building cost	Metal deck and concrete on good steel structure, no partitions	Minimum lighting, no plumbing	Included in building cost
	Display mezzanine	49.24	In building cost	Showroom finish, acoustic tile, vinyl composition	Average loft lighting and plumbing	Included in building cost
<b>C</b>	Good	101.81	Masonry or concrete, some ornamentation, steel frame	Plaster, finished floors, good display rooms and detail	Fluorescent lighting, adequate restrooms and plumbing	Package A.C.
	Average	75.02	Brick, block, concrete, load-bearing walls or frame	Gypsum board, finished floors, display areas	Adequate lighting and plumbing	Package A.C.
	Low cost	49.77	Low-cost brick, concrete block, tilt-up	Minimum finish and detail, small office or display areas	Minimum lighting and plumbing	Forced air
<b>CMILL</b>	Average	91.78	Mill-type frame, heavy brick walls, wood trusses	Painted walls and ceilings, few partitions, office and display areas	*Adequate lighting and plumbing	Steam
<b>D</b>	Average	70.04	Wood studs, stucco, siding, adequate windows	Drywall or plaster, finished floors, office and display areas	Incandescent or cheap fluorescent, adequate plumbing	Package A.C.
	Low cost	46.06	Wood studs and stucco or wood siding, very plain	Minimum finish and detail, small office or display areas	Minimum lighting and plumbing	Forced air
<b>S</b>	Average	71.11	Steel frame, transite or steel siding	Drywall or plaster, slab floors, office and display areas	Adequate lighting and plumbing	Package A.C.
<b>CDS</b>	Storage basement	31.03	Reinforced concrete, unfinished interior	Unfinished storage area, some partitions	Minimum lighting and drains	None
	Display basement	57.84	Plaster or drywall interior	Display finish, acoustic tile, vinyl composition, storage, shop area	Adequate display lighting, minimal plumbing	Forced air
	Storage mezzanine	21.05	In building cost	Heavy plywood or plank on wood or light steel structure, no partitions	Minimum lighting, no plumbing	Included in building cost
	Display mezzanine	34.04	In building cost	Showroom finish, plaster or drywall soffit, vinyl composition	Average loft lighting and plumbing	Included in building cost

**MEZZANINES:** Do not use story height or area/perimeter multipliers with mezzanine costs.

# INDUSTRIAL – LOFTS

**REFINEMENTS:** On this page are adjustments to the base costs from the previous page. Follow steps 1 through 5 to obtain final costs.

**1**

<p><b>ELEVATORS:</b> Buildings whose base costs include service elevators are marked with an asterisk (*). If the building under consideration has no elevators, deduct the following from the base costs so marked. For detailed costs, see Section UIP 8.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Classes A/B/C<sub>MILL</sub></th> <th style="text-align: left;">Sq. Ft. Costs</th> </tr> <tr> <td>Excellent .....</td> <td>\$4.45</td> </tr> <tr> <td>Good .....</td> <td>3.80</td> </tr> <tr> <td>Average .....</td> <td>3.21</td> </tr> <tr> <td>Low cost .....</td> <td>2.73</td> </tr> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p>	Classes A/B/C <sub>MILL</sub>	Sq. Ft. Costs	Excellent .....	\$4.45	Good .....	3.80	Average .....	3.21	Low cost .....	2.73	<p><b>SPRINKLERS:</b> Apply to area covered by sprinklers.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sq. Ft.</th> <th style="text-align: left;">LOW</th> <th style="text-align: left;">AVG.</th> <th style="text-align: left;">GOOD</th> <th style="text-align: left;">EXCL.</th> </tr> <tr> <td>5,000</td> <td>\$2.86</td> <td>\$3.79</td> <td>\$5.01</td> <td>\$6.63</td> </tr> <tr> <td>10,000</td> <td>2.58</td> <td>3.38</td> <td>4.44</td> <td>5.82</td> </tr> <tr> <td>15,000</td> <td>2.42</td> <td>3.16</td> <td>4.13</td> <td>5.40</td> </tr> <tr> <td>20,000</td> <td>2.32</td> <td>3.02</td> <td>3.93</td> <td>5.11</td> </tr> <tr> <td>30,000</td> <td>2.18</td> <td>2.83</td> <td>3.66</td> <td>4.74</td> </tr> <tr> <td>40,000</td> <td>2.09</td> <td>2.70</td> <td>3.48</td> <td>4.49</td> </tr> <tr> <td>50,000</td> <td>2.02</td> <td>2.60</td> <td>3.35</td> <td>4.31</td> </tr> <tr> <td>80,000</td> <td>1.88</td> <td>2.41</td> <td>3.08</td> <td>3.95</td> </tr> <tr> <td>100,000</td> <td>1.82</td> <td>2.32</td> <td>2.96</td> <td>3.79</td> </tr> <tr> <td>150,000</td> <td>1.71</td> <td>2.17</td> <td>2.76</td> <td>3.51</td> </tr> </table> <p><b>ELEVATOR STOPS:</b> For basement or mezzanine elevator stops, add \$6,400 to \$9,650 per stop.</p> <p><b>DOCK HEIGHT FLOORS:</b> Add \$1.64 to \$6.20 per square foot to base cost of first floor. For loading docks, see Page CAL 398.</p>	Sq. Ft.	LOW	AVG.	GOOD	EXCL.	5,000	\$2.86	\$3.79	\$5.01	\$6.63	10,000	2.58	3.38	4.44	5.82	15,000	2.42	3.16	4.13	5.40	20,000	2.32	3.02	3.93	5.11	30,000	2.18	2.83	3.66	4.74	40,000	2.09	2.70	3.48	4.49	50,000	2.02	2.60	3.35	4.31	80,000	1.88	2.41	3.08	3.95	100,000	1.82	2.32	2.96	3.79	150,000	1.71	2.17	2.76	3.51
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**2**

HEATING AND COOLING					
<p>These costs are averages of total installed cost of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being assessed is different from that indicated, take the difference between the costs of the two and add to or subtract from the base square foot cost. For other types or system adjustments, see Segregated costs.</p>					
HEATING ONLY	Sq. Ft. Costs	HEATING & COOLING	Sq. Ft. Costs	COOLING ONLY	Sq. Ft. Costs
Electric cable or baseboard ..	\$ 6.21	Package A.C. (short ductwork) ....	\$13.65	Central refrigeration (zoned) ....	\$11.50
Electric wall heaters .....	2.53	Warm and cool air (zoned) .....	18.65	package (short ductwork) ....	7.63
Forced air furnace .....	7.01	Hot/chilled water (zoned) .....	31.25	Central evaporative .....	4.77
Hot water, baseboard/convactor	12.40	Heat pump system .....	17.10	Pkg. refrig. . \$1,660 to \$2,180 per ton capacity	
Space heaters, with fan .....	3.54			Evap. coolers . . \$235 to \$385 per MCFM capacity	
radiant .....	3.96				
Steam (including boiler) .....	10.80	Small indiv. heat pumps cost \$1,600 to \$2,160		<b>VENTILATION ONLY</b>	
without boiler .....	9.42	per ton of rated capacity.		Vent. (blowers/ducts) .....	\$2.04

**3**

HEIGHT REFINEMENTS			
<p><b>MULTISTORY BUILDINGS:</b> Add .5% (1/2%) for each story over three, above ground, to all base costs.</p> <p><b>STORY HEIGHT MULTIPLIERS:</b> Multiply base cost by following multipliers for any variation in average story height.</p>			
Average Wall Height	Square Foot Multiplier	Average Wall Height	Square Foot Multiplier
8	.885	16	1.041
10	.921	18	1.086
12	.960	20	1.133
14	1.000 (base)		

**4**

Average Floor Area Sq.Ft./Story	AVERAGE PERIMETER														Average Floor Area Sq. Ft./Story	
	100	150	200	250	300	400	500	600	700	800	900	1000	1200	1500		
1,000	1.252	1.468	----	----	----	----	----	----	----	----	----	----	----	----	1,000	
2,000	----	1.147	1.252	1.360	----	----	----	----	----	----	----	----	----	----	2,000	
4,000	----	----	1.040	1.094	1.147	1.252	----	----	----	----	----	----	----	----	4,000	
5,000	----	----	.996	1.040	1.083	1.168	1.252	----	----	----	----	----	----	----	5,000	
8,000	----	----	----	----	.984	1.040	1.094	1.147	1.199	1.252	----	----	----	----	8,000	
10,000	----	----	----	----	----	.996	1.040	1.083	1.125	1.168	1.210	----	----	----	10,000	
14,000	----	----	----	----	----	.945	.977	1.008	1.040	1.071	1.102	1.132	----	----	14,000	
20,000	----	----	----	----	----	----	.926	.949	.972	.996	1.019	1.040	1.083	----	20,000	
25,000	----	----	----	----	----	----	.907	.924	.942	.959	.977	.996	1.032	----	25,000	
30,000	----	----	----	----	----	----	----	----	.907	.921	.935	.949	.965	.995	1.040	30,000
40,000	----	----	----	----	----	----	----	----	----	.899	.907	.916	.926	.949	.984	40,000
50,000	----	----	----	----	----	----	----	----	----	----	.891	.898	.907	.924	.950	50,000

**5 USE COUNTY MULTIPLIERS IN MULTIPLIER SECTION.**