

**PROJECT: E.Gill Development**

ADDRESS: 62 S. 12th Street Block 1868, Lot 47 Newark, NJ

Notes:

ITEM #	REF. SHEET	CSI SECT	DESCRIPTION	QTY.	WASTAGE	QTY WITH WASTAGE	UNIT	UNIT LABOR COST	UNIT MATERIAL COST	TOTAL LABOR COST	TOTAL MATERIAL COST	ITEM COST	TRADE COST
		DIV-01	GENERAL										\$ -
1			Permit	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
2			Supervision	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
3			Final Cleanup	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
4			Mobilization Cost	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
5			Project Overheads	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
6			Bonds	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
7			Fees (Architect & Engineer)	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
8			Temporary Control & Facilities	1	0%	1	LS	\$ -	\$ -	\$ -	\$ -	\$ -	
		DIV-22	Plumbing										\$ -
			<b>Plumbing Water &amp; Gas Plan</b>										
			<b>Pipes</b>										
9			1-1/4" Gas Pipe	11	5%	12	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
10			2-1/2" Gas Pipe	224	5%	236	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
11			1/2" Hot Water Pipe	490	5%	514	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
12			1" Hot Water Pipe	155	5%	162	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
13			3/4" Hot Water Pipe	154	5%	161	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
14			1" Cold Water Pipe	33	5%	35	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
15			1/2" Cold Water Pipe	268	5%	282	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
16			1-1/2" Cold Water Pipe	18	5%	19	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
17			1-1/4" Cold Water Pipe	133	5%	140	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
18			3/4" Cold Water Pipe	445	5%	467	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
19			1/2" Hot Water Return Pipe	15	5%	16	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
			<b>Commercial Water Heater</b>										
20			IWH-A: Instantaneous Gas Commercial Water Heater MFR & Model#: "RINNAI" #RUR199IN (Indoor)	5	0%	5	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
			<b>Fixtures</b>										
21			SK: Sink MFR & Model#: SELECTED BY OWNER	9	0%	9	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
22			SHR: Shower MFR & Model#: SELECTED BY OWNER	9	0%	9	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
23	P-2,P-3		W1: Water Closet MFR & Model#: SELECTED BY OWNER	13	0%	13	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
24			L1: Lavatory MFR & Model#: SELECTED BY OWNER	14	0%	14	EA	\$ -	\$ -	\$ -	\$ -	\$ -	

25		DS: Double Sink MFR & Model#: SELECTED BY OWNER	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
26		WB: Cloth Washer Box MFR & Model#: "OATEY" #38995	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
27		GD: Garbage Disposal MFR & Model#: ISE BADGER 1	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
28		BS: Bar Sink MFR & Model#: "ADVANCE TABCO" #DI-1-5, 13"x19"X5"	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
29		BD: Floor Mounted Bidet MFR & Model#: SELECTED BY OWNER	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
30		HB: Hose Bibb MFR & Model#: "WOODFORD" #14 SERIES FREEZE PROOF	4	0%	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
31		Dish Washer	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
32		BT: Bath Tub	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
33		FD: Floor Drain	9	0%	9	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
34		Gas Meter	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
35		Regulator	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
36		SOV	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
		<b>Plumbing Waste &amp; Vent Plan</b>										
		<b>Pipes</b>										
37		2" Waste Pipe	221	5%	232	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
38		3 Waste Pipe	253	5%	266	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
39		4" Waste Pipe	163	5%	171	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
40		1-1/2" Vent Pipe	40	5%	42	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
41		2" Vent Pipe	60	5%	63	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
42	P-1,P-3	2-1/2" Vent Pipe	20	5%	21	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
43		3" Vent Pipe	10	5%	11	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
		<b>Fixtures</b>										
44		SCO: Surface Clean Out	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
45		SCO: Two Way Surface Clean Out	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
46		Wall Clean Out	8	0%	8	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
		<b>DIV-23 HVAC</b>										\$ -
		<b>Mechanical Plan</b>										
		<b>Ducts &amp; Condensate Drain</b>										
47		10" Dia Duct	78	5%	82	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
48		12" Dia Duct	35	5%	37	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
49		8" Dia Duct	140	5%	147	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
50		14" Dia Duct	9	5%	9	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
51		6" Dia Duct	98	5%	103	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
52		18" x 14" Duct	4	5%	5	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
53		4" Dia Duct	46	5%	48	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
54		10" x 10" Duct	4	5%	5	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
55		14" x 8" Duct	69	5%	73	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
56		10" x 8" Duct	34	5%	36	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
57		8" x 8" Duct	169	5%	177	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
58		20" x 8" Duct	24	5%	25	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
59		18" x 8" Duct	23	5%	24	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
60		12" x 8" Duct	41	5%	43	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
61		16" x 8" Duct	14	5%	14	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
62		12" x 12" Duct	27	5%	28	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
63		12" x 10" Duct	19	5%	20	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
64		28" x 8" Duct	29	5%	30	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
65		26" x 10" Duct	15	5%	16	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
66		24" x 8" Duct	32	5%	34	LF	\$ -	\$ -	\$ -	\$ -	\$ -	
67		4" x 6" Duct	7	5%	7	LF	\$ -	\$ -	\$ -	\$ -	\$ -	

68	6" x 6" Duct	69	5%	72	LF	\$ -	\$ -	\$ -	\$ -	\$ -
69	14" x 12" Duct	5	5%	5	LF	\$ -	\$ -	\$ -	\$ -	\$ -
70	14" x 4" Duct	20	5%	21	LF	\$ -	\$ -	\$ -	\$ -	\$ -
71	4" x 4" Duct	17	5%	17	LF	\$ -	\$ -	\$ -	\$ -	\$ -
72	3/4" Condensate Drain	120	5%	126	LF	\$ -	\$ -	\$ -	\$ -	\$ -
73	4" Dryer Vent	30	5%	32	LF	\$ -	\$ -	\$ -	\$ -	\$ -
	<b>Exhaust Fans</b>									
74	EF-A: Exhaust Fan MFR: Broan Model: ZB110 Volts: 120	11	0%	11	EA	\$ -	\$ -	\$ -	\$ -	\$ -
75	EF-B: Exhaust Fan MFR: Broan Model: ZB110 Volts: 120	5	0%	5	EA	\$ -	\$ -	\$ -	\$ -	\$ -
	<b>Indoor ,Outdoor &amp; Roof Top Units Units</b>									
76	Outdoor Unit: OU-A0 MFR: MITSUBISHI Model#: MXZ-SM48NAN	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
77	Outdoor Unit: OU-C0 MFR: MITSUBISHI Model#: MZX-SM36NAN	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
78	Outdoor Unit: OU-E1 MFR: CARRIER Model#: #25VNA036	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
79	Outdoor Unit: OU-F1 MFR: CARRIER Model#: #25VNA024	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
80	Outdoor Unit: OU-G0 MFR: MITSUBISHI Model#: PUZ-A12NKA7	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
81	Outdoor Unit: OU-B0 MFR: MITSUBISHI Model#: MZX-SM36NAN	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
82	Indoor Unit: IU-C1 MFR: MITSUBISHI Model#: PEAD-A36	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
83	Indoor Unit: IU-A3 MFR: MITSUBISHI Model#: SEZ-KD12NA4	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
84	Indoor Unit: IU-A4 MFR: MITSUBISHI Model#: SVZ-KP24NA	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
85	Indoor Unit: IU-G1 MFR: MITSUBISHI Model#: PKA-A12HA7	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
86	Indoor Unit: IU-A1 MFR: MITSUBISHI Model#: SEZ-KD09NA4	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
87	Indoor Unit: IU-A2 MFR: MITSUBISHI Model#: SEZ-KD12NA4	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -
88	Indoor Unit: IU-E1 MFR: CARRIER Model#: FE4ANF003	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -

89	Indoor Unit: IU-B1 MFR: MITSUBISHI Model#: SEZ-KD09NA4	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
90	Indoor Unit: IU-F1 MFR: CARRIER Model#: FE4ANF002	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
91	Indoor Unit: IU-B3 MFR: MITSUBISHI Model#: PEAD-A24	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
92	Indoor Unit: IU-B2 MFR: MITSUBISHI Model#: SEZ-KD09NA4	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
93	Roof Top Unit: RTU- D-1 MFR: CARRIER Model#: 50VRA24	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
94	Roof Top Unit: RTU-D-2 MFR: CARRIER Model#: 50VRA24	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
	<b>Diffusers,Registers &amp; Grilles</b>										
95	CD1-C: Ceiling Diffuser (CFM: 250) MFR: Shoemaker Model: SCB41-0 Material: Steel	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
96	CD1-C: Ceiling Diffuser (CFM: 275) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
97	CD1-A: Ceiling Diffuser (CFM: 50) MFR: Shoemaker Model: SCB41-0 Material: Steel	4	0%	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
98	CD1-B: Ceiling Diffuser (CFM: 125) MFR: Shoemaker Model: SCB41-0 Material: Steel	4	0%	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
99	CD1-A: Ceiling Diffuser (CFM: 76) MFR: Shoemaker Model: SCB41-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
100	CD1-A: Ceiling Diffuser (CFM: 20) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
101	CD1-A: Ceiling Diffuser (CFM: 40)MFR: Shoemaker Model: SCB41-0 Material: Steel	5	0%	5	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
102	CD1-B: Ceiling Diffuser (CFM: 115) MFR: Shoemaker Model: SCB41-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
103	CD1-A: Ceiling Diffuser (CFM: 22) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
104	CD1-A: Ceiling Diffuser (CFM: 70) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	

105	M-1	CD1-B: Ceiling Diffuser (CFM: 170) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
106		CD1-A: Ceiling Diffuser (CFM: 25) MFR: Shoemaker Model: SCB41-0 Material: Steel	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
107		CD1-B: Ceiling Diffuser (CFM: 117) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
108		CD1-B: Ceiling Diffuser (CFM: 30) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
109		CD1-B: Ceiling Diffuser (CFM: 150) MFR: Shoemaker Model: SCB41-0 Material: Steel	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
110		CD1-A: Ceiling Diffuser (CFM: 10) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
111		CD1-B: Ceiling Diffuser (CFM: 136) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
112		CD1-B: Ceiling Diffuser (CFM: 147) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
113		CD1-C: Ceiling Diffuser (CFM: 210) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
114		CD1-C: Ceiling Diffuser (CFM: 235) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
115		CD1-B: Ceiling Diffuser (CFM: 100) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
116		CD1-A: Ceiling Diffuser (CFM: 37) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
117		CD1-A: Ceiling Diffuser (CFM: 30) MFR: Shoemaker Model: SCB41-0 Material: Steel	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
118	CD1-A: Ceiling Diffuser (CFM: 15) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -		

119	CD1-A: Ceiling Diffuser (CFM: 71) MFR: Shoemaker Model: SCB41-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
120	CD1-B: Ceiling Diffuser (CFM: 125) MFR: Shoemaker Model: SCB41-0 Material: Steel	5	0%	5	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
121	RG1-30 x 20: Register Grille (CFM: 1200) MFR: Shoemaker Model: 920 FG Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
122	RG1-16 x 16: Register Grille (CFM: 388) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
123	RG1-24 x 20: Register Grille (CFM: 735) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
124	RG1-16 x 16: Register Grille (CFM: 317) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
125	RG1-16 x 16: Register Grille (CFM:191) MFR: Shoemaker Model: 920 FG Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
126	RG1-16 x 16: Register Grille (CFM:197) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
127	RG1-16 x 16: Register Grille (CFM: 235) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
128	RG1-16 x 16: Register Grille (CFM: 375) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
129	RG1-20 x 12: Register Grille (CFM: 317) MFR: Shoemaker Model: 920 FG Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
130	RG1-24 x 20: Register Grille (CFM: 800) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
131	RG1-20 x 20: Register Grille (CFM: 741) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
132	RG1-24 x 20: Register Grille (CFM: 800) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	

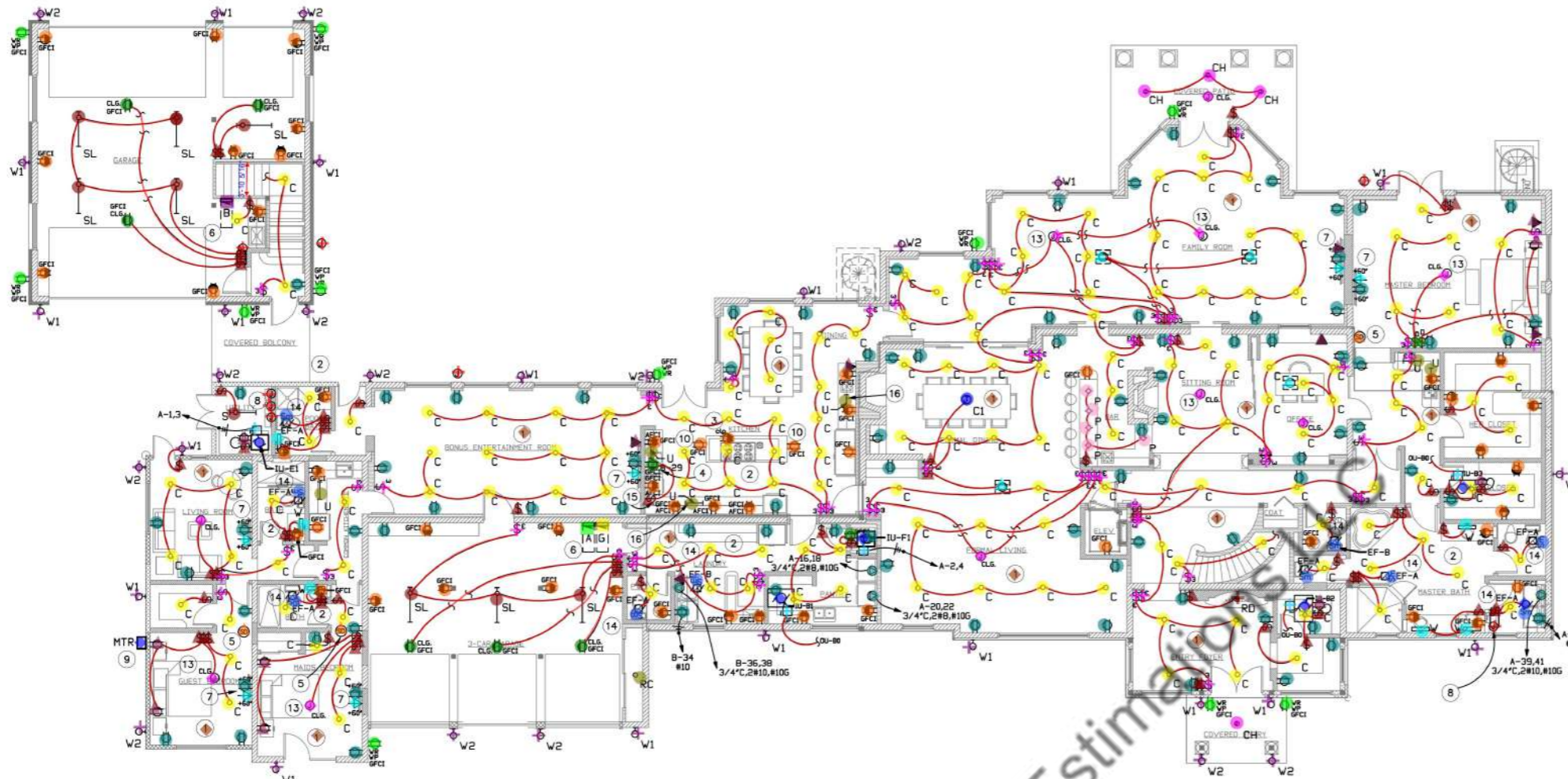
133	RG-1-12 x 20 (MAU Grill) MFR: Shoemaker Model: 920 FG Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
134	SR1-F: Supply Register (CFM: 1200) MFR: Shoemaker Model: 951-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
135	SR1-F: Supply Register (CFM: 240) MFR: Shoemaker Model: 951-0 Material: Steel	4	0%	4	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
136	SR1-D: Supply Register (CFM: 115) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
137	SR1-D: Supply Register (CFM: 165) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
138	SR1-E: Supply Register (CFM: 175) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
139	SR1-D: Supply Register (CFM: 145) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
140	SR1-C: Supply Register (CFM: 125) MFR: Shoemaker Model: 951-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
141	SR1-C: Supply Register (CFM: 67) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
142	SR1-A: Supply Register (CFM: 75) MFR: Shoemaker Model: 951-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
143	SR1-B: Supply Register (CFM: 100) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
144	SR1-A: Supply Register (CFM: 40) MFR: Shoemaker Model: 951-0 Material: Steel	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
145	SR1-D: Supply Register (CFM: 140) MFR: Shoemaker Model: 951-0 Material: Steel	2	0%	2	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
	<b>Fixtures</b>										
146	KN#2: Backdraft Damper	3	0%	3	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
147	KN#5: Air Damper To Be Interlocked With Hood	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
148	KN#3: Residential Style (Hood Wolf #PW362418)	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -	
149	Thermostat	11	0%	11	EA	\$ -	\$ -	\$ -	\$ -	\$ -	





181		ARC-Fault Circuit Interrupter Outlet	19	0%	19	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
182		Ceiling Fan	17	0%	17	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
		<b>Panels &amp; Meter</b>												
183		Panel A Volts: 120/240, 2P, 3W AIC Rating: 22000 Bus Amp: 300	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
184		Panel B Volts: 120/240, 2P, 3W AIC Rating: 22000 Bus Amp: 300	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
185		Panel G Volts: 120/240, 2P, 3W AIC Rating: 22000 Bus Amp: 200	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
186		New NES Meter Volts: 120/240, 2P, 3W AIC Rating: 42000 Amp: 400	1	0%	1	EA	\$ -	\$ -	\$ -	\$ -	\$ -			
<b>SUB TOTAL</b>							<b>Total Lab. Cost =</b>		\$ -	<b>Total Mat. Cost =</b>		\$ -	\$ -	\$ -
<b>INSURANCE</b>									0%			\$ -	\$ -	
<b>OVERHEAD AND PROFIT</b>									25%			\$ -	\$ -	
<b>MATERIAL SALES TAX</b>									10%			\$ -	\$ -	
<b>TOTAL BASE BID</b>												\$ -	\$ -	

Construction Estimations LLC



# FIRST FLOOR ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

Electrical Conduits	Quantity
Light Type C: 6" Recessed Downlight	1485.6 FT
Light Type C1: Surface Mounting Fixture	158.0 EA
Light Type CH: Ceiling Mounted Hung Light	1.0 EA
Light Type P: Pendant Light	4.0 EA
Light Type RD: 4" Recessed Can Light	5.0 EA
Light Type S/SL: Linear Fluorescent T8 Strip Light	1.0 EA
Light Type U: Under Counter Light	10.0 EA
Light Type W: Surface Mounted Decotive Vanity Light	6.0 EA
Light Type W1/W2: Surface Mounted Decoartive Wall Sconce	6.0 EA
Duplex Receptacle (Nema-5-20R)	32.0 EA
GFCI, WP, WR Duplex Receptacle (Nema-5-20R) 125V, 20 Amp	88.0 EA
GFCI Duplex Receptacle (Nema-5-20R) 125V, 20 Amp	11.0 EA
Half Switch GFCI Duplex Receptacle	52.0 EA
Half Switch Duplex Receptacle	8.0 EA
Floor Mounted Duplex Receptacle	8.0 EA
Single Way Switch	4.0 EA
Light Type RC: 6" Aperture Lensed Downlight	68.0 EA
Dimmer Switch	1.0 EA
Three Way Switch	2.0 EA
HP Rated Manual Motor Starter With Thermal Overloads	55.0 EA
Electric Motor	10.0 EA
Disconnect Switch	6.0 EA
Junction Box	5.0 EA
Ceiling Fan Junction Box	8.0 EA
TV Outlet	10.0 EA
Voice Outlet	6.0 EA
Data & Telephone Outlet Combo	7.0 EA
Photo Electric Smoke Detector	4.0 EA
ARC-Fault Circuit Interrupter Outlet	3.0 EA
Panel B	14.0 EA
Panel A	1.0 EA
Panel G	1.0 EA
New NES Meter	1.0 EA

### KEYED NOTES :

- ARC-FAULT CIRCUIT INTERRUPTER OUTLET IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, DENS, BEDROOMS, CLOSETS, HALLWAYS, KITCHENS, LAUNDRY ROOMS SHALL BE LISTED "COMBINATION TYPE" PER NEC 210.12 (B) (TYPICAL).
- MOUNTING HEIGHT OF OUTLETS ABOVE COUNTER SHALL BE VERIFIED WITH ARCHITECT PRIOR TO ROUGH-IN. ALL OUTLETS WITHIN 6'-0" OF SINKS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI) TYPICAL.
- OUTLET FOR HOOD COMBINATION UNIT. VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- HALF SWITCHED DUPLEX OUTLET FOR GARBAGE DISPOSER AND DISHWASHER MOUNTED BELOW COUNTER. UNSWITCHED TERMINALS FOR DISHWASHER.
- PHOTOELECTRIC SMOKE DETECTOR. SEE GENERAL NOTES.
- NEW ELECTRICAL PANEL. PAINT COVER TO MATCH WALL. (TYPICAL)
- VERIFY RECEPTACLE AND TV CABLE MOUNTING HEIGHT PRIOR TO ROUGH IN. CENTER VERTICALLY ON WALL.
- PROVIDE J-BOX FOR WATER HEATER IGNITER VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.
- NEW SES.
- AT THE KITCHEN ISLAND; UNDERGROUND INSULATED CONDUCTORS AND CABLES FOR BRANCH CIRCUITS TO BE LISTED FOR USE IN WET LOCATIONS.
- PROVIDE HALF SWITCHED OUTLET AND ON/OFF SWITCH IN ATTIC SPACE FOR HVAC MAINTENANCE. COORDINATE SWITCH LOCATION AND MOUNTING WITH STRUTS.
- PROVIDE CARBON MONOXIDE SENSOR.
- U.L. LISTED CEILING FAN JUNCTION BOX. SUPPORT PER NEC 422.18 (TYPICAL).
- EXHAUST FAN WITH INTEGRAL DISCONNECT SWITCH. VERIFY PRECISE LOCATION PRIOR TO ROUGH-IN (TYPICAL).
- SWITCH SHOWN FOR REFERENCE. SEE POWER PLAN FOR HALF SWITCH OUTLET LOCATION AND CIRCUIT.
- VERIFY U.C. LIGHTING CONTROL SWITCH LOCATION WITH OWNER/MILLWORK PRIOR TO INSTALL. TYPICAL.

### GENERAL NOTES:

- PROVIDE GFCI PROTECTION FOR RECEPTACLES WITHIN 6'-0" OF ALL LAVATORIES, SINKS, AND BASINS WHICH SHALL BE SUPPLIED WITH A 20 AMP BRANCH CIRCUIT THAT SUPPLIES NO OTHER LOADS. NEC 210.8.
- PROVIDE GFCI PROTECTED RECEPTACLES AT ALL EXTERIOR, BATHROOM, AND GARAGE LOCATIONS WHICH SHALL BE SUPPLIED WITH A 20 AMP BRANCH CIRCUIT THAT SUPPLIES NO OTHER LOADS. NEC 210.8, 210.52.
- PROVIDE A MINIMUM OF TWO 20 AMP SMALL APPLIANCE BRANCH CIRCUITS FOR THE KITCHEN, DINING, BREAKFAST ROOMS. NEC 210.4(c)(1), 210.52(b)(1), 220.16(o).
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT LOCATION, QUANTITIES, AND INSTALLATION REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT AND OUTLETS IN MILL WORK AND COUNTER AREAS.
- ALL SWITCHING AND RECEPTACLES ARE SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO COORDINATE EXACT LOCATION WITH OWNER & ARCHITECT PRIOR TO ROUGH IN. COORDINATE WITH NEC 210.52 FOR REQUIREMENTS.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION FOR ALL MECHANICAL AND PLUMBING EQUIPMENT. PROVIDE ELECTRICAL SERVICE AS REQUIRED FOR EACH ITEM.
- ALL EXTERIOR MECHANICAL UNIT FUSED DISCONNECTS SHALL BE WEATHERPROOF, HEAVY DUTY RATED.
- ALL 15A, 20A, 120V BRANCH CIRCUITS IN DWELLING UNITS IN FAMILY RMS, DINING RMS, PARLORS, DEN, BEDROOMS, CLOSETS HALLWAYS OR SIMILAR SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER (AFCI) COMBINATION DEVICE. NEC 210.12.
- PROVIDE SEPARATE 20 AMP BRANCH CIRCUIT TO THE LAUNDRY. NEC 210.11(c), 210.52(f), 220.16(b).
- RECEPTACLE OUTLETS FOR RANGES AND CLOTHES DRYERS SHALL BE A 2 POLE WITH GROUND TYPE. 4 WIRE GROUNDING TYPE FLEXIBLE CORDS WILL BE REQUIRED FOR CONNECTION OF RANGES & CLOTHES DRYERS. THE BONDING JUMPER SHALL NOT BE CONNECTED BETWEEN THE NEUTRAL TERMINAL AND THE FRAME OF THE APPLIANCE. NEC 250.140.
- MC CABLE MAY BE USED WHERE PERMITTED PER CODE.
- SMOKE DETECTORS SHALL BE SELF-CONTAINED, ALTERNATING/DIRECT CURRENT AND BATTERY BACK-UP. ALL EXISTING SMOKE DETECTORS TO BE PROVIDED WITH BATTERY BACK-UP PER SECTION 314.6 OF THE 2018 INTERNATIONAL RESIDENTIAL CODE(2018 IRC).
- SMOKE DETECTORS SHALL BE PERMANENTLY WIRED AND INTERCONNECTED WITHIN EACH DWELLING UNIT PRIOR TO FIRE DEPARTMENT APPROVAL.
- SMOKE DETECTORS SHALL BE PROVIDED TO PROTECT EACH SEPARATE SLEEPING AREA AND BE A MINIMUM 3'-0" FROM AIR VENT OPENING.
- WHERE THE HIGHEST POINT CEILING IN ROOM THAT OPENS TO HALLWAY SERVING BEDROOMS EXCEEDS THAT OF OPENING INTO HALLWAY BY 2'-0" OR MORE, SMOKE DETECTORS SHALL BE INSTALLED IN HALLWAY AND ADJACENT ROOM WITHIN 12" FROM HIGHEST POINT OF CEILING.
- CARBON MONOXIDE SENSORS SHALL HAVE PRIMARY POWER FROM AC PER IBC 2018 SECTION 908.7 & NFPA 720 SECTION 5.2.2. WHEN PROVIDED ALL CARBON STANDBY POWER SHALL MEET THE REQUIREMENTS OF 2018 IBC SECTION 908.7 & NFPA 720 SECTION 5.2.4.
- VERIFY PRECISE LAUNDRY ROOM CONFIGURATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL UL LISTED GARAGE DOOR CONTROL SYSTEM. SYSTEM SHALL INCLUDE 120V, 1PH. MOTOR, INTEGRAL 120V-12/24V. STEP DOWN TRANSFORMER 10W VOLTAGE WEATHERPROOF KEY SWITCH, LOW VOLTAGE DOOR BUTTON, LOW VOLTAGE CONDUCTORS, ETC. SEE GENERAL.
- TAMPER-RESISTANT LISTED RECEPTACLES IN DWELLING UNITS SHALL BE PROVIDED TO COMPLY WITH NEC 406.11.
- OUTLET BOXES IN THE GARAGE CEILING SHALL BE METAL PER 2015 IBC 708.1 & 708.2.
- OUTLET BOXES IN THE WALL BETWEEN THE DWELLING UNIT AND THE GARAGE SHALL BE METAL OR UL APPROVED FIRE RESISTIVE PLASTIC PER 2015 IBC 708.1 & 708.2.
- PER NEC 406.12 EXCEPTION (1),(2),(3) & (4) RECEPTACLES IN EVERY ROOM EXCEPT THE FOLLOWING LOCATIONS SHALL BE REQUIRED TO BE TAMPER RESISTANT: 1. RECEPTACLES LOCATED MORE THAN 5'4" ABOVE THE FLOOR. 2. RECEPTACLES THAT ARE PART OF A LUMINAIRE OR APPLIANCE. 3. A SINGLE RECEPTACLE FOR A SINGLE APPLIANCE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES WHERE SUCH RECEPTACLES ARE LOCATED IN SPACES DEDICATED FOR THE APPLIANCES SERVED AND, UNDER CONDITIONS OF NORMAL USE, THE APPLIANCES ARE NOT EASILY MOVED FROM ONE PLACE TO ANOTHER.
- EXTERIOR RECEPTACLES SHALL BE WEATHER RESISTANT(NEC 406.9) WITH IN-USE COVER.
- TELEPHONE SYSTEM NOT PART OF THIS CONTRACT.
- CABLE TELEVISION SYSTEM NOT PART OF THIS CONTRACT.
- ALL EXTERIOR JUNCTION BOXES AND OUTLETS SHALL BE WEATHERPROOF, EXTERIOR DISCONNECT SWITCHES SHALL BE MOUNTED WITHIN NEMA 3R.
- PER IECC SECTION C402.4.8 & NEC 410.116(A)(2) RECESSED LIGHTING. RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACES. ALL RECESSED LUMINAIRES SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM (0.944 L/S) WHEN TESTED IN ACCORDANCE WITH ASTM E 283 AT A 1.57 PSF (75 PA) PRESSURE DIFFERENTIAL. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
- PER IECC R404.1 LIGHTING EQUIPMENT (MANDATORY). A MINIMUM OF 90 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.
- LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS SHALL HAVE OPERABLE PARTS OF THE CONTROLS LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" ABOVE THE FLOOR. IF THE REACH IS OVER AN OBSTRUCTION BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH, PROVIDING THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25" FROM WALL BENEATH A CONTROL.



THESE PLANS ARE PROPERTY OF ARCHITECTURE ALL & ASSOCIATES. REPRODUCTION OR USE OF THESE PLANS OR DESIGN CONCEPT WITHOUT A WRITTEN APPROVAL FROM THE ARCHITECT WILL CONSTITUTE LEGAL VIOLATION. THESE PLANS ARE PRELIMINARY WHEN NOT STAMPED AND SEALED & THIS SHALL NOT BE USED FOR CONSTRUCTION OR PERMITS. NO CONSTRUCTION SHALL BEGIN PRIOR TO BUILDING PERMIT ISSUANCE.

**KHAN FAMILY RESIDENCE**  
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ALL DIMENSIONS AND MATERIALS ARE UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND MATERIALS.

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CHECKED BY: K.H. DATE: 4/25/23  
00/00/23 1ST CITY SUBMITTAL

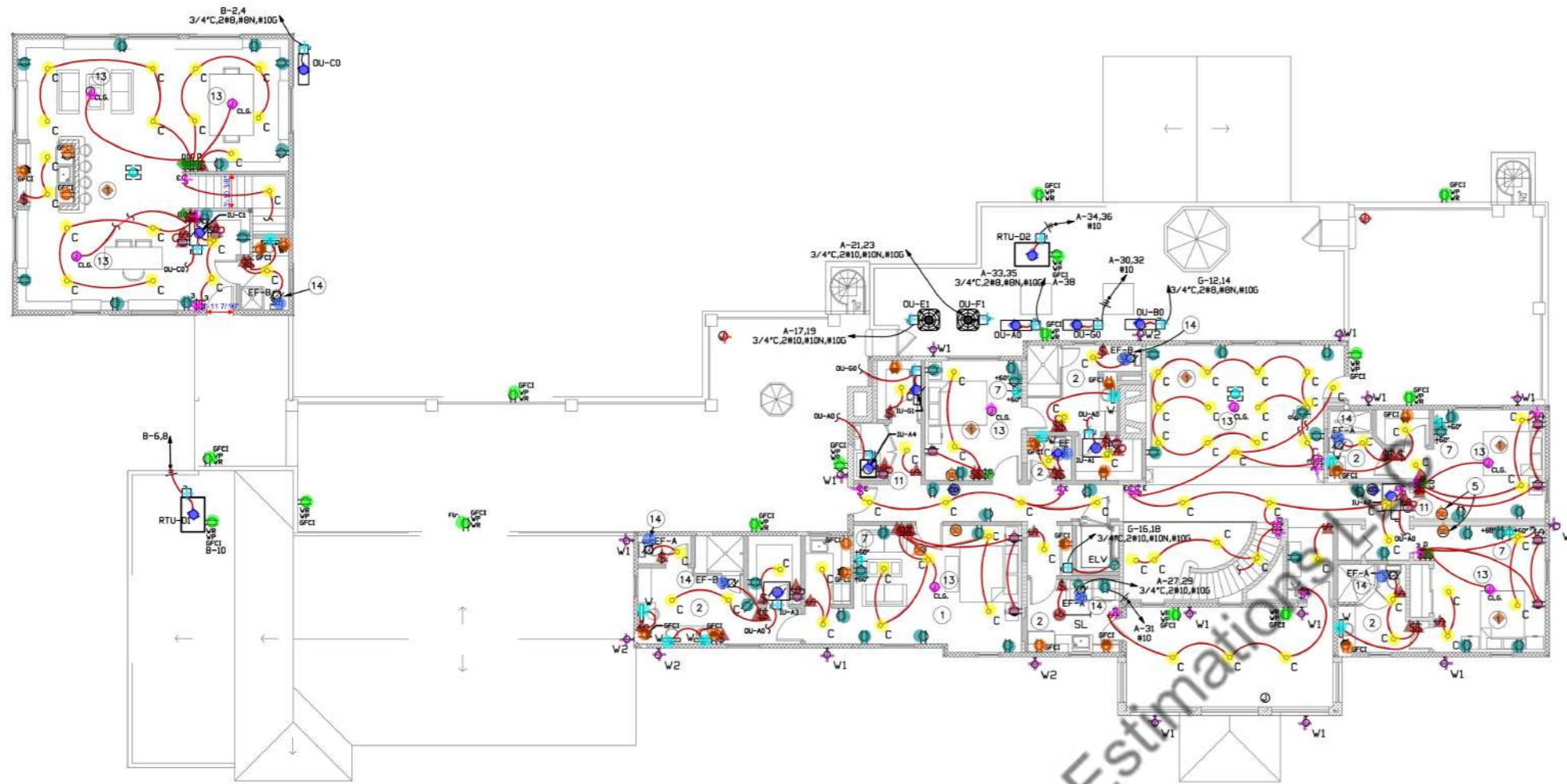
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**MAVEN ENGINEERING** Job #23RSP070  
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Guadalupe, Arizona 85283

Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.



## SECOND FLOOR ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

### Electrical Conduits

- Light Type C: 6" Recessed Downlight
- Light Type S/SL: Linear Fluorescent T8 Strip Light
- Light Type W: Surface Mounted Decotive Vanity Light
- Light Type W1/W2: Surface Mounted Decoartive Wall Sconce
- Duplex Receptacle (Nema-5-20R)
- GFCI, WP, WR Duplex Receptacle (Nema-5-20R) 125V, 20 Amp
- GFCI Duplex Receptacle (Nema-5-20R) 125V, 20 Amp
- Half Switch Duplex Receptacle
- Floor Mounted Duplex Receptacle
- Single Way Switch
- Dimmer Switch
- Three Way Switch
- HP Rated Manual Motor Starter With Thermal Overloads
- Electric Motor
- Disconnect Switch
- Junction Box
- Ceiling Fan Junction Box
- TV Outlet
- Data & Telephone Outlet Combo
- Photo Electric Smoke Detector
- Carbon Monoxide Sensor
- ARC-Fault Circuit Interrupter Outlet

768.7 FT	■
80.0 EA	●
1.0 EA	●
8.0 EA	●
17.0 EA	+
45.0 EA	●
15.0 EA	●
19.0 EA	●
13.0 EA	▲
2.0 EA	▲
47.0 EA	▲
8.0 EA	▲
18.0 EA	+
8.0 EA	●
13.0 EA	◆
14.0 EA	+
2.0 EA	+
8.0 EA	◆
4.0 EA	◆
2.0 EA	◆
5.0 EA	▲
2.0 EA	◆
5.0 EA	◆

### KEYED NOTES :

1. ARC-FAULT CIRCUIT INTERRUPTER OUTLET IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, DENS, BEDROOMS, CLOSETS, HALLWAYS, KITCHENS, LAUNDRY ROOMS SHALL BE LISTED "COMBINATION TYPE" PER NEC 210.12 (B) (TYPICAL).
2. MOUNTING HEIGHT OF OUTLETS ABOVE COUNTER SHALL BE VERIFIED WITH ARCHITECT PRIOR TO ROUGH-IN. ALL OUTLETS WITHIN 6'-0" OF SINKS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI) TYPICAL.
3. OUTLET FOR HOOD COMBINATION UNIT. VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN.
4. HALF SWITCHED DUPLEX OUTLET FOR GARBAGE DISPOSER AND DISHWASHER MOUNTED BELOW COUNTER. UNSWITCHED TERMINALS FOR DISHWASHER.
5. PHOTOELECTRIC SMOKE DETECTOR. SEE GENERAL NOTES.
6. NEW ELECTRICAL PANEL. PAINT COVER TO MATCH WALL. (TYPICAL)
7. VERIFY RECEPTACLE AND TV CABLE MOUNTING HEIGHT PRIOR TO ROUGH IN. CENTER VERTICALLY ON WALL.
8. PROVIDE J-BOX FOR WATER HEATER IGNITER VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.
9. NEW SES.
10. AT THE KITCHEN ISLAND; UNDERGROUND INSULATED CONDUCTORS AND CABLES FOR BRANCH CIRCUITS TO BE LISTED FOR USE IN WET LOCATIONS.
11. PROVIDE HALF SWITCHED OUTLET AND ON/OFF SWITCH IN ATTIC SPACE FOR HVAC MAINTENANCE. COORDINATE SWITCH LOCATION AND MOUNTING WITH STRUTS.
12. PROVIDE CARBON MONOXIDE SENSOR.
13. U.L. LISTED CEILING FAN JUNCTION BOX. SUPPORT PER NEC 422.18 (TYPICAL).
14. EXHAUST FAN WITH INTEGRAL DISCONNECT SWITCH. VERIFY PRECISE LOCATION PRIOR TO ROUGH-IN (TYPICAL).
15. SWITCH SHOWN FOR REFERENCE. SEE POWER PLAN FOR HALF SWITCH OUTLET LOCATION AND CIRCUIT.
16. VERIFY U.C. LIGHTING CONTROL SWITCH LOCATION WITH OWNER/MILLWORK PRIOR TO INSTALL. TYPICAL.

### GENERAL NOTES:

1. PROVIDE GFCI PROTECTION FOR RECEPTACLES WITHIN 6'-0" OF ALL LAVATORIES, SINKS, AND BASINS WHICH SHALL BE SUPPLIED WITH A 20 AMP BRANCH CIRCUIT THAT SUPPLIES NO OTHER LOADS. NEC 210.8.
2. PROVIDE GFCI PROTECTED RECEPTACLES AT ALL EXTERIOR, BATHROOM, AND GARAGE LOCATIONS WHICH SHALL BE SUPPLIED WITH A 20 AMP BRANCH CIRCUIT THAT SUPPLIES NO OTHER LOADS. NEC 210.8, 210.52.
3. PROVIDE A MINIMUM OF TWO 20 AMP SMALL APPLIANCE BRANCH CIRCUITS FOR THE KITCHEN, DINING, BREAKFAST ROOMS. NEC 210.4(c)(1), 210.52(b)(1), 220.16(e).
4. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT LOCATION, QUANTITIES, AND INSTALLATION REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT AND OUTLETS IN MILL WORK AND COUNTER AREAS.
5. ALL SWITCHING AND RECEPTACLES ARE SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR TO COORDINATE EXACT LOCATION WITH OWNER & ARCHITECT PRIOR TO ROUGH IN. COORDINATE WITH NEC 210.52 FOR REQUIREMENTS.
6. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION FOR ALL MECHANICAL AND PLUMBING EQUIPMENT. PROVIDE ELECTRICAL SERVICE AS REQUIRED FOR EACH ITEM.
7. ALL EXTERIOR MECHANICAL UNIT FUSED DISCONNECTS SHALL BE WEATHERPROOF, HEAVY DUTY RATED.
8. ALL 15A, 20A, 120V BRANCH CIRCUITS IN DWELLING UNITS IN FAMILY RMS, DINING RMS, PARLORS, DEN, BEDROOMS, CLOSETS HALLWAYS OR SIMILAR SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER (AFCI) COMBINATION DEVICE. NEC 210.12.
9. PROVIDE SEPARATE 20 AMP BRANCH CIRCUIT TO THE LAUNDRY. NEC 210.11(c), 210.52(f), 220.16(b).
10. RECEPTACLE OUTLETS FOR RANGES AND CLOTHES DRYERS SHALL BE A 2 POLE WITH GROUND TYPE. 4 WIRE GROUNDING TYPE FLEXIBLE CORDS WILL BE REQUIRED FOR CONNECTION OF RANGES & CLOTHES DRYERS. THE BONDING JUMPER SHALL NOT BE CONNECTED BETWEEN THE NEUTRAL TERMINAL AND THE FRAME OF THE APPLIANCE. NEC 250.140.
11. MC CABLE MAY BE USED WHERE PERMITTED PER CODE.
12. SMOKE DETECTORS SHALL BE SELF-CONTAINED, ALTERNATING/DIRECT CURRENT AND U.L. LISTED. ALL LISTED SMOKE DETECTORS TO BE PROVIDED WITH BATTERY BACK-UP PER SECTION 314.6 OF THE 2018 INTERNATIONAL RESIDENTIAL CODE(2018 IRC).
13. SMOKE DETECTORS SHALL BE PERMANENTLY WIRED AND INTERCONNECTED WITHIN EACH DWELLING UNIT PRIOR TO FIRE DEPARTMENT APPROVAL.
14. SMOKE DETECTORS SHALL BE PROVIDED TO PROTECT EACH SEPARATE SLEEPING AREA AND BE A MINIMUM 3'-0" FROM AIR VENT OPENING.
15. WHERE THE HIGHEST POINT CEILING IN ROOM THAT OPENS TO HALLWAY SERVING BEDROOMS EXCEEDS THAT OF OPENING INTO HALLWAY BY 2'-0" OR MORE, SMOKE DETECTORS SHALL BE INSTALLED IN HALLWAY AND ADJACENT ROOM WITHIN 12" FROM HIGHEST POINT OF CEILING.
16. CARBON MONOXIDE SENSORS SHALL HAVE PRIMARY POWER FROM AC PER IBC 2018 SECTION 908.7 & NFPA 720 SECTION 5.2.2. WHEN PROVIDED ALL CARBON STANDBY POWER SHALL MEET THE REQUIREMENTS OF 2018 IBC SECTION 908.7 & NFPA 720 SECTION 5.2.4.
17. VERIFY PRECISE LAUNDRY ROOM CONFIGURATION WITH ARCHITECT PRIOR TO ROUGH-IN.
18. CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE AND OPERATIONAL UL LISTED GARAGE DOOR CONTROL SYSTEM. SYSTEM SHALL INCLUDE 120V, 1PH. MOTOR, INTEGRAL 120V-12/24V. STEP DOWN TRANSFORMER 10W VOLTAGE WEATHERPROOF KEY SWITCH, LOW VOLTAGE DOOR BUTTON, LOW VOLTAGE CONDUCTORS, ETC. SEE GENERAL.
19. TAMPER-RESISTANT LISTED RECEPTACLES IN DWELLING UNITS SHALL BE PROVIDED TO COMPLY WITH NEC 406.11.
20. OUTLET BOXES IN THE GARAGE CEILING SHALL BE METAL PER 2015 IBC 708.1 & 708.2.
21. OUTLET BOXES IN THE WALL BETWEEN THE DWELLING UNIT AND THE GARAGE SHALL BE METAL OR UL APPROVED FIRE RESISTIVE PLASTIC PER 2015 IBC 708.1 & 708.2.
22. PER NEC 406.12 EXCEPTION (1),(2),(3) & (4) RECEPTACLES IN EVERY ROOM EXCEPT THE FOLLOWING LOCATIONS SHALL BE REQUIRED TO BE TAMPER RESISTANT: 1. RECEPTACLES LOCATED MORE THAN 5'4" ABOVE THE FLOOR. 2. RECEPTACLES THAT ARE PART OF A LUMINAIRE OR APPLIANCE. 3. A SINGLE RECEPTACLE FOR A SINGLE APPLIANCE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES WHERE SUCH RECEPTACLES ARE LOCATED IN SPACES DEDICATED FOR THE APPLIANCES SERVED AND, UNDER CONDITIONS OF NORMAL USE, THE APPLIANCES ARE NOT EASILY MOVED FROM ONE PLACE TO ANOTHER.
23. EXTERIOR RECEPTACLES SHALL BE WEATHER RESISTANT(NEC 406.9) WITH IN-USE COVER.
24. TELEPHONE SYSTEM NOT PART OF THIS CONTRACT.
25. CABLE TELEVISION SYSTEM NOT PART OF THIS CONTRACT.
26. ALL EXTERIOR JUNCTION BOXES AND OUTLETS SHALL BE WEATHERPROOF, EXTERIOR DISCONNECT SWITCHES SHALL BE MOUNTED WITHIN NEMA 3R.
27. PER IECC SECTION C402.4.8 & NEC 410.116(A)(2) RECESSED LIGHTING. RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACES. ALL RECESSED LUMINAIRES SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM (0.944 L/S) WHEN TESTED IN ACCORDANCE WITH ASTM E 283 AT A 1.57 PSF (75 PA) PRESSURE DIFFERENTIAL. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
28. PER IECC R404.1 LIGHTING EQUIPMENT (MANDATORY). A MINIMUM OF 90 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.
29. LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS SHALL HAVE OPERABLE PARTS OF THE CONTROLS LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" ABOVE THE FLOOR. IF THE REACH IS OVER AN OBSTRUCTION BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH, PROVIDING THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25" FROM WALL BENEATH A CONTROL.



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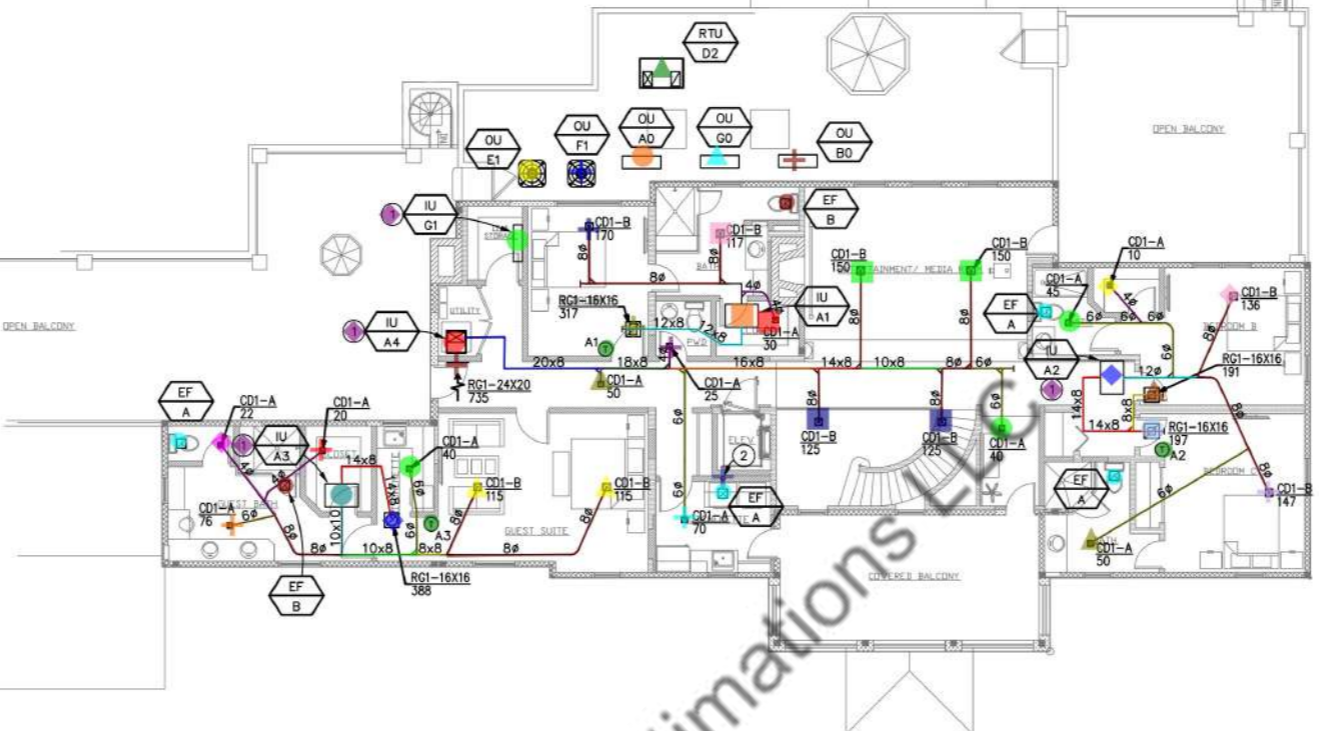
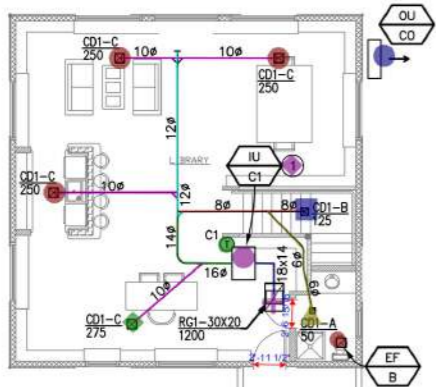
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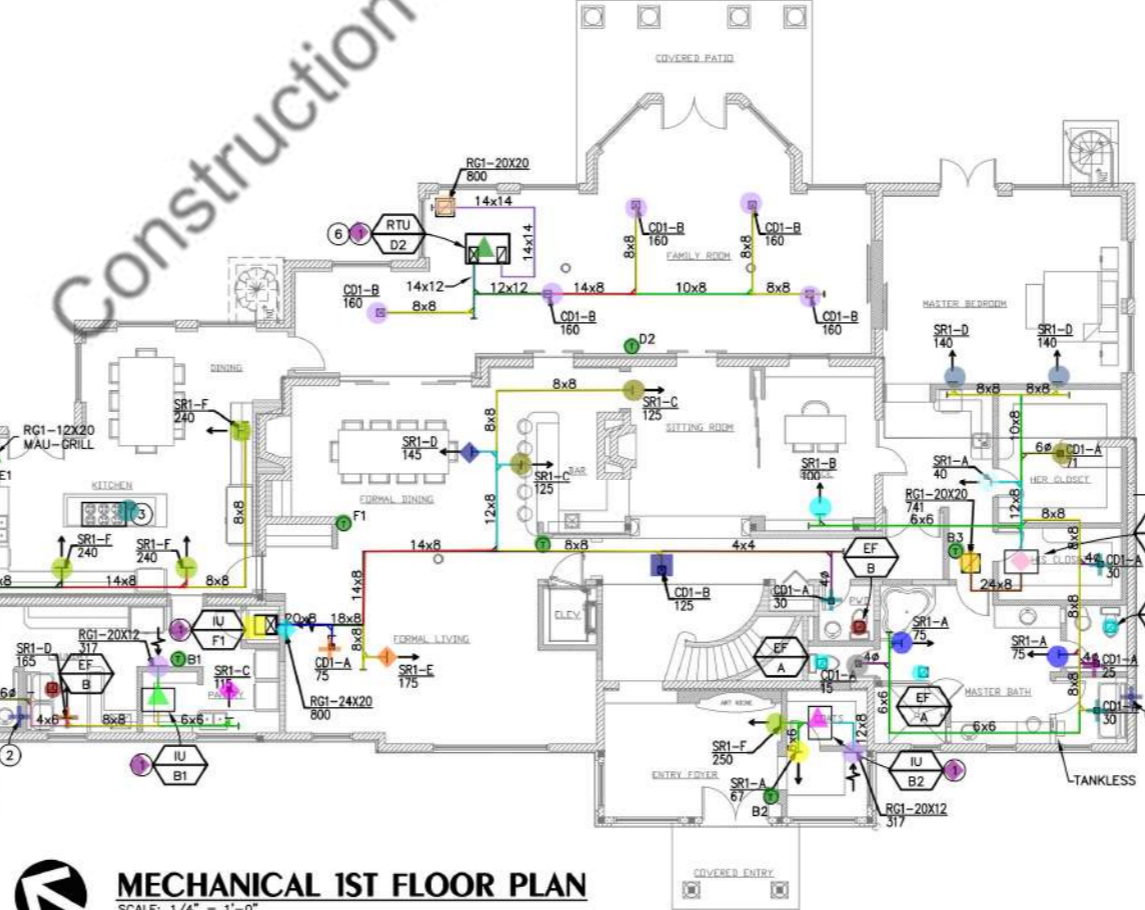
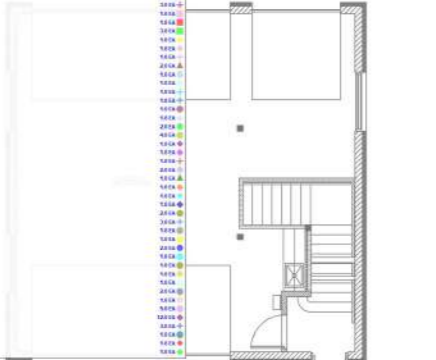


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Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.



**MECHANICAL 2ND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

- 1/2" Dia Duct
- 3/4" Dia Duct
- 1" Dia Duct
- 1 1/4" Dia Duct
- 1 1/2" Dia Duct
- 1 3/4" Dia Duct
- 2" Dia Duct
- 2 1/2" Dia Duct
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**MECHANICAL 1ST FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**KEYED NOTES :**

1. 3/4" CD DOWN IN WALL, TERMINATE WITH 90° ELBOW 6" AFG. 3/4" OVERFLOW DRAIN TO TERMINATE IN OBSERVABLE LOCATION.
2. 4" DRYER VENT TO ROUTE IN TRUSS SPACE TO EXTERIOR WALL. TERMINATE WITH WALL CAP/BACKDRAFT DAMPER
3. RESIDENTIAL STYLE HOOD WOLF #PW362418 OR EQUAL, PROVIDE AT 600 CFM EXHAUST WITH INTERNAL BLOWER. HOOD TO BE INTERLOCKED WITH MAKE UP AIR DAMPER WOLF #820071 COORDINATE LOCATION ON DRAWINGS.
4. PROVIDE 12X12 DUCT IN TRUSS SPACE TO INTAKE LOUVER FOR MAKE UP AIR INTAKE.
5. MAKE UP AIR DAMPER TO BE INTERLOCKED WITH HOOD PROVIDE 12X20 FILTER GRILLE.
6. ALL DUCTWORK LOCATED ON ROOF FOR RTU-D2.

**GENERAL NOTES :**

1. MOUNT THERMOSTATS 48" ABOVE FINISH FLOOR TO CENTER.
2. DUCTWORK AND EQUIPMENT SHOWN IS DIAGRAMMATIC. COORDINATE AND ROUTE DUCTWORK TO MEET JOB REQUIREMENTS. LOCATION OF EQUIPMENT MUST BE COORDINATED WITH ALL DISCIPLINES BEFORE FINAL LOCATIONS ARE SELECTED. WEIGHTS OF EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH STRUCTURAL SYSTEMS BEFORE EQUIPMENT CAN BE INSTALLED AT JOBSITE.
3. SPACE ALLOCATED FOR MECHANICAL AND OTHER WORK ABOVE THE SUSPENDED CEILING IS CRITICAL. LIGHT FIXTURES AND AIR DIFFUSERS HAVE BEEN LOCATED TO ACHIEVE A DEFINITE ARCHITECTURAL EFFECT AND MAY NOT BE CHANGED WITHOUT THE CONSENT OF THE ARCHITECT. BECOME FAMILIAR WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO FABRICATING AND INSTALLING ANY MATERIALS. HANG DUCTWORK AS CLOSE AS POSSIBLE TO THE STRUCTURE ABOVE, UNLESS INDICATED OTHERWISE.
4. COORDINATE THE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
5. PLANS SHALL CONFORM TO THE 2018 IRC AS ADOPTED BY CITY OF PHOENIX.
6. ALL DIFFUSERS AND GRILLES ARE LESS THAN 20LBS, CONTRACTOR SHALL POSITIVELY ATTACH TO CEILING MAIN RUNNERS
7. THERMOSTATS ARE LOW VOLTAGE PROGRAMMABLE THERMOSTATS AND ARE TO BE LOCATED AS SHOWN.
8. REFER TO ARCHITECTURAL LOCATION OF DRAWINGS FOR EXACT REGISTERS, GRILLES & DIFFUSERS.
9. R303.8 REQUIRED HEATING AND COOLING. WHEN THE WINTER DESIGN TEMPERATURE IN TABLE R301.2(1) IS BELOW 60F (16C), EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING AND COOLING FACILITIES CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE BETWEEN OF 70 - 68 F (201C) AND 90F (50C) AT A POINT 3 FEET (914 MM) ABOVE THE FLOOR AND 2 FEET (610 MM) FROM EXTERIOR WALL IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. THE INSTALLATION OF ONE OR MORE PORTABLE SPACE HEATERS OR COOLERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THIS SECTION.
10. MANUAL S J & D - ALTERNATE METHODS HAVE BEEN SUBMITTED. LOAD CALCULATION IS SHOWN ON DRAWINGS AND IS EQUAL TO MANUAL J USING ASHRAE REQUIREMENTS. REFERENCE MECHANICAL SCHEDULE FOR MANUAL S REQUIREMENTS AND THE FLOOR PLAN FOR ALL DUCT SIZES.

NOTE: ALL SUPPLY DUCTWORK IS SIZED AT 0.08"SP PER 100 FT AND ALL RETURN DUCT SIZED AT 0.05"SP PER 100 FT. ACCORDING TO ENGINEERING PRACTICES.



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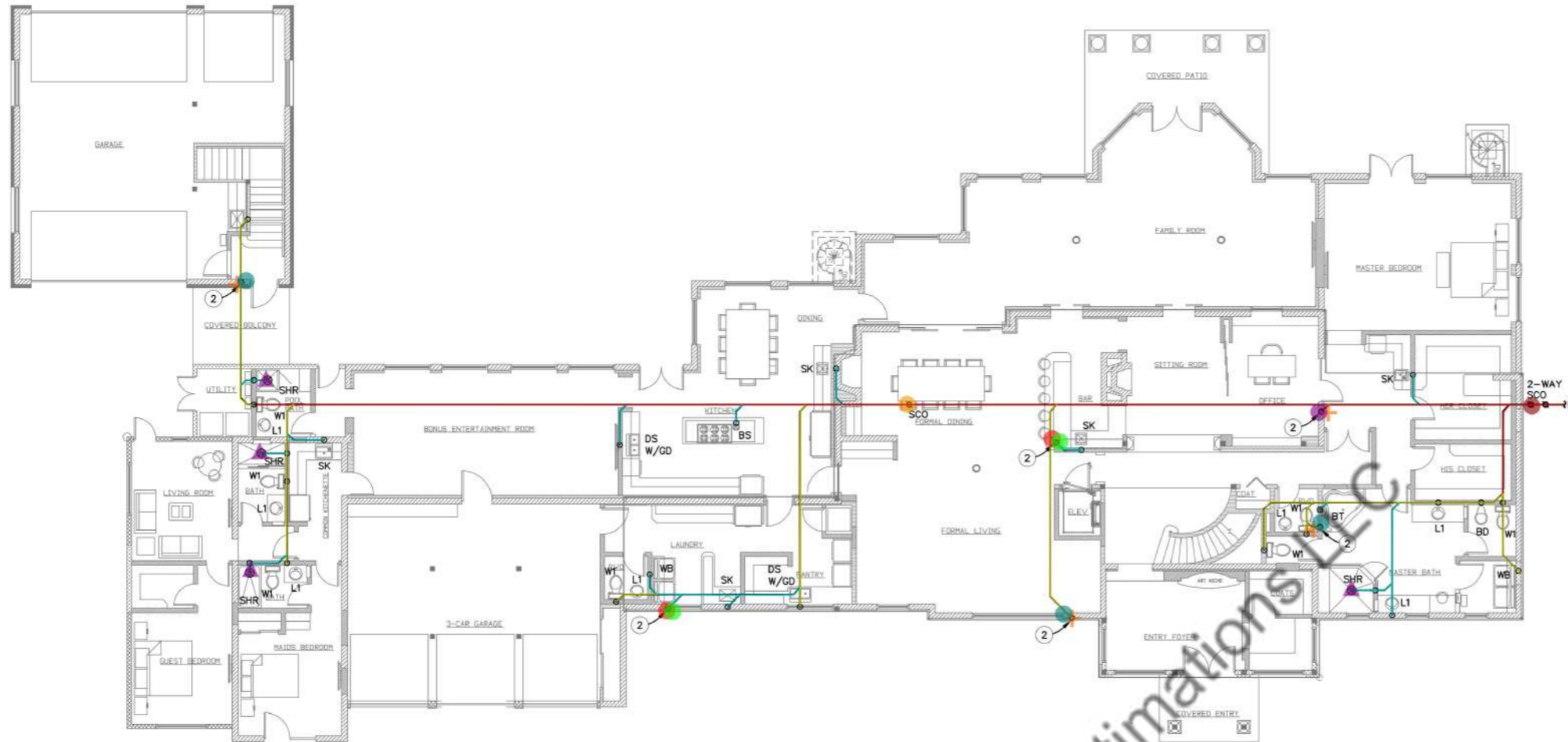
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### PLUMBING WASTE TRENCHING PLAN

SCALE: 1/8" = 1'-0"

Wall Clean Out Mentioned on Riser Diagram So their Total Count Has Added In BOQ Sheet

- FD: Floor Drain
- SCO: Surface Clean Out
- SCO: Two Way Surface Clean Out
- 4" Waste Pipe
- 3" Waste Pipe
- 2" Waste Pipe
- 3" Waste Pipe Up
- 2" Vent Pipe Up
- 2" Waste Pipe Up
- 1-1/2" Vent Pipe up
- 2-1/2" Vent Pipe Up

- 4.0 EA ▲
- 1.0 EA ●
- 1.0 EA ●
- 162.7 FT
- 145.3 FT
- 81.0 FT
- 4.0 EA +
- 3.0 EA ●
- 2.0 EA ●
- 2.0 EA ●
- 1.0 EA ●

#### KEYED NOTES :

- CONTINUATION TO EXISTING MANHOLE. VERIFY EXACT LOCATION IN FIELD, INVERT, AND DIRECTION OF FLOW PRIOR TO WORK.
- WASTE DROP FROM UPPER TO MAIN FLOOR. SEE WASTE AND VENT SCHEMATIC, SHEET P-4.

#### GENERAL NOTES :

- EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
- BEFORE SUBMITTING BID, THE PLUMBING CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND INCLUDE IN HIS BID AN AMOUNT TO FURNISH AND INSTALL ANY FIXTURES WHICH ARE SHOWN IN ADDITION TO FIXTURES SHOWN ON THE PLUMBING DRAWINGS.
- CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW WASTE LINES ARE TO BE CONNECTED BEFORE MAKING UP OR INSTALLATION OF NEW WASTE SYSTEM.
- CONTRACTOR SHALL VERIFY AND COORDINATE LOCATION OF ALL PLUMBING LINES WITH DUCTWORK AND ELECTRICAL SERVICES.
- THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
- ALL VENTS THROUGH ROOF SHALL BE 10'-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
- WHERE POSSIBLE, THE VENTS TOGETHER SO THAT A MINIMUM NUMBER TERMINATE THROUGH THE ROOF.
- CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
- CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
- CONTRACTOR SHALL ROUGH-IN ALL WASTES AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURERS SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED.
- ASSUMED WATER PRESSURE—CONTRACTOR SHALL VERIFY ACTUAL WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE IS LESS THAN 50 PSI CONTRACTOR SHALL CONTACT THE ENGINEER FOR PIPE SIZING EVALUATION. IF PRESSURE EXCEEDS 80 PSI, A PRESSURE REDUCING VALVE SHALL BE PROVIDED. PIPING VELOCITY SHALL NOT EXCEED 8 FEET PER SECOND.
- PLANS AND WORK SHALL CONFORM TO 2018 IPC AND IFGC AS ADOPTED BY THE CITY OF PHOENIX.

#### FIELD VERIFICATION NOTES :

- THE PLUMBING CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
  - EXACT PLACEMENT SIZE CAPACITY MANUFACTURER AND CONDITION OF ALL EXISTING PLUMBING EQUIPMENT WITHIN SCOPE OF WORK, WHETHER SPECIFICALLY SHOWN OR NOT.
  - SIZE AND LOCATION OF ALL EXISTING WASTE, VENT AND WATER PIPING.
- ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, WATER, WASTE AND VENT PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN HIS BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
- NO ALLOWANCES WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
- ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTORS BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION

#### PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—GW—	GREASE WASTE (GW)	●	POINT OF CONNECTION
---	EXISTING (E)	⊘	SHUT OFF VALVE (GATE)
---	SOIL WASTE LINE (W)	⊘	CHECK VALVE
---	VENT LINE (V)	⊘	UNION
---	COLD WATER (C.W.)	⊘	LUBRICATED PLUG VALVE
---	HOT WATER (H.W.)	⊘	HOSE BIBB (H.B.)
---	HOT WATER RETURN	⊘	BRANCH RISE OFF MAIN
—G—	GAS LINE	⊘	S.C.O. SURFACE CLEANOUT
—TW—	TEMPERED WATER	⊘	F.C.O. FLOOR CLEANOUT
—SW—	SOFT WATER	⊘	GLOBE VALVE
---	BUILDING SEWER	⊘	BALL VALVE
⊘	FLOOR DRAIN (F.D.)	—R.D.L.—	ROOF DRAIN LEADER
⊘	FLOOR SINK (F.S.)	—O.D.L.—	OVERFLOW DRAIN LEADER
⊘	ROOF DRAIN (R.D.)	—CD—	CONDENSATE DRAIN LINE
⊘	OVER FLOW DRAIN	—ICW—	INDUSTRIAL COLD WATER

NOTE: ONLY THOSE SYMBOLS SHOWN ON THE DRAWING APPLY

#### PIPING MATERIALS

SANITARY WASTE AND VENT SYSTEMS  
 PIPING:  
 ABS CONFORMING TO ASTM D 2661.

DOMESTIC WATER SYSTEM  
 PIPING:

ABOVE GRADE: TYPE "L" HARD DRAWN COPPER, CONFORMING TO ASTM B-88. OR PEX CONFORMING TO ASTM F 876. PEX PIPING 1.5" AND LARGER MUST BE RIGID TUBING.

BELOW SLAB: TYPE "K" SOFT DRAWN COPPER, CONFORMING TO ASTM B-88, WITH PLASTIC SLEEVE.

PIPING, EXTERIOR BELOW GRADE ONLY:  
 PVC CONFORMING ASTM D 1785, WITH TRACER WIRE.

FUEL GAS SYSTEM  
 PIPING ABOVE GRADE:  
 BLACK STEEL PIPE, SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A-53, GRADE A OR B, SEAMLESS OR WELDED PIPE.

PIPING, EXTERIOR BELOW GRADE ONLY:  
 POLYETHYLENE PLASTIC PIPE  
 PER ASTM D 2513, PIPE SHALL BE MARKED GAS AND HAVE A TRACER WIRE MINIMUM 18 AWG

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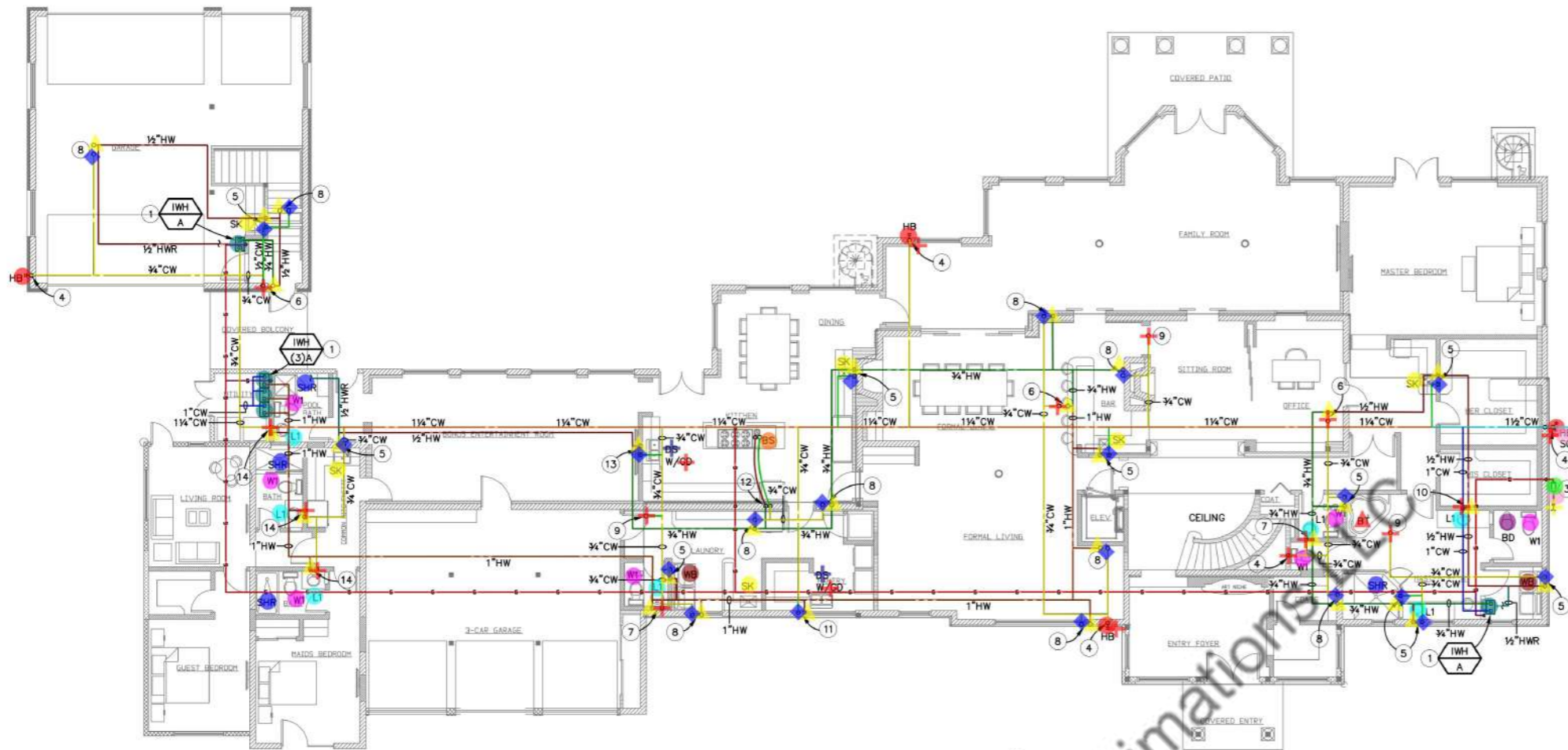
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**P-1**





**FIRST FLOOR PLUMBING PLAN**

SCALE: 1/8" = 1'-0"

**KEYED NOTES :**

1. FULL SIZE T&P TO TERMINATE AT EXTERIOR +6" A.F.G. W/90° ELBOW.
2. EXTEND NEW 1 1/2" CW TO CONNECT TO EXISTING WATER METER. VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. VERIFY THAT EXISTING METER IS SIZED 1" OR LARGER. REPLACE IF NECESSARY.
3. NEW GAS METER. VERIFY LOCATION WITH GAS COMPANY.
4. 3/4" CW DOWN IN WALL TO FIXTURE.
5. 1/2" H&CW DOWN IN WALL TO FIXTURE.
6. 1/2" HW AND 3/4" CW UP TO 2ND FLR.
7. 1/2" HW AND 3/4" CW DOWN IN WALL. PROVIDE 1/2" H&CW TO LAV AND 3/4" CW TO WC.
8. 1/2" H&CW UP TO 2ND FLR.
9. 3/4" CW UP TO 2ND FLR.
10. 1/2" HW AND 3/4" CW DOWN IN WALL. PROVIDE 1/2" H&CW TO LAV, 1/2" CW TO BD, AND 3/4" CW TO WC.
11. 1/2" H&CW DOWN IN WALL. PROVIDE 1/2" H&CW EACH TO DS AND SK.
12. 1/2" H&CW DOWN IN WALL. PROVIDE 3/4" CW TO REFRIGERATOR SOV BOX. PROVIDE HAMMER ARRESTORS PRIOR TO SOV BOX CONNECTION. CONTINUE 1/2" H&CW DOWN TO BELOW GRADE AND ROUTE TO ISLAND TO SERVE SK.
13. 1/2" H&CW DOWN IN WALL. PROVIDE 1/2" H&CW TO DS AND 1/2" HW TO DW. COORDINATE DW CONNECTIONS IN FIELD.
14. 1/2" HW AND 3/4" CW DOWN IN WALL. PROVIDE 1/2" H&CW TO LAV, 1/2" H&CW TO SHR, AND 3/4" CW TO WC.

• IWH-A: Instantaneous gas Commercial Water Heater	5.0 EA
• HB: Hose Bibb	4.0 EA
• SOV	2.0 EA
• SK: Sink	6.0 EA
• SHR: Shower	4.0 EA
• W1: Water Closet	7.0 EA
• L1: Lavatory	7.0 EA
• WB: Cloth Washer Box	2.0 EA
• GD: Garbage Disposal	2.0 EA
• DS: Double Sink	2.0 EA
• BS: Bar Sink	1.0 EA
• BD: Floor Mounted Bidet	1.0 EA
• BT: Bath Tub	1.0 EA
• Gas Meter	1.0 EA
• Regulator	1.0 EA
2-1/2" Gas Pipe	224.5 FT
1-1/4" Gas Pipe	11.1 FT
1/2" Hot Water Pipe	179.7 FT
3/4" Hot Water Pipe	153.6 FT
3/4" Cold Water Pipe	284.7 FT
1-1/4" Cold Water Pipe	133.2 FT
1-1/2" Cold Water Pipe	18.4 FT
1" Cold Water Pipe	33.1 FT
1" Hot Water Pipe	154.5 FT
1/2" Cold Water Pipe	48.2 FT
1/2" Hot Water Return Pipe	14.9 FT
1/2" Hot Water Pipe Up	31.0 EA
1/2" Cold Water Pipe Up	22.0 EA
3/4" Cold Water Pipe Up	16.0 EA



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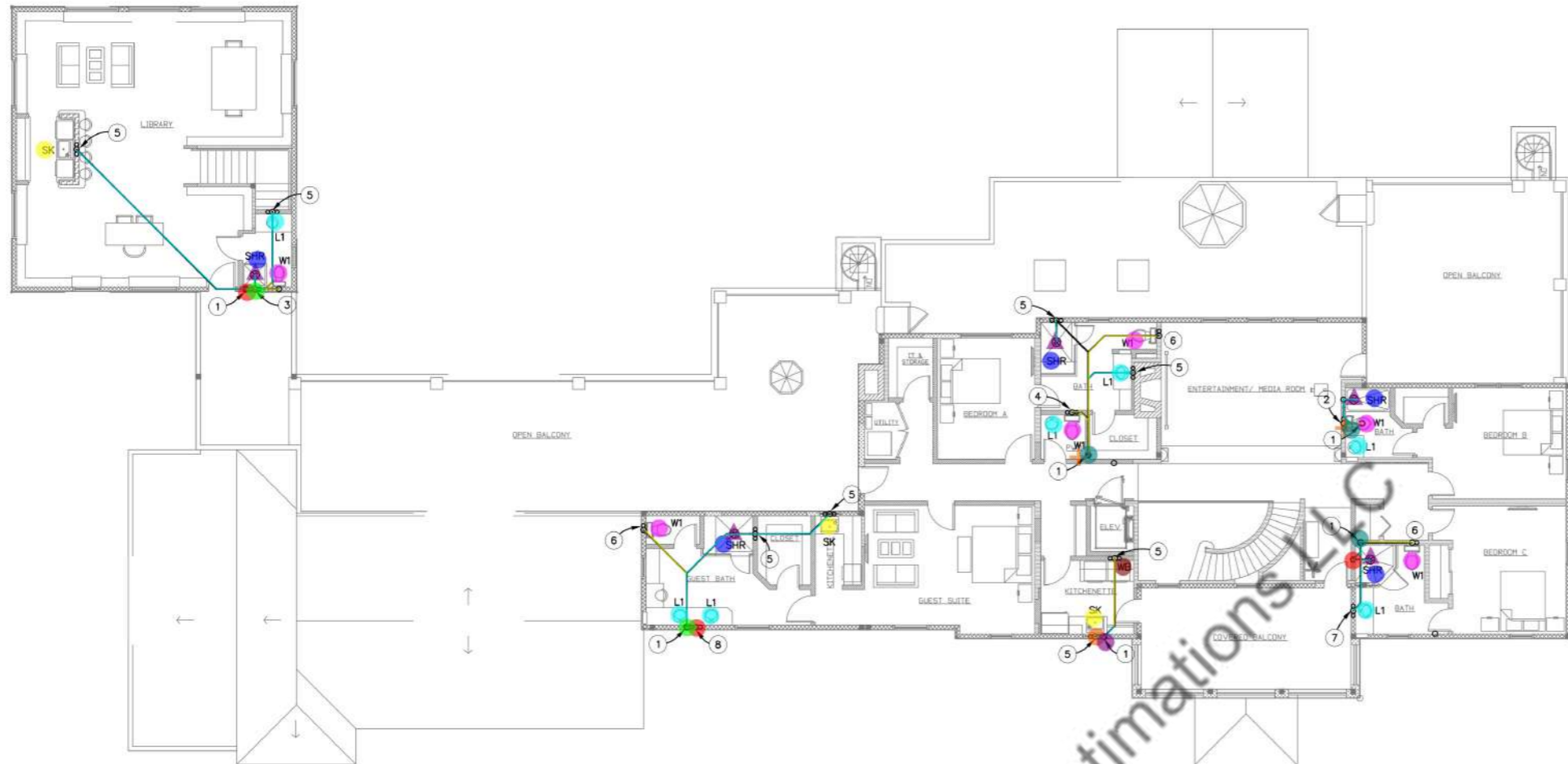
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**SECOND FLOOR PLUMBING PLAN**  
SCALE: 1/8" = 1'-0"

**KEYED NOTES :**

1. WASTE DROP FROM UPPER TO MAIN FLOOR. SEE WASTE AND VENT SCHEMATIC, SHEET P-4.
2. 1/2"HW AND 3/4"CW UP IN WALL. PROVIDE 1/2"HW&CW TO LAV, 1/2"HW&CW TO SHR, AND 3/4"CW TO WC.
3. 1/2"HW AND 3/4"CW UP IN WALL. PROVIDE 1/2"HW&CW TO SHR AND 3/4"CW TO WC.
4. 1/2"HW AND 3/4"CW UP IN WALL. PROVIDE 1/2"HW&CW TO LAV AND 3/4"CW TO WC.
5. 1/2"HW&CW UP IN WALL TO FIXTURE
6. 3/4"CW UP IN WALL TO FIXTURE.
7. 1/2"HW&CW UP IN WALL. PROVIDE 1/2"HW&CW EACH TO LAV AND SHR.
8. 1/2"HW&CW UP IN WALL. PROVIDE 1/2"HW&CW TO EACH (2)LAV.

- |                        |         |
|------------------------|---------|
| ● SK: Sink             | 3.0 EA  |
| ● L1: Lavatory         | 7.0 EA  |
| ● W1: Water Closet     | 6.0 EA  |
| ● SHR: Shower          | 5.0 EA  |
| ● WB: Cloth Washer Box | 1.0 EA  |
| ● FD: Floor Drain      | 5.0 EA  |
| ┌─┐ 2" Waste Pipe      | 89.7 FT |
| ┌─┐ 3 Waste Pipe       | 47.9 FT |
| ● 2" Waste Pipe Up     | 3.0 EA  |
| ● 1-1/2" Vent Pipe up  | 2.0 EA  |
| ● 2-1/2" Vent Pipe Up  | 1.0 EA  |
| ● 2" Vent Pipe Up      | 3.0 EA  |
| ● 3" Waste Pipe Up     | 2.0 EA  |
| ● 3" Vent Pipe Up      | 1.0 EA  |

All The Cold Water & Hot Water Risers Which are Also Mention in Keynotes Of This Sheet Have Already Covered On 1st Floor



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8011 S Avenida del Yaqui  
Guadalupe, Arizona 85283  
Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.