

EST NUMBER: WEB15500
RUN DATE.: 08/05/09 08:47am
DATA DATE.: SEPT 2009

MECHANICAL PIPING & EQUIPMENT ESTIMATE
ANYTOWN, ANYWHERE
ESTIMATE SUMMARY

PREPARED FOR: ALL OF OUR CLIENTS
PREPARED BY.: TEMPEST COMPANY
PAGE: 1

DESCRIPTION	LABOR MANHOURS	LABOR DOLLARS	MATERIAL DOLLARS	EQUIPMENT DOLLARS	SUBCONTRACT DOLLARS	TOTAL DOLLARS
INTEGRATION FACILITY	4,796.5	259,396	184,356	0	0	443,752
*** TOTAL ESTIMATED COST ***	4,796.5	259,396	184,356	0	0	443,752

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INTEGRATION FACILITY SUMMARY - INTEGRATION FACILITY

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DESCRIPTION	LABOR MANHOURS	LABOR DOLLARS	MATERIAL DOLLARS	EQUIPMENT DOLLARS	SUBCONTRACT DOLLARS	TOTAL DOLLARS
MECHANICAL	4,796.5	259,396	184,356	0	0	443,752
*** INTEGRATION FACILITY ESTIMATED COST ***	4,796.5	259,396	184,356	0	0	443,752

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MECHANICAL SUMMARY - INTEGRATION FACILITY

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DESCRIPTION	LABOR MANHOURS	LABOR DOLLARS	MATERIAL DOLLARS	EQUIPMENT DOLLARS	SUBCONTRACT DOLLARS	TOTAL DOLLARS
MECHANICAL SYSTEMS	4,796.5	259,396	184,356	0	0	443,752
*** MECHANICAL ESTIMATED COST ***	4,796.5	259,396	184,356	0	0	443,752

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MECHANICAL SYSTEMS SUMMARY - INTEGRATION FACILITY

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DESCRIPTION	LABOR MANHOURS	LABOR DOLLARS	MATERIAL DOLLARS	EQUIPMENT DOLLARS	SUBCONTRACT DOLLARS	TOTAL DOLLARS
MECHANICAL EQUIPMENT	240.0	12,979	64,030	0	0	77,009
COMPRESSED AIR SYSTEM	260.6	14,094	4,644	0	0	18,738
VACUUM SYSTEM	369.1	19,931	8,600	0	0	28,531
NATURAL GAS SYSTEM	720.8	38,983	12,369	0	0	51,352
HOT WATER SYSTEM	3,021.6	163,435	84,025	0	0	247,460
REFRIGERANT SYSTEM	184.4	9,974	10,688	0	0	20,662
*** MECHANICAL SYSTEMS ESTIMATED COST ***	4,796.5	259,396	184,356	0	0	443,752

MECHANICAL PIPING & EQUIPMENT ESTIMATE
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 ESTIMATE DETAIL - INTEGRATION FACILITY

DESCRIPTION	QUANTITY	UNIT MEAS	LABOR MAN UNIT	HOURS TOTAL	LABOR DOLLARS UNIT	TOTAL	MATERIAL DOLLARS UNIT	TOTAL	EQUIPMENT DOLLARS UNIT	TOTAL	SUBCONTRACT DOLLARS UNIT	TOTAL	TOTAL DOLLARS
MECHANICAL EQUIPMENT													
B-1 Boiler	1	Each	32	32.0	54.09	1,731	15,000	15,000	0	0	0	0	16,731
B-2 Boiler	1	Each	32	32.0	54.09	1,731	15,000	15,000	0	0	0	0	16,731
B-3 Boiler	1	Each	32	32.0	54.09	1,731	9,500	9,500	0	0	0	0	11,231
B-4 Boiler	1	Each	32	32.0	54.09	1,731	9,500	9,500	0	0	0	0	11,231
P-1 End Suction Pumps 4"	1	Each	12	12.0	54.09	649	2,500	2,500	0	0	0	0	3,149
P-2 End Suction Pumps 4"	1	Each	12	12.0	54.09	649	2,500	2,500	0	0	0	0	3,149
P-5 End Suction Pumps 2"	1	Each	8	8.0	54.09	433	1,750	1,750	0	0	0	0	2,183
P-6 End Suction Pumps 2"	1	Each	8	8.0	54.09	433	1,750	1,750	0	0	0	0	2,183
P-34 Boiler Circulating Pumps 2 1/2" (Come w/Boilers)	1	Each	2.5	2.5	54.09	135	w/Boiler	0	0	0	0	0	135
P-4 Boiler Circulating Pumps 2 1/2" (Come w/Boilers)	1	Each	2.5	2.5	54.09	135	w/Boiler	0	0	0	0	0	135
P-7 Boiler Circulating Pumps 1 1/2" (Come w/Boilers)	1	Each	2.5	2.5	54.09	135	w/Boiler	0	0	0	0	0	135
P-8 Boiler Circulating Pumps 1 1/2" (Come w/Boilers)	1	Each	2.5	2.5	54.09	135	w/Boiler	0	0	0	0	0	135
AS-1 Air Seperator 4"	1	Each	4	4.0	54.09	216	450	450	0	0	0	0	666
AS-2 Air Seperator 2"	1	Each	2	2.0	54.09	108	250	250	0	0	0	0	358
ET-1 Expansion Tank 200 Gallon	1	Each	4	4.0	54.09	216	750	750	0	0	0	0	966
ET-2 Expansion Tank 60 Gallon	1	Each	2	2.0	54.09	108	250	250	0	0	0	0	358
Auto Air Vent @ AS 3/4"	2	Each	0.5	1.0	54.09	54	45	90	0	0	0	0	144
Auto Air Vent @ ET 3/8"	2	Each	0.5	1.0	54.09	54	15	30	0	0	0	0	84
Chemical Pot Feeder 5 Gallon	2	Each	1.5	3.0	54.09	162	250	500	0	0	0	0	662
PRV Makeup Valve 3/4"	2	Each	1	2.0	54.09	108	85	170	0	0	0	0	278
Backflow Preventer 3/4"	2	Each	1.5	3.0	54.09	162	150	300	0	0	0	0	462
Suction Diffusers 4"	2	Each	4	8.0	54.09	433	450	900	0	0	0	0	1,333
Suction Diffusers 2"	2	Each	2	4.0	54.09	216	250	500	0	0	0	0	716
Triple Duty Valve 4"	2	Each	4	8.0	54.09	433	375	750	0	0	0	0	1,183
Triple Duty Valve 2"	2	Each	2	4.0	54.09	216	225	450	0	0	0	0	666
Flex Connectors 4"	4	Each	2	8.0	54.09	433	125	500	0	0	0	0	933
Flex Connectors 2"	4	Each	1	4.0	54.09	216	85	340	0	0	0	0	556

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UH-1 Unit Heater @ Mech Room	1	Each	4	4.0	54.09	216	300	300	0	0	0	0	516
*** MECHANICAL EQUIPMENT ESTIMATED COST ***				240.0		12,979		64,030		0		0	77,009
COMPRESSED AIR SYSTEM													
1/2" Pipe Copper B-88 Type L Hard	390	Lin Ft	0.06	23.4	54.09	1,266	1.155	450	0	0	0	0	1,716
1" Pipe Copper B-88 Type L Hard	765	Lin Ft	0.08	61.2	54.09	3,310	2.87	2,196	0	0	0	0	5,506
1/2" 90 Degree Ell Copper B-88	51	Each	0.41	20.9	54.09	1,130	0.8568	44	0	0	0	0	1,174
1" 90 Degree Ell Copper B-88	28	Each	0.58	16.2	54.09	876	4.7292	132	0	0	0	0	1,008
1/2" 45 Degree Ell Copper B-88	12	Each	0.41	4.9	54.09	265	1.575	19	0	0	0	0	284
1" 45 Degree Ell Copper B-88	12	Each	0.58	7.0	54.09	379	6.93	83	0	0	0	0	462
1" Tee Copper B-88	7	Each	0.84	5.9	54.09	319	10.9326	77	0	0	0	0	396
1" x 1/2" Reducing Tee Copper B-88	19	Each	0.86	16.3	54.09	882	10.9704	208	0	0	0	0	1,090
1" Coupling Copper B-88	30	Each	0.63	18.9	54.09	1,022	2.604	78	0	0	0	0	1,100
1" x 1/2" Concentric Reducer Copper B-88	7	Each	0.33	2.3	54.09	124	1.81	13	0	0	0	0	137
1/2" Adapter Copper x Female FIP	26	Each	0.22	5.7	54.09	308	2.8518	74	0	0	0	0	382
1/2" Ball Valve Bronze 150# Solder	26	Each	0.19	4.9	54.09	265	4.34	113	0	0	0	0	378
1" Ball Valve Bronze 150# Solder	3	Each	0.65	2.0	54.09	108	5.99	18	0	0	0	0	126
1/2" Clevis Hanger Copper Plated	39	Each	0.5	19.5	54.09	1,055	1.98	77	0	0	0	0	1,132
1" Clevis Hanger Copper Plated	77	Each	0.5	38.5	54.09	2,082	1.98	152	0	0	0	0	2,234
1/2" Air Quick Connection	26	Each	0.5	13.0	54.09	703	35	910	0	0	0	0	1,613
*** COMPRESSED AIR SYSTEM ESTIMATED COST ***				260.6		14,094		4,644		0		0	18,738
VACUUM SYSTEM													
1 1/4" Pipe Copper B-88 Type L Hard	1,320	Lin Ft	0.08	105.6	54.09	5,712	4.03	5,320	0	0	0	0	11,032
1 1/4" 90 Degree Ell Copper B-88	97	Each	0.67	65.0	54.09	3,516	7.1442	693	0	0	0	0	4,209
1 1/4" 45 Degree Ell Copper B-88	22	Each	0.67	14.7	54.09	795	9.3744	206	0	0	0	0	1,001
1 1/4" Tee Copper B-88	41	Each	0.97	39.8	54.09	2,153	14.9436	613	0	0	0	0	2,766
1 1/4" Coupling Copper B-88	28	Each	0.71	19.9	54.09	1,076	4.6242	129	0	0	0	0	1,205
1 1/4" Adapter Copper x Female FIP	16	Each	0.86	13.8	54.09	746	13.251	212	0	0	0	0	958
1 1/4" Adapter Copper x Male MIP	26	Each	0.35	9.1	54.09	492	11.5374	300	0	0	0	0	792

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1 1/4" Ball Valve Bronze 125# Solder	18	Each	0.93	16.7	54.09	903	24.5	441	0	0	0	0	1,344
1 1/2" Ball Valve Bronze 125# Solder	10	Each	1.15	11.5	54.09	622	32.5	325	0	0	0	0	947
1 1/4" Clevis Hanger Copper Plated	130	Each	0.5	65.0	54.09	3,516	2.22	289	0	0	0	0	3,805
1 1/2" Brass Plug	16	Each	0.5	8.0	50.04	400	4.5	72	0	0	0	0	472
*** VACUUM SYSTEM ESTIMATED COST ***				369.1		19,931		8,600		0		0	28,531
NATURAL GAS SYSTEM													
3/4" Pipe A-53 Carbon Steel Schedule 40 Welded Threaded & Coupled	135	Lin Ft	0.08	10.8	54.09	584	1.35	182	0	0	0	0	766
1" Pipe A-53 Carbon Steel Schedule 40 Welded Threaded & Coupled	370	Lin Ft	0.07	25.9	54.09	1,401	1.959	725	0	0	0	0	2,126
1 1/4" Pipe A-53 Carbon Steel Schedule 40 Welded Threaded & Coupled	472	Lin Ft	0.1	47.2	54.09	2,553	2.538	1,198	0	0	0	0	3,751
1 1/2" Pipe A-53 Carbon Steel Schedule 40 Welded Threaded & Coupled	70	Lin Ft	0.11	7.7	54.09	416	3.039	213	0	0	0	0	629
2" Pipe A-53 Carbon Steel Schedule 40 Welded 40 Threaded & Coupled	135	Lin Ft	0.11	14.9	54.09	806	4.188	565	0	0	0	0	1,371
2 1/2" Pipe A-106 Carbon Steel Schedule 40/SW Plain End	275	Lin Ft	0.15	41.3	54.09	2,234	3.672	1,010	0	0	0	0	3,244
3" Pipe A-106 Carbon Steel Schedule 40 Standard Weight Plain End	62	Lin Ft	0.17	10.5	54.09	568	4.587	284	0	0	0	0	852
4" Pipe A-106 Carbon Steel Schedule 40 Standard Weight Plain End	240	Lin Ft	0.21	50.4	54.09	2,726	6.237	1,497	0	0	0	0	4,223
3/4" 3000# Thread-O-Let A-181 Forged Steel	1	Each	0.85	0.9	54.09	49	4.572	5	0	0	0	0	54
1" 3000# Thread-O-Let A-181 Forged Steel	2	Each	2	4.0	54.09	216	5.328	11	0	0	0	0	227
1 1/4" 3000# Thread-O-Let A-181 Forged Steel	3	Each	2.43	7.3	54.09	395	3.47	10	0	0	0	0	405
1 1/2" 3000# Thread-O-Let A-181 Forged Steel	1	Each	2.87	2.9	54.09	157	8.448	8	0	0	0	0	165
2" 3000# Thread-O-Let A-181 Forged Steel	1	Each	3.75	3.8	54.09	206	9.62	10	0	0	0	0	216
4" Weld Neck Flange A-181 Forged Steel 150# Raised Face	2	Each	3.59	7.2	54.09	389	48.8	98	0	0	0	0	487
2 1/2" 90 Degree Ell A-234 Carbon Steel Schedule 40/SW Butt Weld	4	Each	2.21	8.8	54.09	476	14.025	56	0	0	0	0	532
3" 90 Degree Ell A-234 Carbon Steel Schedule 40/SW Butt Weld	2	Each	3.89	7.8	54.09	422	17.12	34	0	0	0	0	456
4" 90 Degree Ell A-234 Carbon Steel Schedule 40/SW Butt Weld	8	Each	4.83	38.6	54.09	2,088	28.21	226	0	0	0	0	2,314
2 1/2" x 1 1/2" Reducing Tee A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	5.18	5.2	54.09	281	51.2	51	0	0	0	0	332
3" x 2" Reducing Tee A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	5.51	5.5	54.09	297	49.895	50	0	0	0	0	347
4" x 2" Reducing Tee A-234 Carbon Steel Schedule 40 Butt Weld	1	Each	6.95	7.0	54.09	379	63.265	63	0	0	0	0	442
2 1/2" x 2" Concentric Reducer A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	1.98	2.0	54.09	108	22.01	22	0	0	0	0	130
3" x 2 1/2" Concentric Reducer A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	3.53	3.5	54.09	189	18.19	18	0	0	0	0	207

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4" x 3" Concentric Reducer A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	4.47	4.5	54.09	243	23.355	23	0	0	0	0	266
4" x 2" Concentric Reducer A-234 Carbon Steel Schedule 40/SW Butt Weld	1	Each	4.47	4.5	54.09	243	28.52	29	0	0	0	0	272
3/4" 90 Degree Ell A-197 Malleable Iron 150# Screwed	24	Each	0.69	16.6	54.09	898	1.0075	24	0	0	0	0	922
1" 90 Degree Ell A-197 Malleable Iron 150# Screwed	48	Each	0.86	41.3	54.09	2,234	1.7475	84	0	0	0	0	2,318
1 1/4" 90 Degree Ell A-197 Malleable Iron 150# Screwed	26	Each	0.98	25.5	54.09	1,379	2.88	75	0	0	0	0	1,454
1 1/2" 90 Degree Ell A-197 Malleable Iron 150# Screwed	8	Each	1.07	8.6	54.09	465	3.7875	30	0	0	0	0	495
2" 90 Degree Ell A-197 Malleable Iron 150# Screwed	4	Each	1.31	5.2	54.09	281	6.53	26	0	0	0	0	307
3/4" Tee A-197 Malleable Iron 150# Screwed	6	Each	1.02	6.1	54.09	330	1.5975	10	0	0	0	0	340
1" Tee A-197 Malleable Iron 150# Screwed	12	Each	1.26	15.1	54.09	817	2.735	33	0	0	0	0	850
1 1/4" Tee A-197 Malleable Iron 150# Screwed	5	Each	1.44	7.2	54.09	389	4.435	22	0	0	0	0	411
1 1/2" Tee A-197 Malleable Iron 150# Screwed	4	Each	1.59	6.4	54.09	346	5.5125	22	0	0	0	0	368
1" x 3/4" Reducing Tee A-197 Malleable Iron 150# Screwed	1	Each	1.16	1.2	54.09	65	3.12	3	0	0	0	0	68
1 1/4" x 1" Reducing Tee A-197 Malleable Iron 150# Screwed	5	Each	1.26	6.3	54.09	341	5.405	27	0	0	0	0	368
1 1/2" x 1" Reducing Tee A-197 Malleable Iron 150# Screwed	1	Each	1.43	1.4	54.09	76	6.295	6	0	0	0	0	82
2" x 1 1/4" Reducing Tee A-197 Malleable Iron 150# Screwed	4	Each	1.76	7.0	54.09	379	10.62	42	0	0	0	0	421
2" x 3/4" Reducing Tee A-197 Malleable Iron 150# Screwed	1	Each	1.76	1.8	54.09	97	9.8625	10	0	0	0	0	107
1" x 3/4" Concentric Reducer A-197 Malleable Iron 150# Screwed	1	Each	0.75	0.8	54.09	43	2.355	2	0	0	0	0	45
1 1/4" x 1" Concentric Reducer A-197 Malleable Iron 150# Screwed	4	Each	0.89	3.6	54.09	195	3.03	12	0	0	0	0	207
1 1/2" x 1 1/4" Concentric Reducer A-197 Malleable Iron 150# Screwed	1	Each	0.98	1.0	54.09	54	3.83	4	0	0	0	0	58
2" x 1 1/2" Concentric Reducer A-197 Malleable Iron 150# Screwed	1	Each	1.13	1.1	54.09	59	5.5525	6	0	0	0	0	65
2" x 1 1/4" Concentric Reducer A-197 Malleable Iron 150# Screwed	2	Each	1.13	2.3	54.09	124	6.3575	13	0	0	0	0	137
3/4" Cap A-197 Malleable Iron 150# Screwed	6	Each	0.36	2.2	54.09	119	1.1425	7	0	0	0	0	126
1" Cap A-197 Malleable Iron 150# Screwed	12	Each	0.1	1.2	54.09	65	1.38	17	0	0	0	0	82
1 1/4" Cap A-197 Malleable Iron 150# Screwed	5	Each	0.53	2.7	54.09	146	1.8175	9	0	0	0	0	155
1 1/2" Cap A-197 Malleable Iron 150# Screwed	2	Each	0.57	1.1	54.09	59	2.5	5	0	0	0	0	64
3/4" Union A-197 Malleable Iron 150# Screwed Bronze x Iron Seat	6	Each	0.71	4.3	54.09	233	4.23	25	0	0	0	0	258
1" Union A-197 Malleable Iron 150# Screwed Bronze x Iron Seat	12	Each	0.52	6.2	54.09	335	5.5175	66	0	0	0	0	401
1 1/4" Union A-197 Malleable Iron 150# Screwed Bronze x Iron Seat	5	Each	0.9	4.5	54.09	243	7.9125	40	0	0	0	0	283

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1 1/2" Union A-197 Malleable Iron 150# Screwed Bronze x Iron Seat	2	Each	0.99	2.0	54.09	108	9.8675	20	0	0	0	0	128
3/4" Plug Valve Bronze 150# Screwed	6	Each	0.5	3.0	54.09	162	25.33	152	0	0	0	0	314
1" Plug Valve Bronze 150# Screwed	12	Each	0.53	6.4	54.09	346	31.25	375	0	0	0	0	721
1 1/4" Plug Valve Bronze 150# Screwed	5	Each	1.05	5.3	54.09	287	38.28	191	0	0	0	0	478
1 1/2" Plug Valve Bronze 150# Screwed	2	Each	0.38	0.8	54.09	43	42.22	84	0	0	0	0	127
4" Plug Valve Cast Iron 150# Flanged	1	Each	2.04	2.0	54.09	108	339.5	340	0	0	0	0	448
4" 150# BN&G Set A-193-B7 Studs A-194-2H Nuts & 1/16" Composition Gasket	2	Each	1.25	2.5	54.09	135	12.5	25	0	0	0	0	160
4" Pipe Sleeve Steel	2	Each	1	2.0	54.09	108	28	56	0	0	0	0	164
2 1/2" Clevis Hanger Steel	27	Each	0.65	17.6	54.09	952	3.33	90	0	0	0	0	1,042
3" Clevis Hanger Steel	6	Each	0.65	3.9	54.09	211	4.17	25	0	0	0	0	236
4" Clevis Hanger Steel	24	Each	0.7	16.8	54.09	909	5.04	121	0	0	0	0	1,030
3/4" Clevis Hanger Steel	12	Each	1.05	12.6	54.09	682	1.29	15	0	0	0	0	697
1" Clevis Hanger Steel	28	Each	1.05	29.4	54.09	1,590	1.35	38	0	0	0	0	1,628
1 1/4" Clevis Hanger Steel	42	Each	1.37	57.5	54.09	3,110	1.53	64	0	0	0	0	3,174
1 1/2" Clevis Hanger Steel	7	Each	1.05	7.4	54.09	400	1.71	12	0	0	0	0	412
2" Clevis Hanger Steel	13	Each	1.05	13.7	54.09	741	2.04	27	0	0	0	0	768
4" Riser Clamp Steel	3	Each	0.23	0.7	54.09	38	9.48	28	0	0	0	0	66
3/4" Riser Clamp Steel	4	Each	0.19	0.8	54.09	43	4.38	18	0	0	0	0	61
1" Riser Clamp Steel	10	Each	0.19	1.9	54.09	103	4.44	44	0	0	0	0	147
1 1/4" Riser Clamp Steel	4	Each	0.19	0.8	54.09	43	5.37	21	0	0	0	0	64
3/4" Gas Pressure Regulator 2'-6"	6	Each	1	6.0	54.09	325	105	630	0	0	0	0	955
1" Gas Pressure Regulator 2'-6"	12	Each	1.25	15.0	54.09	811	150	1,800	0	0	0	0	2,611
1 1/4" Gas Pressure Regulator 2'-6"	5	Each	1.35	6.8	54.09	368	165	825	0	0	0	0	1,193
1 1/2" Gas Pressure Regulator 2'-6"	2	Each	1.5	3.0	54.09	162	180	360	0	0	0	0	522
*** NATURAL GAS SYSTEM ESTIMATED COST ***				720.8		38,983		12,369		0		0	51,352

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PREPARED FOR: ALL OF OUR CLIENTS
 PREPARED BY.: TEMPEST COMPANY
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DESCRIPTION	QUANTITY	UNIT MEAS	LABOR MAN UNIT	HOURS TOTAL	LABOR DOLLARS UNIT	TOTAL	MATERIAL DOLLARS UNIT	TOTAL	EQUIPMENT DOLLARS UNIT	TOTAL	SUBCONTRACT DOLLARS UNIT	TOTAL	TOTAL DOLLARS
HOT WATER SYSTEM													
2 1/2" Pipe A-53 Carbon Steel Schedule 40/SW Welded Grooved End	212	Lin Ft	0.09	19.1	54.09	1,033	6.68	1,416	0	0	0	0	2,449
3" Pipe A-53 Carbon Steel Schedule 40/SW Welded Grooved End	570	Lin Ft	0.11	62.7	54.09	3,391	8.56	4,879	0	0	0	0	8,270
4" Pipe A-53 Carbon Steel Schedule 40/SW Welded Grooved End	96	Lin Ft	0.12	11.5	54.09	622	12.29	1,180	0	0	0	0	1,802
1/2" Pipe Copper B-88 Type L Hard	31	Lin Ft	0.06	1.9	54.09	103	1.155	36	0	0	0	0	139
3/4" Pipe Copper B-88 Type L Hard	2,505	Lin Ft	0.06	150.3	54.09	8,130	1.825	4,572	0	0	0	0	12,702
1" Pipe Copper B-88 Type L Hard	994	Lin Ft	0.08	79.5	54.09	4,300	2.87	2,853	0	0	0	0	7,153
1 1/4" Pipe Copper B-88 Type L Hard	494	Lin Ft	0.08	39.5	54.09	2,137	4.03	1,991	0	0	0	0	4,128
1 1/2" Pipe Copper B-88 Type L Hard	833	Lin Ft	0.08	66.6	54.09	3,602	5.2	4,332	0	0	0	0	7,934
2" Pipe Copper B-88 Type L Hard	1,411	Lin Ft	0.09	127.0	54.09	6,869	8.115	11,450	0	0	0	0	18,319
3/4" 3000# Thread-O-Let A-181 Forged Steel	34	Each	0.85	28.9	54.09	1,563	4.572	155	0	0	0	0	1,718
1" 3000# Thread-O-Let A-181 Forged Steel	2	Each	2	4.0	54.09	216	5.328	11	0	0	0	0	227
1 1/4" 3000# Thread-O-Let A-181 Forged Steel	1	Each	2.43	2.4	54.09	130	3.47	3	0	0	0	0	133
1 1/2" 3000# Thread-O-Let A-181 Forged Steel	1	Each	2.87	2.9	54.09	157	8.448	8	0	0	0	0	165
2 1/2" 150# Victaulic Flange	16	Each	0.12	1.9	54.09	103	32.56	521	0	0	0	0	624
3" 150# Victaulic Flange	6	Each	0.13	0.8	54.09	43	102.28	614	0	0	0	0	657
4" 150# Victaulic Flange	12	Each	0.16	1.9	54.09	103	136.46	1,638	0	0	0	0	1,741
1/2" 90 Degree Ell Copper B-88	13	Each	0.41	5.3	54.09	287	0.8568	11	0	0	0	0	298
3/4" 90 Degree Ell Copper B-88	821	Each	0.47	385.9	54.09	20,873	1.9278	1,583	0	0	0	0	22,456
1" 90 Degree Ell Copper B-88	17	Each	0.58	9.9	54.09	535	4.7292	80	0	0	0	0	615
1 1/4" 90 Degree Ell Copper B-88	6	Each	0.67	4.0	54.09	216	7.1442	43	0	0	0	0	259
1 1/2" 90 Degree Ell Copper B-88	38	Each	0.72	27.4	54.09	1,482	11.1426	423	0	0	0	0	1,905
2" 90 Degree Ell Copper B-88	22	Each	0.8	17.6	54.09	952	20.3154	447	0	0	0	0	1,399
1/2" Tee Copper B-88	4	Each	0.59	2.4	54.09	130	1.47	6	0	0	0	0	136
3/4" Tee Copper B-88	12	Each	0.68	8.2	54.09	444	3.5364	42	0	0	0	0	486
2" Tee Copper B-88	2	Each	1.15	2.3	54.09	124	35.91	72	0	0	0	0	196
3/4" x 1/2" Reducing Tee Copper B-88	256	Each	0.69	176.6	54.09	9,552	3.402	871	0	0	0	0	10,423
1" x 3/4" Reducing Tee Copper B-88	72	Each	0.86	61.9	54.09	3,348	10.9704	790	0	0	0	0	4,138

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PREPARED FOR: ALL OF OUR CLIENTS
 PREPARED BY.: TEMPEST COMPANY
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DESCRIPTION	QUANTITY	UNIT MEAS	LABOR MAN HOURS UNIT	LABOR DOLLARS TOTAL	LABOR DOLLARS UNIT	MATERIAL DOLLARS TOTAL	MATERIAL DOLLARS UNIT	EQUIPMENT DOLLARS TOTAL	EQUIPMENT DOLLARS UNIT	SUBCONTRACT DOLLARS TOTAL	SUBCONTRACT DOLLARS UNIT	TOTAL DOLLARS
1 1/4" x 3/4" Reducing Tee Copper B-88	29	Each	0.96	27.8	54.09	1,504	16.1406	468	0	0	0	1,972
1 1/2" x 1" Reducing Tee Copper B-88	8	Each	1.02	8.2	54.09	444	17.136	137	0	0	0	581
1 1/2" x 3/4" Reducing Tee Copper B-88	40	Each	1.02	40.8	54.09	2,207	17.136	685	0	0	0	2,892
2" x 1 1/2" Reducing Tee Copper B-88	5	Each	1.17	5.9	54.09	319	27.9636	140	0	0	0	459
2" x 1 1/4" Reducing Tee Copper B-88	1	Each	1.17	1.2	54.09	65	31.0422	31	0	0	0	96
2" x 1" Reducing Tee Copper B-88	2	Each	1.17	2.3	54.09	124	14.24	28	0	0	0	152
2" x 3/4" Reducing Tee Copper B-88	58	Each	1.17	67.9	54.09	3,673	27.1236	1,573	0	0	0	5,246
3/4" Coupling Copper B-88	4	Each	0.54	2.2	54.09	119	1.3062	5	0	0	0	124
1" Coupling Copper B-88	10	Each	0.63	6.3	54.09	341	2.604	26	0	0	0	367
1 1/4" Coupling Copper B-88	2	Each	0.71	1.4	54.09	76	4.6242	9	0	0	0	85
1 1/2" Coupling Copper B-88	16	Each	0.74	11.8	54.09	638	6.111	98	0	0	0	736
2" Coupling Copper B-88	20	Each	0.84	16.8	54.09	909	10.2144	204	0	0	0	1,113
1" x 3/4" Concentric Reducer Copper B-88	19	Each	0.33	6.3	54.09	341	21.5628	410	0	0	0	751
1 1/4" x 1" Concentric Reducer Copper B-88	10	Each	0.4	4.0	54.09	216	32.466	325	0	0	0	541
1 1/2" x 1 1/4" Concentric Reducer Copper B-88	8	Each	0.4	3.2	54.09	173	4.34	35	0	0	0	208
2" x 1 1/2" Concentric Reducer Copper B-88	6	Each	0.6	3.6	54.09	195	8.4	50	0	0	0	245
2" x 1 1/4" Concentric Reducer Copper B-88	2	Each	0.75	1.5	54.09	81	8.11	16	0	0	0	97
1/2" Adapter Copper x Female FIP	255	Each	0.22	56.1	54.09	3,034	2.8518	727	0	0	0	3,761
1/2" Adapter Copper x Male MIP	4	Each	0.22	0.9	54.09	49	1.7934	7	0	0	0	56
3/4" Adapter Copper x Female FIP	258	Each	0.25	64.5	54.09	3,489	3.9186	1,011	0	0	0	4,500
3/4" Adapter Copper x Male MIP	519	Each	0.25	129.8	54.09	7,021	3.0156	1,565	0	0	0	8,586
1 1/2" Adapter Copper x Male MIP	10	Each	0.35	3.5	54.09	189	13.251	133	0	0	0	322
2" Adapter Copper x Female FIP	4	Each	1.1	4.4	54.09	238	28.1484	113	0	0	0	351
2" Adapter Copper x Male MIP	12	Each	0.44	5.3	54.09	287	22.428	269	0	0	0	556
1/2" Union Copper B-88	6	Each	0.41	2.5	54.09	135	9.3576	56	0	0	0	191
3/4" Union Copper B-88	263	Each	0.54	142.0	54.09	7,681	11.7642	3,094	0	0	0	10,775
1 1/2" Union Copper B-88	4	Each	0.75	3.0	54.09	162	43.2516	173	0	0	0	335
2" Union Copper B-88	2	Each	0.87	1.7	54.09	92	73.7268	147	0	0	0	239

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DESCRIPTION	QUANTITY	UNIT MEAS	LABOR MAN UNIT	HOURS TOTAL	LABOR DOLLARS UNIT	TOTAL	MATERIAL DOLLARS UNIT	TOTAL	EQUIPMENT DOLLARS UNIT	TOTAL	SUBCONTRACT DOLLARS UNIT	TOTAL	TOTAL DOLLARS
2 1/2" 90 Degree Ell A-197 Malleable Iron 150# Grooved	21	Each	1.23	25.8	54.09	1,396	23.14	486	0	0	0	0	1,882
3" 90 Degree Ell A-197 Malleable Iron 150# Grooved	23	Each	1.44	33.1	54.09	1,790	41.1	945	0	0	0	0	2,735
4" 90 Degree Ell A-197 Malleable Iron 150# Grooved	8	Each	1.97	15.8	54.09	855	44.74	358	0	0	0	0	1,213
4" Tee A-197 Malleable Iron 150# Grooved	2	Each	2.9	5.8	54.09	314	200.375	401	0	0	0	0	715
4" x 3" Reducing Tee A-197 Malleable Iron 150# Grooved	2	Each	2.66	5.3	54.09	287	709	1,418	0	0	0	0	1,705
4" x 2 1/2" Reducing Tee A-197 Malleable Iron 150# Grooved	4	Each	2.66	10.6	54.09	573	91.55	366	0	0	0	0	939
2 1/2" x 2" Concentric Reducer A-197 Malleable Iron 150# Grooved	2	Each	1.14	2.3	54.09	124	40.75	82	0	0	0	0	206
3" x 2 1/2" Concentric Reducer A-197 Malleable Iron 150# Grooved	2	Each	1.19	2.4	54.09	130	40	80	0	0	0	0	210
4" x 3" Concentric Reducer A-197 Malleable Iron 150# Grooved	2	Each	1.5	3.0	54.09	162	45.625	91	0	0	0	0	253
4" x 2" Concentric Reducer A-197 Malleable Iron 150# Grooved	2	Each	1.5	3.0	54.09	162	36.625	73	0	0	0	0	235
1 1/2" Check Valve Bronze 150# Screwed	2	Each	1.11	2.2	54.09	119	23.19	46	0	0	0	0	165
1/2" Ball Valve Bronze 125# Solder	135	Each	0.25	33.8	54.09	1,828	5.1	689	0	0	0	0	2,517
3/4" Ball Valve Bronze 125# Solder	272	Each	0.19	51.7	54.09	2,796	11.36	3,090	0	0	0	0	5,886
1 1/2" Ball Valve Bronze 150# Solder	4	Each	0.86	3.4	54.09	184	12.87	51	0	0	0	0	235
2" Ball Valve Bronze 150# Solder	2	Each	0.951	1.9	54.09	103	50.04	100	0	0	0	0	203
3/4" 2-Way Control Valve Bronze 150# Screwed	128	Each	1.47	188.2	54.09	10,180	T.C.	0	0	0	0	0	10,180
3/4" Strainer Bronze 150# Screwed	128	Each	0.72	92.2	54.09	4,987	32.62	4,175	0	0	0	0	9,162
2 1/2" Check Valve Cast Iron 150# Flanged	2	Each	0.92	1.8	54.09	97	152.6	305	0	0	0	0	402
2 1/2" Butterfly Valve Cast Iron 150# Flanged	4	Each	0.57	2.3	54.09	124	101	404	0	0	0	0	528
3" Butterfly Valve Cast Iron 150# Flanged	2	Each	1.1	2.2	54.09	119	218	436	0	0	0	0	555
4" Butterfly Valve Cast Iron 150# Flanged	2	Each	1.13	2.3	54.09	124	284	568	0	0	0	0	692
2 1/2" 150# BN&G Set A-193-B7 Studs A-194-2H Nuts & 1/16" Composition Gasket	16	Each	0.75	12.0	54.09	649	4.19	67	0	0	0	0	716
3" 150# BN&G Set A-193-B7 Studs A-194-2H Nuts & 1/16" Composition Gasket	6	Each	0.75	4.5	54.09	243	2.93	18	0	0	0	0	261
4" 150# BN&G Set A-193-B7 Studs A-194-2H Nuts & 1/16" Composition Gasket	18	Each	1.25	22.5	54.09	1,217	12.5	225	0	0	0	0	1,442
2 1/2" Coupling Style 77	50	Each	0.36	18.0	54.09	974	11.48	574	0	0	0	0	1,548
3" Coupling Style 77	59	Each	0.43	25.4	54.09	1,374	17.75	1,047	0	0	0	0	2,421
4" Coupling Style 77	34	Each	0.62	21.1	54.09	1,141	25.87	880	0	0	0	0	2,021
6" Pipe Sleeve Steel	2	Each	1	2.0	54.09	108	30	60	0	0	0	0	168

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DESCRIPTION	QUANTITY	UNIT MEAS	LABOR MAN UNIT	HOURS TOTAL	LABOR DOLLARS UNIT	TOTAL	MATERIAL DOLLARS UNIT	TOTAL	EQUIPMENT DOLLARS UNIT	TOTAL	SUBCONTRACT DOLLARS UNIT	TOTAL	TOTAL DOLLARS
3/4" Clevis Hanger Copper Plated	249	Each	0.5	124.5	54.09	6,734	1.98	493	0	0	0	0	7,227
1" Clevis Hanger Copper Plated	99	Each	0.5	49.5	54.09	2,677	1.98	196	0	0	0	0	2,873
1 1/4" Clevis Hanger Copper Plated	50	Each	0.5	25.0	54.09	1,352	2.22	111	0	0	0	0	1,463
1 1/2" Clevis Hanger Copper Plated	83	Each	0.5	41.5	54.09	2,245	2.31	192	0	0	0	0	2,437
2" Clevis Hanger Copper Plated	141	Each	0.5	70.5	54.09	3,813	2.64	372	0	0	0	0	4,185
2 1/2" Clevis Hanger Steel	20	Each	0.65	13.0	54.09	703	3.33	67	0	0	0	0	770
3" Clevis Hanger Steel	57	Each	0.65	37.1	54.09	2,007	4.17	238	0	0	0	0	2,245
4" Clevis Hanger Steel	11	Each	0.7	7.7	54.09	416	5.04	55	0	0	0	0	471
3" Riser Clamp Steel	2	Each	0.21	0.4	54.09	22	7.02	14	0	0	0	0	36
3/4" Auto Balancing Valve	128	Each	0.5	64.0	54.09	3,462	85	10,880	0	0	0	0	14,342
1/2" Pete's Plug	254	Each	0.25	63.5	54.09	3,435	10	2,540	0	0	0	0	5,975
1/2" Pressure Gauge	6	Each	0.5	3.0	54.09	162	45	270	0	0	0	0	432
*** HOT WATER SYSTEM ESTIMATED COST ***				3,021.6		163,435		84,025		0		0	247,460
REFRIGERANT SYSTEM													
3/4" Pipe Copper ACR Type K Hard	240	Lin Ft	0.06	14.4	54.09	779	1.395	335	0	0	0	0	1,114
1 1/4" Pipe Copper ACR Type K Hard	240	Lin Ft	0.08	19.2	54.09	1,039	3.82	917	0	0	0	0	1,956
3/4" 90 Degree Ell Copper B-88	48	Each	0.47	22.6	54.09	1,222	1.9278	93	0	0	0	0	1,315
1 1/4" 90 Degree Ell Copper B-88	48	Each	0.67	32.2	54.09	1,742	7.1442	343	0	0	0	0	2,085
3/4" Solenoid Valve Bronze 150# Solder	12	Each	1	12.0	54.09	649	150	1,800	0	0	0	0	2,449
3/4" Sight & Glass	12	Each	1	12.0	54.09	649	50	600	0	0	0	0	1,249
3/4" Hot Gas Bypass Assembly	12	Each	4	48.0	54.09	2,596	300	3,600	0	0	0	0	6,196
1 1/4" Suction Line Accumulator	12	Each	2	24.0	54.09	1,298	250	3,000	0	0	0	0	4,298
*** REFRIGERANT SYSTEM ESTIMATED COST ***				184.4		9,974		10,688		0		0	20,662