

NOTES:

- THE EXISTING ONE LINE HAS BEEN DEVELOPED BASED ON EXISTING DRAWINGS AND READILY AVAILABLE OBSERVATIONS. NO CIRCUIT TRACES WERE USED TO VERIFY THE SYSTEM CONFIGURATION. WIRE SIZES SHOWN ARE FOR ESTIMATING PURPOSES ONLY AND HAVE NOT BEEN FIELD VERIFIED. NOT ALL DISTRIBUTION EQUIPMENT IS SHOWN ON THIS DRAWING.

KEYNOTES

- EXISTING PANELBOARD AFFECTED BY NEW CONSTRUCTION.

OVERCURRENT DEVICE RATING	WIRE SIZE AWG. OR KCMIL			5 WIRE FEEDERS (200% NEUTRAL) WITH EQUIP. GROUND.		4 WIRE FEEDERS WITH EQUIPMENT GROUND		3 WIRE FEEDERS WITH EQUIPMENT GROUND	
	PHASE & NEUT.	GND.		COND. SIZE	IDENT.	COND. SIZE	IDENT.	COND. SIZE	IDENT.
20	12	12		3/4"	A2	3/4"	A	3/4"	A1
30	10	10		3/4"	B2	3/4"	B	3/4"	B1
40	8	10		3/4"	C2	3/4"	C	3/4"	C1
60	6	10		1"	D2	1"	D	1"	D1
70	4	10		1 1/4"	E2	1 1/4"	E	1 1/4"	E1

NOTES:

- CONDUIT SIZES ARE BASED ON TYPE THHN, THWN, THWN-2 CONDUCTORS, TABLE C1, 2008 NATIONAL ELECTRIC CODE.
- WHERE MULTIPLE SETS ARE SPECIFIED, PROVIDE 3 PHASE, NEUTRAL AND GROUND IN EACH CONDUIT. CONDUCTORS AND CONDUITS SHALL BE EQUAL IN LENGTH AND OF SAME MANUFACTURER.
- IF IDENT. ON ONE-LINE DIAGRAM SHOWS CONDUCTORS WELL ABOVE OVERCURRENT PROTECTION, VOLTAGE DROP HAS BEEN ACCOUNTED FOR.

OVERCURRENT DEVICE RATING	WIRE SIZE AWG. OR KCMIL			5 WIRE FEEDERS (200% NEUTRAL) WITH EQUIP. GROUND.		4 WIRE FEEDERS WITH EQUIPMENT GROUND		3 WIRE FEEDERS WITH EQUIPMENT GROUND	
	PHASE & NEUT.	GND.		COND. SIZE	IDENT.	COND. SIZE	IDENT.	COND. SIZE	IDENT.
100	1/0	6		2"	F2	1 1/2"	F	1 1/2"	F1
110	1/0	4		2"	G2	1 1/2"	G	1 1/2"	G1
125	2/0	4		2"	H2	2"	H	2"	H1
150	3/0	4		2 1/2"	I2	2"	I	2"	I1
175	4/0	4		2 1/2"	J2	2 1/2"	J	2"	J1
200	250 KCMIL	4		2 1/2"	K2	2 1/2"	K	2 1/2"	K1
225	300 KCMIL	2		3"	L2	2 1/2"	L	2 1/2"	L1
250	350 KCMIL	2		3"	M2	3"	M	2 1/2"	M1
300	500 KCMIL	2		3 1/2"	N2	3"	N	3"	N1
350	700 KCMIL	1		4"	O2	4"	O	4"	O1
400	2-250 KCMIL	1		2-2 1/2"	P2	2-2 1/2"	P	2-2 1/2"	P1
450	2-300 KCMIL	1/0		2-3"	Q2	2-2 1/2"	Q	2-2 1/2"	Q1
500	2-350 KCMIL	1/0		2-3"	R2	2-2 1/2"	R	2-2 1/2"	R1
600	2-500 KCMIL	2/0		2-3 1/2"	S2	2-3"	S	2-3"	S1
700	2-700 KCMIL	3/0		2-4"	T2	2-4"	T	2-3 1/2"	T1
800	3-400 KCMIL	3/0		3-3"	U2	3-3"	U	3-2 1/2"	U1
1000	3-600 KCMIL	4/0		3-4"	V2	3-3 1/2"	V	3-3"	V1
1200	4-500 KCMIL	250 KCMIL		4-3"	W2	4-3"	W	4-3"	W1
1600	5-600 KCMIL	350 KCMIL		4-3 1/2"	X2	5-3"	X	5-3"	X1
2000	6-600 KCMIL	400 KCMIL		6-3 1/2"	Y2	6-3"	Y	6-3"	Y1

NOTES:

- CONDUIT SIZES ARE BASED ON XHHW-2 CONDUCTORS IN EMT CONDUIT.

DRAWING PRINTED FULL SIZE (100% = 30" x 42") DRAWING PRINTED HALF SIZE (50% = 15" x 21") DRAWING PRINTED QUARTER SIZE (25% = 7 1/2" x 10 1/2") DRAWING PRINTED ONE EIGHTH SIZE (12.5% = 3 3/4" x 5 1/4") DRAWING PRINTED ONE SIXTEENTH SIZE (6.25% = 1 7/8" x 2 5/8") DRAWING PRINTED ONE THIRTYSECOND SIZE (3.125% = 9/16" x 1 1/4") DRAWING PRINTED ONE SIXTYFOURTH SIZE (1.5625% = 3/8" x 5/8") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.78125% = 3/16" x 5/16") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.390625% = 3/32" x 5/32") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.1953125% = 3/64" x 5/64") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0625% = 1/16" x 1/8") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.03125% = 1/32" x 1/16") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.015625% = 1/64" x 1/32") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0078125% = 1/128" x 1/64") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00390625% = 1/256" x 1/128") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.001953125% = 1/512" x 1/256") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000625% = 1/1024" x 1/512") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0003125% = 1/2048" x 1/1024") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00015625% = 1/4096" x 1/2048") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000078125% = 1/8192" x 1/4096") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000390625% = 1/16384" x 1/8192") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00001953125% = 1/32768" x 1/16384") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000625% = 1/65536" x 1/32768") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.000003125% = 1/131072" x 1/65536") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.0000015625% = 1/262144" x 1/131072") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.00000078125% = 1/524288" x 1/262144") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.000000390625% = 1/1048576" x 1/524288") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.0000001953125% = 1/2097152" x 1/1048576") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0000000625% = 1/4194304" x 1/2097152") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00000003125% = 1/8388608" x 1/4194304") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.000000015625% = 1/16777216" x 1/8388608") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0000000078125% = 1/33554432" x 1/16777216") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00000000390625% = 1/67108864" x 1/33554432") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.000000001953125% = 1/134217728" x 1/67108864") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000000000625% = 1/268435456" x 1/134217728") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0000000003125% = 1/536870912" x 1/268435456") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00000000015625% = 1/1073741824" x 1/536870912") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000000000078125% = 1/2147483648" x 1/1073741824") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000000000390625% = 1/4294967296" x 1/2147483648") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00000000001953125% = 1/8589934592" x 1/4294967296") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000000000625% = 1/17179869184" x 1/8589934592") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.000000000003125% = 1/34359738368" x 1/17179869184") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.0000000000015625% = 1/68719476736" x 1/34359738368") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.00000000000078125% = 1/137438953472" x 1/68719476736") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.000000000000390625% = 1/274877906944" x 1/137438953472") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.0000000000001953125% = 1/549755813888" x 1/274877906944") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0000000000000625% = 1/1099511627776" x 1/549755813888") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00000000000003125% = 1/2199023255552" x 1/1099511627776") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.000000000000015625% = 1/4398046511104" x 1/2199023255552") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0000000000000078125% = 1/8796093022208" x 1/4398046511104") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00000000000000390625% = 1/17592186044416" x 1/8796093022208") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.000000000000001953125% = 1/35184372088832" x 1/17592186044416") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000000000000000625% = 1/70368744177664" x 1/35184372088832") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0000000000000003125% = 1/140737488355328" x 1/70368744177664") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00000000000000015625% = 1/281474976710656" x 1/140737488355328") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000000000000000078125% = 1/562949953421312" x 1/281474976710656") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000000000000000390625% = 1/1125899906842624" x 1/562949953421312") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00000000000000001953125% = 1/2251799813685248" x 1/1125899906842624") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000000000000000625% = 1/4503599627370496" x 1/2251799813685248") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.000000000000000003125% = 1/9007199254740992" x 1/4503599627370496") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.0000000000000000015625% = 1/18014398509481984" x 1/9007199254740992") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.00000000000000000078125% = 1/36028797018963968" x 1/18014398509481984") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.000000000000000000390625% = 1/72057594037927936" x 1/36028797018963968") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.0000000000000000001953125% = 1/144115188075855872" x 1/72057594037927936") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0000000000000000000625% = 1/288230376151711744" x 1/144115188075855872") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00000000000000000003125% = 1/576460752303423488" x 1/288230376151711744") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.000000000000000000015625% = 1/1152921504606846976" x 1/576460752303423488") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0000000000000000000078125% = 1/2305843009213693952" x 1/1152921504606846976") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00000000000000000000390625% = 1/4611686018427387904" x 1/2305843009213693952") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.000000000000000000001953125% = 1/9223372036854775808" x 1/4611686018427387904") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000000000000000000000625% = 1/18446744073709551616" x 1/9223372036854775808") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0000000000000000000003125% = 1/36893488147419103232" x 1/18446744073709551616") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00000000000000000000015625% = 1/73786976294838206464" x 1/36893488147419103232") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000000000000000000000078125% = 1/147573952589676412928" x 1/73786976294838206464") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000000000000000000000390625% = 1/295147905179352825856" x 1/147573952589676412928") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00000000000000000000001953125% = 1/590295810358705651712" x 1/295147905179352825856") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000000000000000000000625% = 1/1180591620717411303424" x 1/590295810358705651712") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.000000000000000000000003125% = 1/2361183241434822606848" x 1/1180591620717411303424") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.0000000000000000000000015625% = 1/4722366482869645213696" x 1/2361183241434822606848") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.00000000000000000000000078125% = 1/9444732965739290427392" x 1/4722366482869645213696") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.000000000000000000000000390625% = 1/18889465931478580854784" x 1/9444732965739290427392") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.0000000000000000000000001953125% = 1/37778931862957161709568" x 1/18889465931478580854784") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0000000000000000000000000625% = 1/75557863725914323419136" x 1/37778931862957161709568") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00000000000000000000000003125% = 1/151115727451828646838272" x 1/75557863725914323419136") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.000000000000000000000000015625% = 1/302231454903657293676544" x 1/151115727451828646838272") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0000000000000000000000000078125% = 1/604462909807314587353088" x 1/302231454903657293676544") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00000000000000000000000000390625% = 1/1208925819614629174706176" x 1/604462909807314587353088") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.000000000000000000000000001953125% = 1/2417851639229258349412352" x 1/1208925819614629174706176") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000000000000000000000000000625% = 1/4835703278458516698824704" x 1/2417851639229258349412352") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0000000000000000000000000003125% = 1/9671406556917033397649408" x 1/4835703278458516698824704") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00000000000000000000000000015625% = 1/19342813113834066795298816" x 1/9671406556917033397649408") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000000000000000000000000000078125% = 1/38685626227668133590597632" x 1/19342813113834066795298816") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000000000000000000000000000390625% = 1/77371252455336267181195264" x 1/38685626227668133590597632") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00000000000000000000000000001953125% = 1/154742504910672534362390528" x 1/77371252455336267181195264") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000000000000000000000000000625% = 1/309485009821345068724781056" x 1/154742504910672534362390528") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.000000000000000000000000000003125% = 1/618970019642690137449562112" x 1/309485009821345068724781056") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.0000000000000000000000000000015625% = 1/1237940039285380274899124224" x 1/618970019642690137449562112") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.00000000000000000000000000000078125% = 1/2475880078570760549798248448" x 1/1237940039285380274899124224") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.000000000000000000000000000000390625% = 1/4951760157141521099596496896" x 1/2475880078570760549798248448") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.0000000000000000000000000000001953125% = 1/9903520314283042199192993792" x 1/4951760157141521099596496896") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.0000000000000000000000000000000625% = 1/19807040628566084398385987584" x 1/9903520314283042199192993792") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00000000000000000000000000000003125% = 1/39614081257132168796771975168" x 1/19807040628566084398385987584") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.000000000000000000000000000000015625% = 1/79228162514264337593543950336" x 1/39614081257132168796771975168") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.0000000000000000000000000000000078125% = 1/158456325028528675187087900672" x 1/79228162514264337593543950336") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.00000000000000000000000000000000390625% = 1/316912650057057350374175801344" x 1/158456325028528675187087900672") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.000000000000000000000000000000001953125% = 1/633825300114114700748351602688" x 1/316912650057057350374175801344") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.000000000000000000000000000000000625% = 1/1267650600228229401496703205376" x 1/633825300114114700748351602688") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.0000000000000000000000000000000003125% = 1/2535301200456458802993406410752" x 1/1267650600228229401496703205376") DRAWING PRINTED ONE SIXTYFOURTH SIZE (0.00000000000000000000000000000000015625% = 1/5070602400912917605986812821504" x 1/2535301200456458802993406410752") DRAWING PRINTED ONE HUNDRELEVENTH SIZE (0.000000000000000000000000000000000078125% = 1/10141204801825835211973625643008" x 1/5070602400912917605986812821504") DRAWING PRINTED ONE TWOHUNDRELEVENTH SIZE (0.0000000000000000000000000000000000390625% = 1/20282409603651670423947251286016" x 1/10141204801825835211973625643008") DRAWING PRINTED ONE FOURHUNDRELEVENTH SIZE (0.00000000000000000000000000000000001953125% = 1/40564819207303340847894502572032" x 1/20282409603651670423947251286016") DRAWING PRINTED ONE EIGHTEENTH SIZE (0.00000000000000000000000000000000000625% = 1/81129638414606681695789005144064" x 1/40564819207303340847894502572032") DRAWING PRINTED ONE THIRTYSECOND SIZE (0.00