

# 4. Cost Estimating



## **Cost Estimation Summary**

Conceptual cost estimations have been produced for the three different plan options and are shown in the following schedule of values. The costs vary based on the extent of each option's proposed renovations, ranging from minor plan reconfigurations to the potential construction of additional levels, with each option including necessary changes to MEP and the building enclosure.

However, these options should not be considered by their cost alone. In order to determine the true value of each scheme, all costs must be weighed against the performance of each layout in terms of its success in meeting tenant requirements and the quality of the resulting spaces. In some cases, a small increase in cost may result in a much more complete and enduring response to the problems at hand.

It should be noted that these preliminary numbers do not include various other expenses which cannot be accurately determined at this time. These include professional design fees, interior fixtures, furnishings and equipment, and costs related to acquiring or relocating to alternative locations for any displaced tenants. All estimates and ranges provided are subject to cost escalation over time.

Based on the findings in the building assessment phase of the project, particular maintenance to the existing building will need to be provided even if none of these renovation options are selected. The exterior enclosure will need to have various repairs and replacements completed to prevent any further damage to the skin along with a replacement of the roof membrane. These costs are reflected in a separate column in the cost summary and are also included in each option total.

If renovations were to move forward windows would be replaced throughout the building, including areas that are currently infilled with plywood, in order to increase the thermal performance and to maintain a uniform look on the exterior. Option 3 would require new exterior windows in addition to the replacement of the windows on the lower levels. Although the current building is not a registered historic structure, any adjustments to the exterior façade should strive to maintain the original appearance and style.

The area of the building occupied by the shelter would require a layer of spray foam insulation along the inside of exterior walls, in addition to furring walls, in order to increase the thermal value of the envelope and meet code requirements. However, cost estimates do not assume exterior wall insulation would be added to any space occupied by the existing tenants, based on the nature of their occupancy classification. The roof replacement in both options 1 & 2 would require the installation of additional insulation prior to the application of a new roof membrane on the existing structure. Option 3 will require new structure above the existing roof deck, new insulated exterior brick walls and an insulated roof constructed to meet code. The remaining costs itemized in the schedule of values include items such as improvements to the exterior grading along Fairchild and Doty Street, new access penetrations in the exterior envelope, new exit stairs and other interior elements generated for each option.

It was determined that the mechanical, electrical, and plumbing (MEP) infrastructure of the existing has exceeded its useful life and would be completely replaced for the purposes of this study. The existing building currently does not have a sprinkler system in place but all proposed options would require their installation. Individual estimates for the MEP have been included in this document to show the breakdown of the disciplines for each option and these numbers have been inserted into the overall schedule of values as part of the grand total.



# KRUPP GENERAL CONTRACTORS, LLC

749 UNIVERSITY AVENUE, SUITE 101  
MADISON, WI 53705

**120 SOUTH FAIRCHILD BUILDING**  
MADISON, WI  
ENGBERG ANDERSON ARCHITECTS

10/14/2016

## SCHEDULE OF VALUES

### PRELIMINARY CONSTRUCTION COST BUDGET

Division	Description	Enclosure Repairs REPAIRS COSTS	OPTION 1 COSTS	OPTION 2 COSTS	OPTION 3 COSTS
<b>1.000</b>	<b>GENERAL REQUIREMENTS</b>				
1.000	General Conditions	40,000	90,000	150,000	240,000
1.416	Local Building Permits	5,500	12,500	25,000	34,000
1.960	Winter/ Summer Conditions	0	10,000	30,000	50,000
<b>2.000</b>	<b>EXISTING CONDITIONS</b>				
2.400	Selective Demolition	0	44,000	90,000	80,000
2.800	Asbestos / Lead Remediation	0	20,000	30,000	20,000
<b>3.000</b>	<b>CONCRETE</b>				
3.300	Cast-in-Place Concrete	0	30,500	42,700	45,500
3.500	Concrete Toppings	0	18,500	70,470	112,000
<b>4.000</b>	<b>MASONRY</b>				
4.200	Masonry-Tuck Point & Restoration	55,000	0	0	0
4.200	Masonry: Block & Brick Ext. Wall	0	15,500	66,500	54,600
4.200	Masonry: Exterior Top Floor Veneer				295,000
<b>5.000</b>	<b>METALS</b>				
5.100	Structural Steel	0	5,000	11,500	407,000
5.700	Misc. Steel (West Stairs)	0	45,000	45,000	60,000
5.700	Misc. Steel Decorative Rails	0	7,500	10,000	15,000
5.900	Equipment	0	6,000	11,500	80,400
<b>6.000</b>	<b>WOOD, PLASTICS, &amp; COMPONENTS</b>				
6.100	Rough Carpentry Labor/Material	0	25,000	61,750	55,650
6.200	Finish Carpentry Labor/Material	0	25,200	63,000	63,000
<b>7.000</b>	<b>THERMAL &amp; MOISTURE PROTECTION</b>				
7.100	Damproofing & Waterproofing & Hot Mop	0	0	0	0
7.200	Insulation: Spray Foam Exterior Wall 2.5"	0	10,000	22,000	28,600
7.200	Insulation: Interior Sound Batt	0	7,600	12,000	10,200
7.500	Membrane Roofing: Roof	130,000	0	0	20,000
7.500	Roof Insulation R-30	52,000	0	0	10,000
7.620	Flashing & Sheetmetal	0	0	0	12,000
7.730	Roof Hatch	2,500	0	0	0
7.760	Roof Pavers	0	0	0	20,720
7.840	Firestopping	0	2,500	5,500	5,000
7.920	Caulking / Joint Sealers-Interior	0	2,000	3,000	20,000
<b>8.000</b>	<b>OPENINGS</b>				
8.110	Hollow Metal Doors & Frames & Hardware	0	32,000	56,050	48,000
8.140	Wood Doors	0	12,500	29,000	29,000
8.330	Coiling Doors	0	7,000	8,000	11,000
8.360	Overhead Doors	0	0	4,500	0
8.410	Aluminum Entrances & Storefronts	0	14,500	30,000	25,000
8.530	Windows (Aluminum Storefront Type) All (61 figured)	140,000	0	0	70,000
8.600	Skylights (5 Sun Tunnels)	0	9,000	9,000	9,000
8.800	Glass & Glazing- Mirrors	0	3,500	5,550	5,550
<b>9.000</b>	<b>FINISHES</b>				
9.216	Drywall	0	71,900	164,740	160,000
9.220	Steel Studs- Interior Walls	0	38,550	87,150	80,000
9.220	Steel Stud- Exterior Walls			0	45,000
9.500	Acoustical Ceilings (1st Floor)	0	45,000	92,100	90,000
9.600	Flooring Allowance	0	50,000	105,500	110,000
9.900	Painting	0	30,000	77,000	75,000
<b>10.000</b>	<b>SPECIALTIES</b>				
10.140	Signage (Interior)	0	4,000	7,000	7,000
10.210	Toilet Partitions	0	15,200	22,800	20,000
10.280	Bath Accessories	0	4,500	7,000	7,000
10.400	Fire Extinguishers & Cabinets	0	900	2,200	2,200
10.400	Knox Box	0	350	700	350
10.560	Storage Lockers	0	14,000	28,750	20,000
10.570	Shelving - Misc.	0	15,000	30,000	25,000
<b>11.000</b>	<b>EQUIPMENT</b>				
11.300	Kitchen Appliances- Warming Kitchen Allowance	0	50,000	52,500	50,000
11.300	Laundry Equipment	0	9,000	21,000	18,000
<b>12.000</b>	<b>FURNISHINGS</b>				
12.210	Window Treatments	0	1,800	6,200	6,000
12.300	Casework	0	40,500	57,000	60,000
12.360	Countertops (Plam.) & Window Sills (Solid Surface)	0	10,900	25,000	25,000
12.930	Bike Racks	0	4,000	4,000	4,000
<b>14.000</b>	<b>CONVEYING EQUIPMENT</b>				
14.000	Elevator	0	0	0	55,000

	Enclosure Repairs REPAIRS	OPTION 1	OPTION 2	OPTION 3
<b>21.000</b> <b>FIRE SUPPRESSION</b>				
21.000 Fire Protection-Sprinkler (Budget by MEP Eng.)	0	243,030	243,030	316,262
<b>22.000</b> <b>PLUMBING</b>				
22.000 Plumbing (Budget by MEP Eng.)	0	98,705	128,282	159,287
<b>23.000</b> <b>HVAC</b>				
23.000 HVAC (Budget by MEP Eng.)	0	799,365	945,645	1,029,250
<b>23.000</b> <b>HVAC</b>				
23.000 HVAC- Heat Recovery Option (Budget by MEP Eng.)		279,060	279,060	279,060
<b>26.000</b> <b>ELECTRICAL</b>				
26.000 Electrical:(Budget by MEP Eng.)	0	456,849	834,762	607,913
<b>27.000</b> <b>TECHNOLOGY</b>				
27.500 Data, Commun. & Monitoring (Budget by MEP Eng.)	0	31,245	45,862	57,086
<b>31.000</b> <b>EARTHWORK</b>				
31.000 Earthwork	0	20,000	26,500	30,000
32.120 Asphalt Paving-Road Patch	0	8,000	8,000	8,000
32.310 Fence & Gates (Smoking Cage)	0	0	10,000	0
32.900 Landscaping	0	7,500	7,500	7,500
33.000 Site Utilities: New Water Service for Fire Protection	0	35,000	35,000	35,000
<b>Contractor Profit &amp; Overhead 4%</b>	\$17,000	\$113,586	\$169,852	\$213,005
<b>SUBTOTAL:</b>	\$442,000	\$2,953,240	\$4,416,153	\$5,538,133
<b>DESIGN CONTINGENCY</b>		\$295,324	\$441,615	\$553,813
<b>CONSTRUCTION CONTINGENCY</b>	\$50,000	\$295,000	440,000	\$550,000
<b>TOTAL:</b>	\$492,000	\$3,543,564	\$5,297,768	\$6,641,946
	<b>ENCLOSURE REPAIRS</b>	\$492,000	\$492,000	\$492,000
	<b>GRAND TOTALS</b>	<b>\$4,035,564</b>	<b>\$5,789,768</b>	<b>\$7,133,946</b>

**EXCLUSIONS** The following are excluded from the cost of this estimate:

- 1) Professional Design Fees
- 2) Testing Fees
- 3) Contaminated Soil Removal
- 4) Fixtures, Furnishings & Equipment Costs (FF&E)
- 5) Cost Escalations
- 6) Tenant Relocation and Moving Costs
- 7) Finance and Legal Charges



## Project Budget Estimate

Project Name: Fairchild Bldg

Date: 9/22/16

Henneman Project #: 16-8118

Project Phase: Option 1 - Conceptual Budget - Renovation

Discipline: Electrical, Fire Protection, Plumbing and HVAC

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
1	<b>ELECTRICAL</b>							
2	Demolition	34240	squ. ft.	\$0.65	\$25,610.00			
3	Receptacles Wall Mounted & Floor Boxes and New Branch Circuits	34240	squ. ft.	\$1.97	\$67,590.00			
4	Branch Circuit Panel w/ Branch Circuits Reconfig	1	lot	\$75,000.00	\$90,000.00			
5	Main Panel, Distribution Panel, Feeder & S.B. Breakers	1	lot	\$45,000.00	\$45,000.00			
6	LED Lighting & Control - Basic (Reuse)	34240	squ. ft.	\$2.20	\$74,920.00			
7	Systems (telecom back boxes and fire alarm)	34240	squ. ft.	\$2.75	\$94,140.00	\$397,260.00	\$11.6	
8								
9	<b>FIRE PROTECTION</b>							
10	Demolition Work	41770	squ. ft.	\$0.10	\$4,190.00			
11	New In-Coming Water Service	1	lot	\$15,000.00	\$15,000.00			
12	Stairwell Standpipe System	1	lot	\$36,000.00	\$36,000.00			
13	New Work (Relocate Sprinkler Heads as Req'd)	41770	squ. ft.	\$3.75	\$156,140.00	\$211,330.00	\$5.1	
14								
15	<b>PLUMBING</b>							
16	Demolition Work	17665	squ. ft.	\$0.25	\$6,760.00			
17	New Work	17665	squ. ft.	\$4.25	\$79,070.00	\$85,830.00	\$4.9	
18	* No Storm Drainage - Modifications.							
19								
20	<b>HVAC</b>							
21	Demolition Work	41770	squ. ft.	\$0.75	\$31,380.00			
22	New Work	41770	squ. ft.	\$10.00	\$419,610.00			
23	Balancing only - No Commissioning	41770	squ. ft.	\$1.05	\$44,110.00			
24	HW Boilers/Pumps/HW Piping and Distribution	1	-	\$105,000.00	\$115,000.00			
25	DDC Controls and Dampers Actuation	1	-	\$75,000.00	\$85,000.00	\$695,100.00	\$16.6	
26								
27	<b>Technology</b>							
28	Demolition Work	16690	squ. ft.	\$0.06	\$940.00			
29	New Work	16690	squ. ft.	\$1.10	\$18,730.00			
30	Floor Data jacks	45	ea	\$250.00	\$7,500.00	\$27,170.00	\$1.63	
32								
33								
<b>TOTAL</b>					<b>Sum</b>	<b>\$1,416,690</b>	<b>\$1,416,690.00</b>	<b>\$39.8</b>
Overhead & Profit				15.00%		\$212,500		
					<b>Sum</b>	<b>\$1,629,190</b>		

Estimate Notes:

1. Assumes competitively bid project with a minimum of 4 bidding contractors.
2. Hazardous material abatement and soft costs are not included in this estimate.

**SUPPLEMENTAL - SUSTAINABLE FEATURE**

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
1	<b>Heat Recovery Option for Bsmt/Ground Floors</b>							
2	New Work (Basement - Add Heat Recovery Exhaust)	8300	squ. ft.	\$8.00	\$66,400.00			
3	New Work (Ground - Add Heat Recovery Exhaust)	16575	squ. ft.	\$8.00	\$132,600.00			
4	Balancing only - No Commissioning	24875	squ. ft.	\$0.75	\$18,660.00			
5	DDC Controls and Dampers Actuation (Additional Controls)	1	-	\$25,000.00	\$25,000.00	\$242,660.00	\$9.8	
6								
<b>TOTAL</b>					<b>Sum</b>	<b>\$242,660</b>	<b>\$242,660.00</b>	<b>\$9.8</b>
Overhead & Profit				15.00%		\$36,400		
					<b>Sum</b>	<b>\$279,060</b>		



## Project Budget Estimate

Project Name: Fairchild Bldg

Date: 9/22/16

Henneman Project #: 16-8118

Project Phase: Option 2 - Conceptual Budget - Renovation

Discipline: Electrical, Fire Protection, Plumbing and HVAC

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
1	<b>ELECTRICAL</b>							
2	Demolition	41770	squ. ft.	\$1.10	\$45,990.00			
3	Receptacles Wall Mounted & Floor Boxes and New Branch Circuits	41770	squ. ft.	\$4.52	\$188,920.00			
4	Branch Circuit Panel w/ Branch Circuits Reconfig	1	lot	\$75,000.00	\$75,000.00			
5	Main Panel, Distribution Panel, Feeder & S.B. Breakers	1	lot	\$45,000.00	\$45,000.00			
6	LED Lighting & Control - Basic	41770	squ. ft.	\$6.60	\$276,790.00			
7	Systems (telecom back boxes and fire alarm)	41770	squ. ft.	\$2.25	\$94,180.00	\$725,880.00	\$17.4	
8								
9	<b>FIRE PROTECTION</b>							
10	Demolition Work	41770	squ. ft.	\$0.10	\$4,190.00			
11	New In-Coming Water Service	1	lot	\$15,000.00	\$15,000.00			
12	Stairwell Standpipe System	1	lot	\$36,000.00	\$36,000.00			
13	New Work (Relocate Sprinkler Heads as Req'd)	41770	squ. ft.	\$3.75	\$156,140.00	\$211,330.00	\$5.1	
14								
15	<b>PLUMBING</b>							
16	Demolition Work	41770	squ. ft.	\$0.45	\$18,860.00			
17	New Work	41770	squ. ft.	\$2.21	\$92,690.00	\$111,550.00	\$2.7	
18	* No Storm Drainage - Modifications.							
19								
20	<b>HVAC</b>							
21	Demolition Work	41770	squ. ft.	\$0.75	\$31,400.00			
22	New Work	41770	squ. ft.	\$13.30	\$556,770.00			
23	Balancing only - No Commissioning	41770	squ. ft.	\$1.05	\$44,130.00			
24	HW Boilers/Pumps/HW Piping and Distribution	1	-	\$105,000.00	\$115,000.00			
25	DDC Controls and Dampers Actuation	1	-	\$75,000.00	\$75,000.00	\$822,300.00	\$19.7	
26								
27	<b>Technology</b>							
28	Demolition Work	16690	squ. ft.	\$0.20	\$3,360.00			
29	New Work	16690	squ. ft.	\$1.50	\$25,270.00			
30	Floor Data jacks	45	ea	\$250.00	\$11,250.00	\$39,880.00	\$2.39	
31								
32								
33								
<b>TOTAL</b>					<b>Sum</b>	<b>\$1,910,940</b>	<b>\$1,910,940.00</b>	<b>\$47.2</b>
Overhead & Profit				15.00%		\$286,640		
					<b>Sum</b>	<b>\$2,197,580</b>		

Estimate Notes:

1. Assumes competitively bid project with a minimum of 4 bidding contractors.
2. Hazardous material abatement and soft costs are not included in this estimate.

**SUPPLEMENTAL - SUSTAINABLE FEATURE**

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
1	<b>Heat Recovery Option for Bsmt/Ground Floors</b>							
2	New Work (Basement - Add Heat Recovery Exhaust)	8300	squ. ft.	\$8.00	\$66,400.00			
3	New Work (Ground - Add Heat Recovery Exhaust)	16575	squ. ft.	\$8.00	\$132,600.00			
4	Balancing only - No Commissioning	24875	squ. ft.	\$0.75	\$18,660.00			
5	DDC Controls and Dampers Actuation (Additional Controls)	1	-	\$25,000.00	\$25,000.00	\$242,660.00	\$9.8	
6								
<b>TOTAL</b>					<b>Sum</b>	<b>\$242,660</b>	<b>\$242,660.00</b>	<b>\$9.8</b>
Overhead & Profit				15.00%		\$36,400		
					<b>Sum</b>	<b>\$279,060</b>		





## Project Budget Estimate

Project Name: Fairchild Bldg

Date: 9/22/16

Henneman Project #: 16-8118

Project Phase: Option 3 - Conceptual Budget - Renovation

Discipline: Electrical, Fire Protection, Plumbing and HVAC

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
1	<b>ELECTRICAL</b>							
2	Demolition	34240	squ. ft.	\$0.65	\$33,220.00			
3	Receptacles Wall Mounted & Floor Boxes and New Branch Circuits	34240	squ. ft.	\$3.31	\$113,280.00			
4	Branch Circuit Panel w/ Branch Circuits Reconfig	1	lot	\$75,000.00	\$90,000.00			
5	Main Panel, Distribution Panel, Feeder & S.B. Breakers	1	lot	\$45,000.00	\$45,000.00			
6	LED Lighting & Control - Basic (Reuse)	34240	squ. ft.	\$2.20	\$135,840.00			
7	Systems (telecom back boxes and fire alarm)	34240	squ. ft.	\$3.25	\$111,280.00	\$528,620.00	\$15.4	
8								
9	<b>FIRE PROTECTION</b>							
10	Demolition Work	41770	squ. ft.	\$0.10	\$4,190.00			
11	New In-Coming Water Service	1	lot	\$15,000.00	\$15,000.00			
12	Stairwell Standpipe System	1	lot	\$36,000.00	\$36,000.00			
13	New Work (Relocate Sprinkler Heads as Req'd)	41770	squ. ft.	\$3.75	\$219,820.00	\$275,010.00	\$6.6	
14								
15	<b>PLUMBING</b>							
16	Demolition Work	17665	squ. ft.	\$0.25	\$13,480.00			
17	New Work	17665	squ. ft.	\$4.25	\$125,030.00	\$138,510.00	\$7.8	
18	*New Storm Drainage with Modifications.							
19								
20	<b>HVAC</b>							
21	Demolition Work	41770	squ. ft.	\$0.75	\$37,100.00			
22	New Work	41770	squ. ft.	\$10.00	\$602,370.00			
23	Balancing only - No Commissioning	41770	squ. ft.	\$1.05	\$55,530.00			
24	HW Boilers/Pumps/HW Piping and Distribution	1	-	\$105,000.00	\$115,000.00			
25	DDC Controls and Dampers Actuation	1	-	\$75,000.00	\$85,000.00	\$895,000.00	\$21.4	
26								
27	<b>Technology</b>							
28	Demolition Work	16690	squ. ft.	\$0.06	\$2,460.00			
29	New Work	16690	squ. ft.	\$1.10	\$32,180.00			
30	Floor Data jacks	45	ea	\$250.00	\$15,000.00	\$49,640.00	\$2.97	
32								
33								
<b>TOTAL</b>					<b>Sum</b>	<b>\$1,886,780</b>	<b>\$1,886,780.00</b>	<b>\$54.3</b>
Overhead & Profit				15.00%	\$283,020			
					<b>Sum</b>	<b>\$2,169,800</b>		

Estimate Notes:

1. Assumes competitively bid project with a minimum of 4 bidding contractors.
2. Hazardous material abatement and soft costs are not included in this estimate.

**SUPPLEMENTAL - SUSTAINABLE FEATURE**

Item #	Description	Quantity	Units	Unit Cost	Amount	Total	Sq.Ft.	
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3	New Work (Ground - Add Heat Recovery Exhaust)	16575	squ. ft.	\$8.00	\$132,600.00			
4	Balancing only - No Commissioning	24875	squ. ft.	\$0.75	\$18,660.00			
5	DDC Controls and Dampers Actuation (Additional Controls)	1	-	\$25,000.00	\$25,000.00	\$242,660.00	\$9.8	
6								
<b>TOTAL</b>					<b>Sum</b>	<b>\$242,660</b>	<b>\$242,660.00</b>	<b>\$9.8</b>
Overhead & Profit				15.00%	\$36,400			
					<b>Sum</b>	<b>\$279,060</b>		