

UNIT 2 APPENDICES: CONSTRUCTION MANAGEMENT



IPD/BIM TEAM #3

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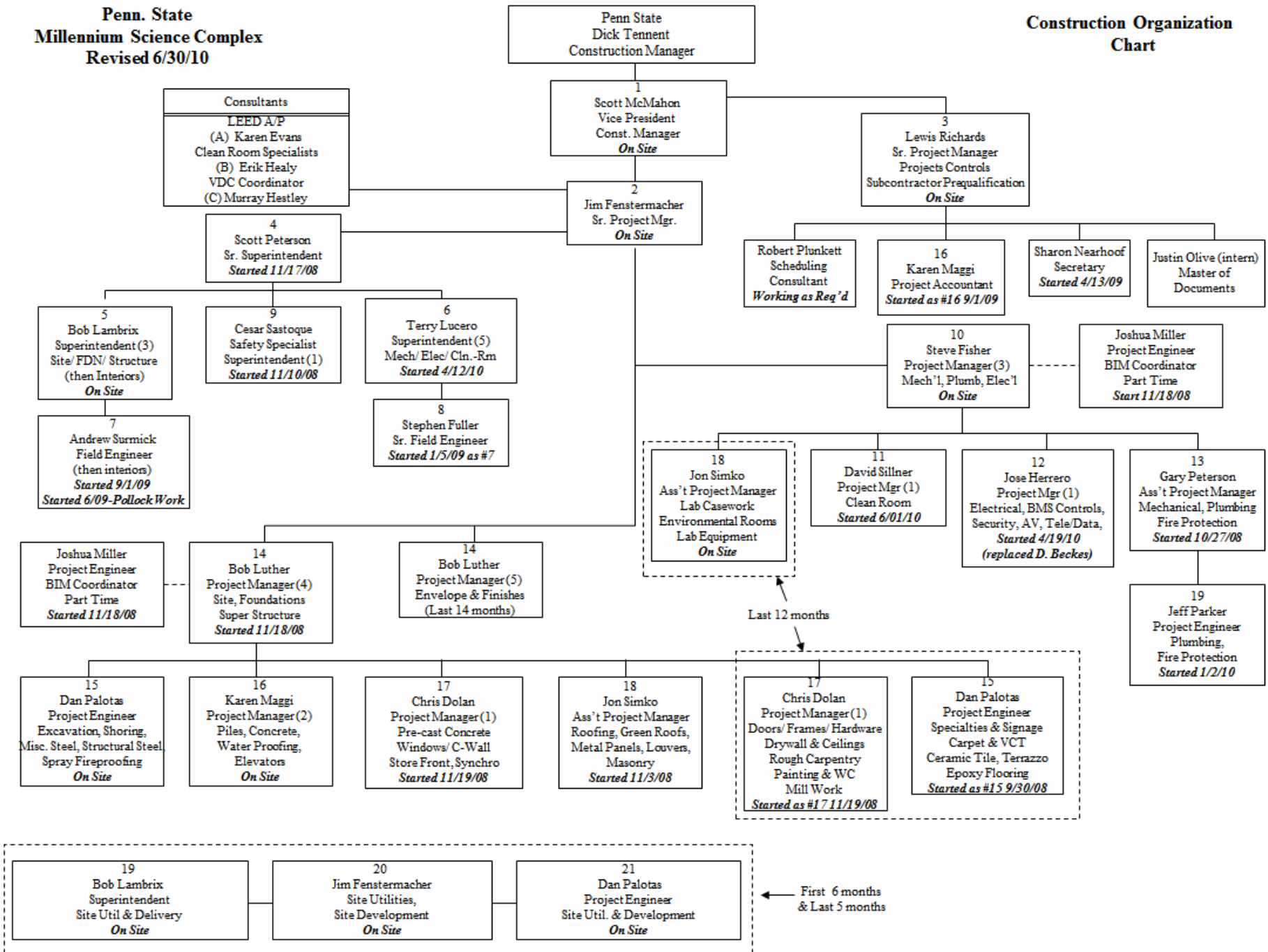
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APPENDIX 2.A: PROJECT SUMMARY SCHEDULE

APPENDIX 2.B: PROJECT STAFFING PLAN

**Penn. State
Millennium Science Complex
Revised 6/30/10**

**Construction Organization
Chart**



APPENDIX 2.D: MECHANICAL SYSTEM SCHEDULES

Duct Schedule

Size	Area	Length	Unitless Length	Cross Area	Volume Per FT	Weight
13"x13"	88 SF	20' - 4 1/4"	20.354167	0.022 SF	0.02	70.34
14"Ø	4 SF	1' - 0"	1.000001	5.445938	0.03781901	6.54
16"x16"	110 SF	20' - 6 7/8"	20.572917	0.026 SF	0.03	106.65
18"x18"	123 SF	20' - 6 7/8"	20.572917	0.035 SF	0.03	106.65
20"x20"	67 SF	10' - 1 9/32"	10.10551	0.038 SF	0.04	69.85
20"x20"	105 SF	15' - 9 7/8"	15.822917	0.038 SF	0.04	109.37
24"x12"	1 SF	0' - 2"	0.166781	0.031 SF	0.03	0.86
24"x12"	4 SF	0' - 8 7/32"	0.684538	0.031 SF	0.03	3.55
24"x12"	20 SF	3' - 3 15/16"	3.32848	0.031 SF	0.03	17.25
24"x12"	1 SF	0' - 2 1/4"	0.187613	0.031 SF	0.03	0.97
24"x12"	25 SF	4' - 1 3/4"	4.146562	0.031 SF	0.03	21.50
28"x14"	3 SF	0' - 4 21/32"	0.388672	0.038 SF	0.04	2.69
28"x14"	51 SF	7' - 3"	7.25	0.038 SF	0.04	50.11
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	1 SF	1' - 0 3/16"	1.015668	1.54547	0.010732431	1.88
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	1 SF	1' - 3 11/32"	1.278464	1.54547	0.010732431	2.37
4"Ø	2 SF	1' - 6 7/16"	1.536308	1.54547	0.010732431	2.85
4"Ø	2 SF	1' - 6 7/16"	1.536308	1.54547	0.010732431	2.85
4"Ø	0 SF	0' - 0 5/16"	0.02618	1.54547	0.010732431	0.05
4"Ø	0 SF	0' - 0 5/16"	0.02618	1.54547	0.010732431	0.05
4"Ø	0 SF	0' - 2 9/16"	0.213747	1.54547	0.010732431	0.40
4"Ø	0 SF	0' - 2 9/16"	0.213747	1.54547	0.010732431	0.40
4"Ø	0 SF	0' - 1 29/32"	0.158332	1.54547	0.010732431	0.29
4"Ø	0 SF	0' - 1 29/32"	0.158332	1.54547	0.010732431	0.29
5"Ø	0 SF	0' - 2 15/32"	0.205681	1.93797	0.013458125	0.48
5"Ø	3 SF	2' - 5 11/32"	2.445871	1.93797	0.013458125	5.69
5"Ø	3 SF	2' - 5 11/32"	2.445869	1.93797	0.013458125	5.69
6"Ø	4 SF	2' - 7 27/32"	2.654202	2.33047	0.016183819	7.42
6"Ø	4 SF	2' - 9 17/32"	2.795287	2.33047	0.016183819	7.82
6"Ø	4 SF	2' - 7 27/32"	2.654198	2.33047	0.016183819	7.42
6"Ø	5 SF	3' - 5 9/32"	3.441116	2.33047	0.016183819	9.62
6"Ø	3 SF	2' - 1 27/32"	2.154202	2.33047	0.016183819	6.02
6"Ø	4 SF	2' - 8 1/16"	2.670739	2.33047	0.016183819	7.47
6"Ø	5 SF	3' - 3 13/16"	3.316563	2.33047	0.016183819	9.27

Duct Schedule (continued)

Size	Area	Length	Unitless Length	Cross Area	Volume Per FT	Weight
6"∅	4 SF	2' - 9 17/32"	2.795287	2.33047	0.016183819	7.82
6"∅	5 SF	3' - 5 9/32"	3.441111	2.33047	0.016183819	9.62
6"∅	3 SF	1' - 7 23/32"	1.643331	2.33047	0.016183819	4.60
6"∅	4 SF	2' - 3 15/32"	2.28916	2.33047	0.016183819	6.40
6"∅	3 SF	1' - 9 7/16"	1.785586	2.33047	0.016183819	4.99
6"∅	4 SF	2' - 5 3/16"	2.43141	2.33047	0.016183819	6.80
6"∅	3 SF	1' - 9 7/16"	1.785586	2.33047	0.016183819	4.99
6"∅	4 SF	2' - 3 15/16"	2.327243	2.33047	0.016183819	6.51
6"∅	2 SF	1' - 3 7/16"	1.285586	2.33047	0.016183819	3.60
6"∅	3 SF	1' - 11 7/16"	1.952243	2.33047	0.016183819	5.46
6"∅	4 SF	2' - 7 27/32"	2.654202	2.33047	0.016183819	7.42
6"∅	4 SF	2' - 7 27/32"	2.65419	2.33047	0.016183819	7.42
6"∅	3 SF	2' - 1 27/32"	2.154202	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154198	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154197	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154202	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154189	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154202	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154188	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154202	2.33047	0.016183819	6.02
6"∅	3 SF	2' - 1 27/32"	2.154184	2.33047	0.016183819	6.02
6"∅	5 SF	3' - 5 3/4"	3.478452	2.33047	0.016183819	9.73
6"∅	6 SF	4' - 0 1/4"	4.020111	2.33047	0.016183819	11.24
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	28 SF	13' - 7 7/32"	13.600993	3.090938	0.021464844	50.45
8"∅	3 SF	1' - 5"	1.41662	3.090938	0.021464844	5.25
8"∅	3 SF	1' - 3 1/2"	1.29162	3.090938	0.021464844	4.79
8"∅	3 SF	1' - 3 1/2"	1.29162	3.090938	0.021464844	4.79
8"∅	2 SF	0' - 11 1/2"	0.958286	3.090938	0.021464844	3.55
8"∅	2 SF	0' - 11 1/2"	0.958286	3.090938	0.021464844	3.55
8"∅	2 SF	1' - 1 1/2"	1.124953	3.090938	0.021464844	4.17
8"∅	2 SF	1' - 1 1/2"	1.124953	3.090938	0.021464844	4.17
8"∅	29 SF	13' - 10 23/32"	13.892659	3.090938	0.021464844	51.53

Duct Schedule (continued)						
Size	Area	Length	Unitless Length	Cross Area	Volume Per FT	Weight
8"∅	3 SF	1' - 5"	1.416619	3.090938	0.021464844	5.25
8"x8"	33 SF	12' - 5 1/2"	12.458333	0.016 SF	0.02	43.06
8"x8"	20 SF	7' - 4 1/8"	7.34375	0.016 SF	0.02	25.38
						1315.99

Total Weight	Material	Labor	Total
1315.991601	2.98	6.75	\$ 9.73

COST	\$12,804.60
Time	\$16,261.84
Installation & Waste	\$17,888.02
Including O & P	\$20,928.99

Pipe Schedule

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"∅	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"∅	0' - 7 31/32"	0.662917	5.25	5.6	1.25	12.1	\$8.02
Pipe Types: Standard	1/2"∅	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"∅	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"∅	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"∅	0' - 7 31/32"	0.662917	5.25	5.6	1.25	12.1	\$8.02
Pipe Types: Standard	1/2"∅	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"∅	0' - 7 31/32"	0.662917	5.25	5.6	1.25	12.1	\$8.02
Pipe Types: Standard	1/2"∅	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"∅	0' - 7 31/32"	0.662917	5.25	5.6	1.25	12.1	\$8.02
Pipe Types: Standard	1/2"∅	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"∅	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"∅	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"∅	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"∅	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"∅	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"∅	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"∅	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"Ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"Ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"Ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"Ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"Ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"Ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"Ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"Ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"Ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"Ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"Ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"Ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"Ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"Ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"Ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"Ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"Ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"Ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"Ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"Ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"Ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"Ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"Ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"Ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"Ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"Ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"Ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"Ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"Ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"Ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"Ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"Ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"Ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"Ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"Ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"Ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"Ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"Ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"Ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"Ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"Ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"Ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"Ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"Ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"Ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"Ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"Ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"Ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"Ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"Ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"Ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"Ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"Ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"Ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"Ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"Ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"Ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"Ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 0 29/32"	1.075833	5.25	5.6	1.25	12.1	\$13.02
Pipe Types: Standard	1/2"ø	7' - 7 5/32"	7.596567	5.25	5.6	1.25	12.1	\$91.92
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 6 13/32"	1.534167	5.25	5.6	1.25	12.1	\$18.56
Pipe Types: Standard	1/2"ø	2' - 1 5/32"	2.096667	5.25	5.6	1.25	12.1	\$25.37
Pipe Types: Standard	1/2"ø	2' - 6 21/32"	2.555	5.25	5.6	1.25	12.1	\$30.92
Pipe Types: Standard	1/2"ø	4' - 9 23/32"	4.810597	5.25	5.6	1.25	12.1	\$58.21

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"ø	0' - 10 29/32"	0.909167	5.25	5.6	1.25	12.1	\$11.00
Pipe Types: Standard	1/2"ø	1' - 9 29/32"	1.825833	5.25	5.6	1.25	12.1	\$22.09
Pipe Types: Standard	1/2"ø	1' - 1 29/32"	1.159167	5.25	5.6	1.25	12.1	\$14.03
Pipe Types: Standard	1/2"ø	1' - 4 29/32"	1.409167	5.25	5.6	1.25	12.1	\$17.05
Pipe Types: Standard	1/2"ø	1' - 7 29/32"	1.659167	5.25	5.6	1.25	12.1	\$20.08
Pipe Types: Standard	1/2"ø	1' - 9 13/32"	1.784167	5.25	5.6	1.25	12.1	\$21.59
Pipe Types: Standard	1/2"ø	1' - 10 5/32"	1.846667	5.25	5.6	1.25	12.1	\$22.34
Pipe Types: Standard	1/2"ø	1' - 9 21/32"	1.805	5.25	5.6	1.25	12.1	\$21.84
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	7' - 10 5/32"	7.846567	5.25	5.6	1.25	12.1	\$94.94
Pipe Types: Standard	1/2"ø	8' - 1 5/32"	8.096567	5.25	5.6	1.25	12.1	\$97.97
Pipe Types: Standard	1/2"ø	8' - 4 5/32"	8.346567	5.25	5.6	1.25	12.1	\$100.99
Pipe Types: Standard	1/2"ø	1' - 9 15/32"	1.787917	5.25	5.6	1.25	12.1	\$21.63
Pipe Types: Standard	1/2"ø	2' - 0 15/32"	2.037917	5.25	5.6	1.25	12.1	\$24.66
Pipe Types: Standard	1/2"ø	2' - 3 15/32"	2.287917	5.25	5.6	1.25	12.1	\$27.68
Pipe Types: Standard	1/2"ø	2' - 6 15/32"	2.537917	5.25	5.6	1.25	12.1	\$30.71
Pipe Types: Standard	1/2"ø	9' - 3 27/32"	9.319868	5.25	5.6	1.25	12.1	\$112.77
Pipe Types: Standard	1/2"ø	10' - 3 27/32"	10.319868	5.25	5.6	1.25	12.1	\$124.87
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	6' - 3 23/32"	6.310597	5.25	5.6	1.25	12.1	\$76.36
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 0 23/32"	4.060597	5.25	5.6	1.25	12.1	\$49.13
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	5' - 6 23/32"	5.560597	5.25	5.6	1.25	12.1	\$67.28
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	10' - 9 27/32"	10.819868	5.25	5.6	1.25	12.1	\$130.92
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41
Pipe Types: Standard	1/2"ø	9' - 9 27/32"	9.819868	5.25	5.6	1.25	12.1	\$118.82
Pipe Types: Standard	1/2"ø	0' - 0 13/32"	0.034167	5.25	5.6	1.25	12.1	\$0.41

Pipe Schedule (continued)

Family and Type	Size	Length	Unitless Length	Material	Labor	Equipmet	Total	COST
Pipe Types: Standard	1/2"∅	4' - 9 19/32"	4.799403	5.25	5.6	1.25	12.1	\$58.07
1169.27098							\$14,148.18	

Time	\$17,968.19
Installation & Waste	\$19,765.01
Including O & P	\$23,125.06

APPENDIX 2.E: STRUCTURAL SYSTEM SCHEDULES

Structural Framing - Entire Existing

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
16K2	1296.34	LF	3.9	1.5	0.89	6.29	LF	\$8,153.98
2L6X6X3/4	13.09	TONS	1.36	1.9	0.2	3.46	LB	\$90,582.80
2L6X6X3/8	1.26	TONS	1.36	1.9	0.2	3.46	LB	\$8,719.20
C15X40	6.09	TONS	1.37	1.68	0.18	3.23	LB	\$39,341.40
C6	214.35	LF	3.91	15.25	1.61	20.77	LF	\$4,452.05
GB1	1088.14	CF	210	325	38.5	573.5	CY	\$23,112.90
GB2	359.44	CF	210	325	38.5	573.5	CY	\$7,634.77
HSS10X8X.500	55.04	TONS	1.61	0.12	0.09	1.82	LB	\$200,345.60
HSS12X6X.375	37.35	TONS	1.65	0.15	0.1	1.9	LB	\$141,930.00
HSS12X6X.500	3.04	TONS	1.65	0.15	0.1	1.9	LB	\$11,552.00
HSS12X8X5/8	6.27	TONS	1.65	0.15	0.1	1.9	LB	\$23,826.00
HSS6X6X.125	5.25	TONS	1.61	0.23	0.18	2.02	LB	\$21,210.00
HSS6X6X.1875	14.68	TONS	1.61	0.23	0.18	2.02	LB	\$59,307.20
HSS6X6X.250	14.36	TONS	1.61	0.23	0.18	2.02	LB	\$58,014.40
HSS6X6X3/8	3.35	TONS	1.61	0.23	0.18	2.02	LB	\$13,534.00
HSS7X7X5/16	0.91	TONS	1.61	0.23	0.18	2.02	LB	\$3,676.40
HSS8X6X.625	1.67	TONS	1.61	0.23	0.18	2.02	LB	\$6,746.80
L3	513	LF	3.65	4.7	1.55	9.9	LF	\$5,078.70
W10X33	681.32	LF	23	3.38	2.58	28.96	LF	\$19,731.03
W10X49	1406.63	LF	34	3.38	2.58	39.96	LF	\$56,208.93
W10X60	131.43	LF	42	3.65	2.65	48.3	LF	\$6,348.07
W10X68	72.39	LF	48	3.75	2.95	54.7	LF	\$3,959.73
W10X88	47.96	LF	58	4.2	3.1	65.3	LF	\$3,131.79
W12X120	117.48	LF	82	2.58	1.97	86.55	LF	\$10,167.89
W12X19	3295.07	LF	12.5	2.11	1.62	16.23	LF	\$53,478.99
W12X26	214.58	LF	18.5	2.11	1.62	22.23	LF	\$4,770.11
W12X65	111.54	LF	45	2.74	2.05	49.79	LF	\$5,553.58
W14X109	176.18	LF	71.5	2.55	1.95	76	LF	\$13,389.68
W14X132	50	LF	86	3.2	2.2	91.4	LF	\$4,570.00
W14X145	1019.52	LF	98.94	2.72	2.07	103.73	LF	\$105,754.81
W14X159	359.19	LF	108.43	2.8	2.14	113.37	LF	\$40,721.37
W14X176	172.52	LF	119.95	2.9	2.21	125.06	LF	\$21,575.35
W14X193	1424.59	LF	131.47	3	2.28	136.75	LF	\$194,812.68
W14X211	2449.67	LF	143.68	3.1	2.36	149.14	LF	\$365,343.78
W14X22	3403.37	LF	18.5	1.88	1.42	21.8	LF	\$74,193.47
W14X233	56.49	LF	158.58	3.23	2.45	164.26	LF	\$9,279.05
W14X257	308	LF	174.85	3.37	2.56	180.78	LF	\$55,680.24
W14X283	557.93	LF	192.47	3.52	2.67	198.66	LF	\$110,838.37

Structural Framing - Entire Existing (cont.)

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
W14X30	132	LF	21	2.06	1.58	24.64	LF	\$3,252.48
W14X311	102.67	LF	211.45	3.68	2.79	217.92	LF	\$22,373.85
W14x34	150.16	LF	24	2.29	1.75	28.04	LF	\$4,210.49
W14X370	136.92	LF	251.44	4.02	3.05	258.51	LF	\$35,395.19
W14X398	320.96	LF	270.42	4.18	3.17	277.77	LF	\$89,153.06
W14X426	88	LF	289.4	4.34	3.29	297.03	LF	\$26,138.64
W14X43	770	LF	30	2.29	1.75	34.04	LF	\$26,210.80
W14X455	118.06	LF	309.05	4.51	3.42	316.98	LF	\$37,422.66
W14X48	273.68	LF	33	2.3	1.76	37.06	LF	\$10,142.58
W14X61	49.94	LF	43.5	2.38	1.82	47.7	LF	\$2,382.14
W14X90	1140.75	LF	61.5	2.51	1.92	65.93	LF	\$75,209.65
W14X99	57.38	LF	68.5	2.53	1.94	72.97	LF	\$4,187.02
W16X26	1194.16	LF	18.5	1.86	1.42	21.78	LF	\$26,008.80
W16X31	2163.22	LF	22	2.06	1.58	25.64	LF	\$55,464.96
W16X36	550.99	LF	25	2.19	1.68	28.87	LF	\$15,907.08
W18X35	385.33	LF	24.5	2.81	1.57	28.88	LF	\$11,128.33
W18X40	2266.14	LF	28	2.81	1.57	32.38	LF	\$73,377.61
W18X71	374	LF	48	3	1.68	52.68	LF	\$19,702.32
W18X76	858	LF	52	3	1.68	56.68	LF	\$48,631.44
W21X44	11599.03	LF	30.5	2.53	1.42	34.45	LF	\$399,586.58
W21X50	880	LF	34.5	2.53	1.42	38.45	LF	\$33,836.00
W21X68	2052	LF	83	2.7	1.51	87.21	LF	\$178,954.92
W24X162	1100	LF	99.5	2.57	1.44	103.51	LF	\$113,861.00
W24X176	264	LF	99.5	2.57	1.44	103.51	LF	\$27,326.64
W24X55	6444	LF	38	2.43	1.36	41.79	LF	\$269,294.76
W24X68	305.24	LF	47	2.43	1.36	50.79	LF	\$15,503.14
W24X76	1441.68	LF	52	2.43	1.36	55.79	LF	\$80,431.33
W24X84	2772	LF	57.5	2.5	1.4	61.4	LF	\$170,200.80
W27X84	1183.84	LF	57.5	2.27	1.27	61.04	LF	\$72,261.59
W27X94	93.33	LF	64.5	2.27	1.27	68.04	LF	\$6,350.17
W30X90	743.16	LF	67.5	2.25	1.26	71.01	LF	\$52,771.79
W30X99	350.8	LF	67.5	2.25	1.26	71.01	LF	\$24,910.31
W33X118	132.33	LF	80.5	2.29	1.28	84.07	LF	\$11,124.98
W33X152	617.33	LF	115	2.45	1.37	118.82	LF	\$73,351.15
W36X135	62.22	LF	92	2.3	1.29	95.59	LF	\$5,947.61
W36X150	93.33	LF	102	2.3	1.29	105.59	LF	\$9,854.71
W40X149	264	LF	102	2.4	1.29	105.69	LF	\$27,902.16
W40X167	150.22	LF	116	2.34	1.31	119.65	LF	\$17,973.82

Structural Framing - Entire Existing (cont.)

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
W40X183	177.63	LF	123	2.36	1.32	126.68	LF	\$22,502.17
W40X593	408.33	LF	400	3.18	1.79	404.97	LF	\$165,361.40
W44X230	176	LF	156	2.4	1.34	159.74	LF	\$28,114.24
W44X262	264	LF	176	2.6	1.46	180.06	LF	\$47,535.84
W8X10	44.54	LF	7.75	3.1	2.37	13.22	LF	\$588.82
W8X24	263.08	LF	17.15	3.38	2.58	23.11	LF	\$6,079.78
								\$4,334,651.95

TIME	\$5,505,007.97
CONNECTIONS	\$6,991,360.12
Total Including O & P	\$8,179,891.34

Structural Columns - Entire Existing

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
2-L3x3x1/4	173.97	LF	3.65	14.7	1.55	19.9	LF	\$3,462.00
HSS12-3/4X0.250	0.2299	TONS	1.65	0.15	0.1	1.9	LB	\$873.62
HSS12X8X.500	2.8771	TONS	1.65	0.15	0.1	1.9	LB	\$10,932.98
HSS4X4X.25	0.1663	TONS	1.65	0.15	0.1	1.9	LB	\$631.94
HSS4X4X0.5	0.442	TONS	1.65	0.15	0.1	1.9	LB	\$1,679.60
HSS6X6X0.5	1.3648	TONS	1.65	0.15	0.1	1.9	LB	\$5,186.24
W10X68	51.53	LF	47	3.8	2.75	53.55	LF	\$2,759.43
W14X109	84.95	LF	71.5	2.55	1.95	76	LF	\$6,456.20
W14X120	294.75	LF	82	2.58	1.97	86.55	LF	\$25,510.61
W14X132	889	LF	86	3.2	2.2	91.4	LF	\$81,254.60
W14X145	99.25	LF	98.94	2.72	2.07	103.73	LF	\$10,295.20
W14X176	1189.79	LF	119.95	2.9	2.21	125.06	LF	\$148,795.14
W14X193	174.25	LF	131.47	3	2.28	136.75	LF	\$23,828.69
W14X211	410.45	LF	143.68	3.1	2.36	149.14	LF	\$61,214.51
W14X233	362.83	LF	158.58	3.23	2.45	164.26	LF	\$59,598.46
W14X257	193.91	LF	174.85	3.37	2.56	180.78	LF	\$35,055.05
W14X283	1376.08	LF	192.47	3.52	2.67	198.66	LF	\$273,372.05
W14X311	59.95	LF	223.45	3.68	2.79	229.92	LF	\$13,783.70

Structural Columns - Entire Existing (cont.)

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
W14X370	150	LF	253.44	4.02	3.05	260.51	LF	\$39,076.50
W14X43	348.36	LF	30	2.29	1.75	34.04	LF	\$11,858.17
W14X48	100.84	LF	33	2.3	1.76	37.06	LF	\$3,737.13
W14X53	18	LF	36.5	2.32	1.78	40.6	LF	\$730.80
W14X550	316.58	LF	359.05	4.75	3.5	367.3	LF	\$116,279.83
W14X61	1627.49	LF	43.5	2.38	1.82	47.7	LF	\$77,631.27
W14X68	510.56	LF	44.5	2.4	1.82	48.72	LF	\$24,874.48
W14X74	406.16	LF	51	2.44	1.87	55.31	LF	\$22,464.71
W14X82	341.6	LF	56	2.48	1.89	60.37	LF	\$20,622.39
W14X90	4032.34	LF	61.5	2.51	1.92	65.93	LF	\$265,852.18
W14X99	342.7	LF	68.5	2.53	1.94	72.97	LF	\$25,006.82
								\$1,372,824.32

TIME	\$1,743,486.89
CONNECTIONS	\$2,039,879.66
Total Including O & P	\$2,386,659.20

Structural Framing - 3RD Floor Existing

Type	Total	Unit	Material	Labor	Equipment	Cost Total	Cost Unit	COST
2L6X6X3/4	3.522	Tons	1.36	1.9	0.2	3.46	LB	\$24,372.24
2L6X6X3/8	1.26	Tons	1.36	1.9	0.2	3.46	LB	\$8,719.20
HSS10X8X.500	12.158	Tons	1.61	0.12	0.09	1.82	LB	\$44,255.12
HSS12X6X.375	10.671	Tons	1.65	0.15	0.1	1.9	LB	\$40,549.80
HSS6X6X.125	1.508	Tons	1.61	0.23	0.18	2.02	LB	\$6,092.32
HSS6X6X.1875	4.24	Tons	1.61	0.23	0.18	2.02	LB	\$17,129.60
HSS6X6X.250	4.08	Tons	1.61	0.23	0.18	2.02	LB	\$16,483.20
HSS6X6X3/8	0.9727	Tons	1.61	0.23	0.18	2.02	LB	\$3,929.71
W10X33	284.07	LF	23	3.38	2.58	28.96	LF	\$8,226.67
W10X49	397.67	LF	34	3.38	2.58	39.96	LF	\$15,890.89
W10X60	131.43	LF	42	3.65	2.65	48.3	LF	\$6,348.07
W12X19	746.914	LF	12.5	2.11	1.62	16.23	LF	\$12,122.41
W12X26	214.58	LF	18.5	2.11	1.62	22.23	LF	\$4,770.11
W12X65	82.9632	LF	45	2.74	2.05	49.79	LF	\$4,130.74

Structural Framing - 3RD Floor Existing (cont.)								
Type	Total	Unit	Material	Labor	Equipment	Cost Total	Cost Unit	COST
W14X145	335.157	LF	98.94	2.72	2.07	103.73	LF	\$34,765.84
W14X159	243.54	LF	108.43	2.8	2.14	113.37	LF	\$27,610.13
W14X176	56.87	LF	119.95	2.9	2.21	125.06	LF	\$7,112.16
W14X193	794.64	LF	131.47	3	2.28	136.75	LF	\$108,667.02
W14X211	1149.7	LF	143.68	3.1	2.36	149.14	LF	\$171,466.26
W14X22	392.89	LF	18.5	1.88	1.42	21.8	LF	\$8,565.00
W14X233	56.87	LF	158.58	3.23	2.45	164.26	LF	\$9,341.47
W14X311	57.05	LF	211.45	3.68	2.79	217.92	LF	\$12,432.34
W14X370	22.522	LF	251.44	4.02	3.05	258.51	LF	\$5,822.16
W14X43	220	LF	30	2.29	1.75	34.04	LF	\$7,488.80
W14X48	181.7	LF	33	2.3	1.76	37.06	LF	\$6,733.80
W14X61	49.94	LF	43.5	2.38	1.82	47.7	LF	\$2,382.14
W14X90	501.39	LF	61.5	2.51	1.92	65.93	LF	\$33,056.64
W16X26	176	LF	18.5	1.86	1.42	21.78	LF	\$3,833.28
W16X31	154	LF	22	2.06	1.58	25.64	LF	\$3,948.56
W18X40	726	LF	28	2.81	1.57	32.38	LF	\$23,507.88
W21X44	2662	LF	30.5	2.53	1.42	34.45	LF	\$91,705.90
W21X50	374	LF	34.5	2.53	1.42	38.45	LF	\$14,380.30
W24X162	242	LF	99.5	2.57	1.44	103.51	LF	\$25,049.42
W24X176	88	LF	99.5	2.57	1.44	103.51	LF	\$9,108.88
W24X55	1430	LF	38	2.43	1.36	41.79	LF	\$59,759.70
W24X68	18.58	LF	47	2.43	1.36	50.79	LF	\$943.68
W24X76	88	LF	52	2.43	1.36	55.79	LF	\$4,909.52
W24X84	704	LF	57.5	2.5	1.4	61.4	LF	\$43,225.60
W27X84	264	LF	57.5	2.27	1.27	61.04	LF	\$16,114.56
W30X99	198.33	LF	67.5	2.25	1.26	71.01	LF	\$14,083.41
W33X118	132.33	LF	80.5	2.29	1.28	84.07	LF	\$11,124.98
W36X135	62.22	LF	92	2.3	1.29	95.59	LF	\$5,947.61
W8X24	153.08	LF	17.15	3.38	2.58	23.11	LF	\$3,537.68
								\$979,644.80

TIME	\$1,244,148.90
CONNECTIONS	\$1,580,069.10
Total Including O & P	\$1,848,680.85

Structural Columns - 3RD Floor - Existing

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	Cost
W14X132	144	LF	86	3.2	2.2	91.4	LF	\$13,161.60
W14X145	36	LF	98.94	2.72	2.07	103.73	LF	\$3,734.28
W14X176	163.16	LF	119.95	2.9	2.21	125.06	LF	\$20,404.79
W14X193	36	LF	131.47	3	2.28	136.75	LF	\$4,923.00
W14X211	36	LF	143.68	3.1	2.36	149.14	LF	\$5,369.04
W14X233	81.58	LF	158.58	3.23	2.45	164.26	LF	\$13,400.33
W14X283	284.08	LF	192.47	3.52	2.67	198.66	LF	\$56,435.33
W14X370	72	LF	253.44	4.02	3.05	260.51	LF	\$18,756.72
W14X43	109.05	LF	30	2.29	1.75	34.04	LF	\$3,712.06
W14X48	36	LF	33	2.3	1.76	37.06	LF	\$1,334.16
W14X61	450.37	LF	43.5	2.38	1.82	47.7	LF	\$21,482.65
W14X68	174.12	LF	44.5	2.4	1.82	48.72	LF	\$8,483.13
W14X74	136.16	LF	51	2.44	1.87	55.31	LF	\$7,531.01
W14X82	156.12	LF	56	2.48	1.89	60.37	LF	\$9,424.96
W14X90	638.55	LF	61.5	2.51	1.92	65.93	LF	\$42,099.60
								\$230,252.67

TIME	\$292,420.89
CONNECTIONS	\$371,374.53
Total Including O & P	\$434,508.19

Structural Framing - 3RD Floor Redesign

Type	Total	Unit	Material	Labor	Equipment	Cost Total	Unit3	Cost
2L6X6X3/4	3.522	Tons	1.36	1.9	0.2	3.46	LB	\$12.19
2L6X6X3/8	1.261	Tons	1.36	1.9	0.2	3.46	LB	\$4.36
HSS10X8X.500	1.551	Tons	1.61	0.12	0.09	1.82	LB	\$2.82
HSS12X6X.375	10.671024	Tons	1.65	0.15	0.1	1.9	LB	\$20.27
HSS6X6X.125	1.508518	Tons	1.61	0.23	0.18	2.02	LB	\$3.05
HSS6X6X.1875	4.241	Tons	1.61	0.23	0.18	2.02	LB	\$8.57
HSS6X6X.250	4.0877	Tons	1.61	0.23	0.18	2.02	LB	\$8.26
HSS6X6X3/8	0.9727	Tons	1.61	0.23	0.18	2.02	LB	\$1.96
HSS8X6X.625	0.2782	Tons	1.61	0.23	0.18	2.02	LB	\$0.56
LB30x44	1958	LF	36.55	9.84	3.52	49.91	LF	\$97,723.78

Structural Framing - 3RD Floor Redesign (cont.)

Type	Total	Unit	Material	Labor	Equipment	Cost Total	Unit3	Cost
LB30x44 Short	242	LF	36.55	9.84	3.52	49.91	LF	\$12,078.22
LB30x57	968	LF	46.43	9.84	3.52	59.79	LF	\$57,876.72
W10X33	240.07	LF	23	3.38	2.58	28.96	LF	\$6,952.43
W10X49	397.91	LF	34	3.38	2.58	39.96	LF	\$15,900.48
W10X60	131.43	LF	42	3.65	2.65	48.3	LF	\$6,348.07
W12X19	504.79	LF	12.5	2.11	1.62	16.23	LF	\$8,192.74
W12X26	214.58	LF	18.5	2.11	1.62	22.23	LF	\$4,770.11
W12X65	83.17	LF	45	2.74	2.05	49.79	LF	\$4,141.03
W14X132	968	LF	86	3.2	2.2	91.4	LF	\$88,475.20
W14X145	343.56	LF	98.94	2.72	2.07	103.73	LF	\$35,637.48
W14X159	243.13	LF	108.43	2.8	2.14	113.37	LF	\$27,563.65
W14X193	264	LF	131.47	3	2.28	136.75	LF	\$36,102.00
W14X211	88	LF	143.68	3.1	2.36	149.14	LF	\$13,124.32
W14X22	392.81	LF	18.5	1.88	1.42	21.8	LF	\$8,563.26
W14X43	220	LF	30	2.29	1.75	34.04	LF	\$7,488.80
W14X48	555.79	LF	33	2.3	1.76	37.06	LF	\$20,597.58
W14X61	56.62	LF	43.5	2.38	1.82	47.7	LF	\$2,700.77
W14X90	389.86	LF	61.5	2.51	1.92	65.93	LF	\$25,703.47
W16X26	176	LF	18.5	1.86	1.42	21.78	LF	\$3,833.28
W16X31	154	LF	22	2.06	1.58	25.64	LF	\$3,948.56
W18X40	352	LF	28	2.81	1.57	32.38	LF	\$11,397.76
W21X44	1540	LF	30.5	2.53	1.42	34.45	LF	\$53,053.00
W24X162	220	LF	99.5	2.57	1.44	103.51	LF	\$22,772.20
W24X176	88	LF	99.5	2.57	1.44	103.51	LF	\$9,108.88
W24X55	902	LF	38	2.43	1.36	41.79	LF	\$37,694.58
W24X68	18.58	LF	47	2.43	1.36	50.79	LF	\$943.68
W24X84	352	LF	57.5	2.5	1.4	61.4	LF	\$21,612.80
W27X84	264	LF	57.5	2.27	1.27	61.04	LF	\$16,114.56
W30X99	198	LF	67.5	2.25	1.26	71.01	LF	\$14,059.98
W33X118	132.33	LF	80.5	2.29	1.28	84.07	LF	\$11,124.98
W36X135	62.22	LF	92	2.3	1.29	95.59	LF	\$5,947.61
W8X24	132	LF	17.15	3.38	2.58	23.11	LF	\$3,050.52
								\$694,664.55

TIME	\$882,223.98
CONNECTIONS	\$1,120,424.45
Total Including O & P	\$1,310,896.61

Structural Columns - 3RD Floor Redesign

Type	Total	Unit	Material	Labor	Equipment	Total	Unit	COST
W14X109	36	LF	71.5	2.55	1.95	76	LF	\$2,736.00
W14X132	198	LF	86	3.2	2.2	91.4	LF	\$18,097.20
W14X145	36	LF	98.94	2.72	2.07	103.73	LF	\$3,734.28
W14X176	163.16	LF	119.95	2.9	2.21	125.06	LF	\$20,404.79
W14X193	54	LF	131.47	3	2.28	136.75	LF	\$7,384.50
W14X211	36	LF	143.68	3.1	2.36	149.14	LF	\$5,369.04
W14X233	81.58	LF	158.58	3.23	2.45	164.26	LF	\$13,400.33
W14X283	266.08	LF	192.47	3.52	2.67	198.66	LF	\$52,859.45
W14X370	18	LF	253.44	4.02	3.05	260.51	LF	\$4,689.18
W14X43	77.97	LF	30	2.29	1.75	34.04	LF	\$2,654.10
W14X48	36	LF	33	2.3	1.76	37.06	LF	\$1,334.16
W14X550	188.45	LF	359.05	4.75	3.5	367.3	LF	\$69,217.69
W14X61	450.37	LF	43.5	2.38	1.82	47.7	LF	\$21,482.65
W14X68	174.12	LF	44.5	2.4	1.82	48.72	LF	\$8,483.13
W14X74	136.16	LF	51	2.44	1.87	55.31	LF	\$7,531.01
W14X82	156.12	LF	56	2.48	1.89	60.37	LF	\$9,424.96
W14X90	560.26	LF	61.5	2.51	1.92	65.93	LF	\$36,937.94
								\$285,740.41

TIME	\$362,890.32
CONNECTIONS	\$460,870.70
Total Including O & P	\$539,218.72