0									LABOR RATE		$ 75
SR. NO.	DESCRIPTION	QUANTITY	WASTAGE	QTY WITH WASTAGE	UNIT	UNIT COST	MATERIAL COST	LABOR RATE	LABOR HOURS	LABOR HOURS COST	TOTAL COST
	PROCESS ESTIMATE										
DRINKING WATER PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											
1	1-1/2" Dia Drinking Water Pipe	47	10%	51	FT		$ -	$ 75		$ -	$ -
2	3" Dia Drinking Water Pipe	43	10%	47	FT		$ -	$ 75		$ -	$ -
3	4" Dia Drinking Water Pipe	263	10%	289	FT		$ -	$ 75		$ -	$ -
4	6" Dia Drinking Water Pipe	31	10%	34	FT		$ -	$ 75		$ -	$ -
5	8" Dia Drinking Water Pipe	80	10%	88	FT		$ -	$ 75		$ -	$ -
DRINKING WATER PIPE INSULATION											
1/2" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
1	1-1/2" Dia Drinking Water Pipe	47	10%	51	FT		$ -	$ 75		$ -	$ -
3/4" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
2	3" Dia Drinking Water Pipe	43	10%	47	FT		$ -	$ 75		$ -	$ -
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
3	4" Dia Drinking Water Pipe	263	10%	289	FT		$ -	$ 75		$ -	$ -
4	6" Dia Drinking Water Pipe	31	10%	34	FT		$ -	$ 75		$ -	$ -
5	8" Dia Drinking Water Pipe	80	10%	88	FT		$ -	$ 75		$ -	$ -
DRINKING WATER PIPE FITINGS											
ELBOW											
1	1-1/2" Dia Drinking Water Pipe 90 Deg Elbow	4	0%	4	EA		$ -	$ 75		$ -	$ -
2	3" Dia Drinking Water Pipe 90 Deg Elbow	4	0%	4	EA		$ -	$ 75		$ -	$ -
3	4" Dia Drinking Water Pipe 90 Deg Elbow	22	0%	22	EA		$ -	$ 75		$ -	$ -
4	6" Dia Drinking Water Pipe 90 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
5	8" Dia Drinking Water Pipe 90 Deg Elbow	3	0%	3	EA		$ -	$ 75		$ -	$ -
TEE											
1	4" Dia Drinking Water Pipe Tee	2	0%	2	EA		$ -	$ 75		$ -	$ -
2	8" / 6" Dia Drinking Water Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -

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FILTERED WATER PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											
1	3" Dia Filtered Water Pipe	21	10%	23	FT		$ -	$ 75		$ -	$ -
2	6" Dia Filtered Water Pipe	30	10%	33	FT		$ -	$ 75		$ -	$ -
3	8" Dia Filtered Water Pipe	43	10%	47	FT		$ -	$ 75		$ -	$ -
FILTERED WATER PIPE INSULATION											
3/4" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
1	3" Dia Filtered Water Pipe	21	10%	23	FT		$ -	$ 75		$ -	$ -
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
2	6" Dia Filtered Water Pipe	30	10%	33	FT		$ -	$ 75		$ -	$ -
3	8" Dia Filtered Water Pipe	43	10%	47	FT		$ -	$ 75		$ -	$ -
FILTERED WATER PIPE FITTINGS											
ELBOW											
1	8" Dia Filtered Water Pipe 90 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	6" Dia Filtered Water Pipe 90 Deg Elbow	6	0%	6	EA		$ -	$ 75		$ -	$ -
3	3" Dia Filtered Water Pipe 90 Deg Elbow	2	0%	2	EA		$ -	$ 75		$ -	$ -
TEE											
1	8" Dia Filtered Water Pipe Tee	2	0%	2	EA		$ -	$ 75		$ -	$ -
2	8" / 6" Dia Filtered Water Pipe Tee	2	0%	2	EA		$ -	$ 75		$ -	$ -
REDUCER											
1	8" / 3" Dia Filtered Water Pipe Reducer	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	8" / 6" Dia Filtered Water Pipe Reducer	1	0%	1	EA		$ -	$ 75		$ -	$ -
REVERSE OSMOSIS WATER PIPE											
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), 150# 304											
1	1-1/2" Dia Reverse Osmosis Water Pipe	8	10%	9	FT		$ -	$ 75		$ -	$ -
REVERSE OSMOSIS WATER PIPE INSULATION											
1/2" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
1	1-1/2" Dia Reverse Osmosis Water Pipe	8	10%	9	FT		$ -	$ 75		$ -	$ -
REVERSE OSMOSIS WATER PIPE FITTINGS											
ELBOW											
1	1-1/2" Dia Reverse Osmosis Water Pipe 90 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -

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PRODUCT WATER PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											
1	4" Dia Product Water Pipe	654	10%	719	FT		$ -	$ 75		$ -	$ -
PRODUCT WATER PIPE INSULATION											
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
1	4" Dia Product Water Pipe	654	10%	719	FT		$ -	$ 75		$ -	$ -
PRODUCT WATER PIPE FITTING ELBOW											
1	4" Dia Product Water Pipe 90 Deg Elbow	21	0%	21	EA		$ -	$ 75		$ -	$ -
CIP SUPPLY PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											
1	3" Dia Clean In Place Supply Pipe	112	10%	123	FT		$ -	$ 75		$ -	$ -
2	4" Dia Clean In Place Supply Pipe	27	10%	29	FT		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Supply Pipe	41	10%	46	FT		$ -	$ 75		$ -	$ -
CIP SUPPLY PIPE INSULATION											
3/4" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
1	3" Dia Clean In Place Supply Pipe	112	10%	123	FT		$ -	$ 75		$ -	$ -
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
2	4" Dia Clean In Place Supply Pipe	27	10%	29	FT		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Supply Pipe	41	10%	46	FT		$ -	$ 75		$ -	$ -
CIP SUPPLY PIPE FITTING ELBOW											
1	3" Dia Clean In Place Supply Pipe 90 Deg Elbow	13	0%	13	EA		$ -	$ 75		$ -	$ -
2	4" Dia Clean In Place Supply Pipe 45 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
3	4" Dia Clean In Place Supply Pipe 90 Deg Elbow	7	0%	7	EA		$ -	$ 75		$ -	$ -
4	6" Dia Clean In Place Supply Pipe 90 Deg Elbow	4	0%	4	EA		$ -	$ 75		$ -	$ -
TEE											
1	6" / 3" Dia Clean In Place Supply Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
CIP RETURN PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											

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1	2" Dia Clean In Place Return Pipe	8	10%	9	FT		$ -	$ 75		$ -	$ -
2	4" Dia Clean In Place Return Pipe	536	10%	589	FT		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Return Pipe	20	10%	22	FT		$ -	$ 75		$ -	$ -
CIP RETURN PIPE INSULATION											
3/4" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
1	2" Dia Clean In Place Return Pipe	8	10%	9	FT		$ -	$ 75		$ -	$ -
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
2	4" Dia Clean In Place Return Pipe	536	10%	589	FT		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Return Pipe	20	10%	22	FT		$ -	$ 75		$ -	$ -
CIP RETURN PIPE FITTING											
ELBOW											
1	2" Dia Clean In Place Return Pipe 90 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	4" Dia Clean In Place Return Pipe 90 Deg Elbow	12	0%	12	EA		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Return Pipe 90 Deg Elbow	2	0%	2	EA		$ -	$ 75		$ -	$ -
TEE											
1	4" Dia Clean In Place Return Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	4" / 2" Dia Clean In Place Return Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
3	6" Dia Clean In Place Return Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
REDUCER											
1	6" / 4" Dia Clean In Place Return Pipe Reducer	2	0%	2	EA		$ -	$ 75		$ -	$ -
CITY WATER PIPE											
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), 150# 304											
1	1-1/2" Dia City Water Pipe	49	10%	54	FT		$ -	$ 75		$ -	$ -
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), Butt-Weld same Sch											
2	2-1/2" Dia City Water Pipe	33	10%	36	FT		$ -	$ 75		$ -	$ -
3	6" Dia City Water Pipe	11	10%	12	FT		$ -	$ 75		$ -	$ -
4	8" Dia City Water Pipe	69	10%	76	FT		$ -	$ 75		$ -	$ -
5	10" Dia City Water Pipe	170	10%	187	FT		$ -	$ 75		$ -	$ -
CITY WATER PIPE INSULATION											
1/2" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											

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1	1-1/2" Dia City Water Pipe	49	10%	54	FT		$ -	$ 75		$ -	$ -
3/4" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer											
2	2-1/2" Dia City Water Pipe	33	10%	36	FT		$ -	$ 75		$ -	$ -
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics											
3	6" Dia City Water Pipe	11	10%	12	FT		$ -	$ 75		$ -	$ -
4	8" Dia City Water Pipe	69	10%	76	FT		$ -	$ 75		$ -	$ -
5	10" Dia City Water Pipe	170	10%	187	FT		$ -	$ 75		$ -	$ -
CITY WATER PIPE FITTING ELBOW											
1	1-1/2" Dia City Water Pipe 90 Deg Elbow	4	0%	4	EA		$ -	$ 75		$ -	$ -
2	2-1/2" Dia City Water Pipe 90 Deg Elbow	5	0%	5	EA		$ -	$ 75		$ -	$ -
3	6" Dia City Water Pipe 90 Deg Elbow	2	0%	2	EA		$ -	$ 75		$ -	$ -
4	8" Dia City Water Pipe 90 Deg Elbow	5	0%	5	EA		$ -	$ 75		$ -	$ -
5	10" Dia City Water Pipe 90 Deg Elbow	10	0%	10	EA		$ -	$ 75		$ -	$ -
TEE											
1	10" / 6" Dia City Water Pipe Tee	2	0%	2	EA		$ -	$ 75		$ -	$ -
2	10" / 8" Dia City Water Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
FLUSH WATER PIPE											
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), 150# 304											
1	6" Dia Flush Pipe	54	10%	59	FT		$ -	$ 75		$ -	$ -
FLUSH WATER PIPE INSULATION											
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
1	6" Dia Flush Pipe	54	10%	59	FT		$ -	$ 75		$ -	$ -
FLUSH WATER PIPE FITTINGS ELBOW											
1	6" Dia Flush Pipe 45 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	6" Dia Flush Pipe 90 Deg Elbow	5	0%	5	EA		$ -	$ 75		$ -	$ -
TEE											
1	6" Dia Flush Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
BACKWASH PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											

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1	6" Dia Backwash Pipe	85	10%	94	FT		$ -	$ 75		$ -	$ -
BACKWASH PIPE INSULATION											
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
1	6" Dia Backwash Pipe	85	10%	94	FT		$ -	$ 75		$ -	$ -
BACKWASH PIPE FITTINGS											
ELBOW											
1	6" Dia Backwash Pipe 45 Deg Elbow	1	0%	1	EA		$ -	$ 75		$ -	$ -
2	6" Dia Backwash Pipe 90 Deg Elbow	10	0%	10	EA		$ -	$ 75		$ -	$ -
WASTE WATER PIPE											
Stainless Steel 304L W/ ASTM Rating A269, Standard Specification for Seamless and											
1	8" Dia Waste Water Pipe	175	10%	193	FT		$ -	$ 75		$ -	$ -
WASTE WATER PIPE INSULATION											
1" Thick Closed Cell Rigid Polyurethane (Polyisocyanurate), Dow Plastics Trymer 2000											
1	8" Dia Waste Water Pipe	175	10%	193	FT		$ -	$ 75		$ -	$ -
WASTE WATER PIPE FITTINGS											
ELBOW											
1	8" Dia Waste Water Pipe 90 Deg Elbow	9	0%	9	EA		$ -	$ 75		$ -	$ -
STEAM PIPE											
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), 150# 304											
1	2" Dia Steam Pipe	142	10%	156	FT		$ -	$ 75		$ -	$ -
304L Stainless Steel Sch10S, (ASTM A312) Pipe (ANSI B36.19), Butt-Weld											
2	3" Dia Steam Pipe	29	10%	32	FT		$ -	$ 75		$ -	$ -
STEAM PIPE INSULATION											
1-1/2" Thick All steam pipe up to 150 psig shall be covered with a molded, high											
1	2" Dia Steam Pipe	142	10%	156	FT		$ -	$ 75		$ -	$ -

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2" Thick All steam pipe up to 150 psig shall be covered with a molded, high											
2	3" Dia Steam Pipe	29	10%	32	FT		$ -	$ 75		$ -	$ -
STEAM PIPE FITINGS											
ELBOW											
1	2" Dia Steam Pipe 90 Deg Elbow	11	0%	11	EA		$ -	$ 75		$ -	$ -
2	3" Dia Steam Pipe 90 Deg Elbow	5	0%	5	EA		$ -	$ 75		$ -	$ -
TEE											
1	2" Dia Steam Pipe Tee	4	0%	4	EA		$ -	$ 75		$ -	$ -
2	3" Dia Steam Pipe Tee	1	0%	1	EA		$ -	$ 75		$ -	$ -
3	3" / 2" Dia Steam Pipe Tee	3	0%	3	EA		$ -	$ 75		$ -	$ -
STAINLESS STEEL PIPE COUPLINGS											
1	1-1/4" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Socket Weld.	5	0%	5	EA		$ -	$ 75		$ -	$ -
2	1-1/2" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Socket Weld.	6	0%	6	EA		$ -	$ 75		$ -	$ -
3	2" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Socket Weld. (ASTM A182)	15	0%	15	EA		$ -	$ 75		$ -	$ -
STAINLESS STEEL PIPE FLANGES											
1	2-1/2" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	3	0%	3	EA		$ -	$ 75		$ -	$ -
2	3" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	21	0%	21	EA		$ -	$ 75		$ -	$ -
3	4" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	147	0%	147	EA		$ -	$ 75		$ -	$ -
4	6" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	26	0%	26	EA		$ -	$ 75		$ -	$ -
5	8" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	38	0%	38	EA		$ -	$ 75		$ -	$ -
6	10" Dia Class 150# RF 304 Stainless, (ANSI B16.5) Slip-On or Weld-Neck.	17	0%	17	EA		$ -	$ 75		$ -	$ -
PIPE SUPPORT											
1	Adjustable Roller supports Copper B3122 series or equal with saddle B3161/B3162 series.	278	0%	278	EA		$ -	$ 75		$ -	$ -
2	Protection Sheild Saddle (Grinnell Fig.617 Or Equal)	278	0%	278	EA		$ -	$ 75		$ -	$ -
										TOTAL MATERIAL COST - $	

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I	SUPPLY & INSTALLATION
1	DRINKING WATER PIPE W/FITTINGS
2	FILTERED WATER PIPE W/FITTINGS
3	REVERSE OSMOSIS WATER PIPE W/FITTINGS
4	PRODUCT WATER PIPE W/FITTINGS
5	CIP RETURN PIPE W/FITTINGS
6	CIP SUPPLY PIPE W/FITTINGS
7	CITY WATER PIPE W/FITTINGS
8	FLUSH WATER PIPE W/FITTINGS
9	BACKWASH PIPE W/ FITTINGS
10	WASTE WATER PIPE W/FITTINGS
11	STEAM PIPE W/FITTINGS
12	PIPE COUPLING/FLANGES
13	PIPE SUPPORTS

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