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05/15/2024
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GENERAL ELECTRICAL NOTES

- DO NOT SCALE ELECTRICAL DRAWINGS.
- COORDINATE ALL LIGHT SWITCHES AND TELEPHONE JACK LOCATIONS AND QUANTITIES WITH THE OWNER.
- PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL 15 AND 20 AMP RECEPTACLES
- OUTLET BOXES SHALL BE PRESSED STEEL OR PLASTIC, IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- DISCONNECT SWITCHES SHALL BE N.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- ALL TELEPHONE LINE LOCATION AND QUANTITIES SHALL BE VERIFIED WITH THE OWNER.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROCESS OF CONSTRUCTION.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OF PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTING.
- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
- PROVIDE GROUNDS FOR ALL CIRCUITS.
- ALL RACEWAYS UNDERGROUND SHALL BE A MINIMUM OF 3/4" CONDUIT.
- ALL CIRCUIT BREAKERS, TWO AND THREE POLE, TO BE COMMON TRIP. NO TIE HANDLES, OR TANDEMS WILL BE ACCEPTED.
- PANELBOARDS SHALL BE PROVIDED WITH COPPER BUS AND GROUNDING BARS.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE OF ANY CHANGES DUE TO FAILURE OF NOTIFYING DISCREPANCIES.
- ELECTRICAL CONTRACTOR TO VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS WITH MANUFACTURER INCLUDING CONNECTIONS, WIRE SIZES AND VOLTAGES REQUIREMENTS. NOTIFY THE ARCHITECT WITH ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ELECTRICAL CONTRACTOR TO FIELD VERIFY ALL EXISTING ELECTRICAL SERVICE AND CONDITIONS, TO INCLUDE EXISTING POWER PHASE, VOLTAGE AND CAPACITY AND NOTIFY THE ARCHITECT IN CASE OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- ALL SMOKE DETECTORS MUST BE COMBINATION SMOKE / CARBON MONOXIDE ALARM DETECTORS THEY MUST BE (120V) HARD WIRED, INTERCONNECTED WITH A BATTERY BACKUP AND AT LEAST 4 INCHES AWAY FROM THE NEAREST SIDEWALL TO THE EDGE OF THE DETECTOR. DETECTORS CAN BE NO CLOSER THAN 3 FEET TO THE DOOR OF ANY BATHROOM OR KITCHEN, AND NO CLOSER THAN 3 FEET TO A FAN AND OR AIR CONDITIONING DUCT OUTLET. IF DETECTORS ARE NOT MOUNTED ON A SIDEWALL, THEY MUST BE LOCATED BETWEEN 4 AND 12 INCHES FROM THE CEILING TO THE TOP EDGE OF THE DETECTORS. ALL DETECTORS SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
(AS PER NFPA 72 11.8.2.2 SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INTERCONNECTED IN NUMBERS THAT EXCEED THE MNFORS RECOMMENDATIONS. IN NO CASE SHALL MORE THAN 18 INITIATING DEVICES BE INTERCONNECTED, OF WHICH 12 CAN BE SMOKE ALARMS, WHERE THE INTERCONNECTING MEANS IS NOT SUPERVISED)
- A.H.U. TO HAVE FACTORY DISCONNECTS
WATER HEATER TO HAVE DISCONNECT AND DIRECT WIRED
- ALL CEILING FANS TO BE ON RHEOSTAT COORDINATE ANY OTHER RHEOSTAT LOCATIONS WITH THE OWNER.
- ALL EXTERIOR LIGHTS TO BE WHITE LIGHT AND GLARE SHALL NOT SPILL OVER TO ADJACENT PROPERTIES.
- COORDINATE ALL TELEPHONE, ALARM SYSTEM, INTERCOM , CEILING FANS AND LIGHT SWITCHES LOCATIONS AND QUANTITIES WITH THE OWNER.
- CLOTHES DRYER TRANSITION DUCT TO THE APPLANCE TO BE A LISTED LABELED. ALL CLOTHES DRYER EXHAUST DUCTS SHALL BE A MINIMUM OF 4" ROUND AND 26 GA. METAL PIPE. DRYER DUCTS SHALL HAVE A SMOOTH INTERIOR SURFACE, AND NOT EXCEED THE MAXIMUM ALLOWABLE LENGTH AS PER CODE.
- CLOTHES DRYER TRANSITION DUCTS USED TO CONNECT THE APPLANCE TO THE EXHAUST DUCT SYSTEM SHALL BE LIMITED TO LENGTHS NOT TO EXCEED 8 FEET FOR ELECTRICAL APPLANCES OR 6 FEET FOR GAS APPLANCES AND SHALL BE LISTED OR LABELED FOR THE APPLICATION.
- EXHAUST DUCTS FOR DOMESTIC CLOTHES DRYERS SHALL BE A MIN OF 4" ROUND AND 26 GAGE METAL PIPE. AND SHALL HAVE A SMOOTH INTERIOR FINISH AND THE MAXIMUM DEVELOPMENT LENGHT SHALL NOT EXCEED 25 FEET.
- AS PER F.B.C. ALL MTL FRAME PARTITION SECTIONS ARE TO BE GROUNDED WITH #6 CU. GROUND WIRE IN 3/4" COND. CONNECTED TO A MTL ELECTRICAL OUTLET BOX.
- GENERAL CONTRACTOR AND THE ELECTRICAL SUB CONTRACTOR SHALL COORDINATE AND RELOCATE THE ACTUAL LOCATION OF THE ELECTRICAL METER WITH F.P.L. IN RELATIONSHIP WITH THE EXISTING LOCATIONS OF THE ELECT. POLES OR TRANSFORMERS. THE ELECTRICAL METER LOCATION ON THE DRAWINGS SHALL BE RELOCATED ACCORLINLY. NOTIFY THE ARCHITECT IN CASE OF ANY DISCREPANCIES OR CONFLICTS, PRIOR TO ANY CONSTRUCTION.
- ALL CLOSET LITES TO HAVE ENCLOSED LAMPS
- AS PER N.E.C. 408.4 ALL CIRCUITS AND CIRCUIT MODIFICATIONS SHALL BE LEGIBLY IDENTIFIED AS TO PURPOSE OR USE ON THE CIRCUIT DIRECTORY LOCATED ON THE FACE OF THE INSIDE OF THE PANEL DOOR IN CASE OF A PANELBOARD, AND AT EACH SWITCH ON THE SWITCHBOARD.
- ALL 120-VOLT, SINGLE-PHASE 15 AND 20 AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELING UNITS KITCHEN, FAMILY ROOM, LIVING ROOM, PARLORS, LIBRARIES, DENS, BEDROOMS, DINROOMS, RECREATION ROOMS, CLOSETS, HALWAYS, LAUNDRY AREAS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED AFCI 2017 N.E.C. SECTION 210.12(A)
- A.F.C.I. COMBINATION TYPE BREAKERS ARE REQUIRED FOR ALL BEDROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOM CIRCUITS, INCLUDING ALL RECEPTACLES, LIGHTS, FANS, AND SMOKE DETECTORS. "PROVIDE COMBINATION TYPE CIRCUITS"
- ELECTRICAL METER SERVICING STRUCTURE TO BE AT BASE FLOOD PLUS ONE OR HIGHER

NOTE:
THE ELECTRICAL CONTRACTOR IS TO VERIFY AND PROVIDE ALL ELECTRICAL REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO ALL FUSE AND WIRE SIZES AS PER EACH MACHINES AND LIGHTS INDIVIDUAL NAME PLATE REQUIREMENTS . MANFGRS INSTALLATION MANUAL AND SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL EQUIPMENTS SPEC SHEETS AND INSTALLATION MANUALS AND SHALL ALSO COORDINATE AND INSURE THAT ALL EQUIPMENT WILL BE PROVIDED IN PROPER WORKING ORDER. NOTIFY THE ARCHITECT IN CASE OF ANY DISCREPANCIES BETWEEN THE PLANS AND EACH MACHINE REQUIREMENTS PRIOR TO ANY CONSTRUCTION
THE CONTRACTOR IS TO COORDINATE AND RECEIVE ALL EQUIPMENT SPECS FROM THE OWNER.

CIRCUITS	USE	KW	BRKR	WIRE
A1,3	AHU	10.0 KW	60-2P	6 CU
A2,4	A/C COND.	(5.0 KW)	40-2P	6 CU
A5,7	DRYER	5.0 KW	30-2P	10 CU
A6,8	RANGE & OVEN	12.0 KW	50-2P	6 CU
A9,11	SPRINKLER PUMP	9.7 KW	50-2P	8 CU
A10,12	TANKLESS W/H	9.7 KW	50-2P	8 CU
A14,16	TANKLESS W/H	2.4 KW	20-2P	12
A13	REFRIG	1.5 KW	20-1P	12
A15	DISHWASHER	1.0 KW	20-1P	12
A17	MICROWAVE	1.0 KW	20-1P	12
A18	DISPOSAL	1.0 KW	20-1P	12
A19	WASHER	1.5 KW	20-1P	12
A20	GFCI BATHROOM	1.0 KW	20-1P	12
A21	GFCI LAUNDRY	1.0 KW	20-1P	12
A22	GFCI EXTERIOR	1.0 KW	20-1P	12
A23-24	SMALL APPL.	6.0 KW	20-1P	12

A25	MASTER BEDROOM LIGHTS AND RECEPTS	*	15-1P	14
A26	BEDROOM #2 LIGHTS AND RECEPTS	*	15-1P	14
A27	BEDROOM #3 LIGHTS AND RECEPTS	*	15-1P	14
A28	STUDY LIGHTS AND RECEPTS	*	15-1P	14
A29	GREAT ROOM RECEPTS	*	15-1P	14
A30	BATHROOM LIGHTS	*	15-1P	14
A31	KITCHEN LIGHTS	*	15-1P	14
A32	EXTERIOR LIGHTS	*	15-1P	14
A33	HALLWAY LIGHTS AND RECEPTS	*	15-1P	14
A34	GREAT ROOM LIGHTS	*	15-1P	14

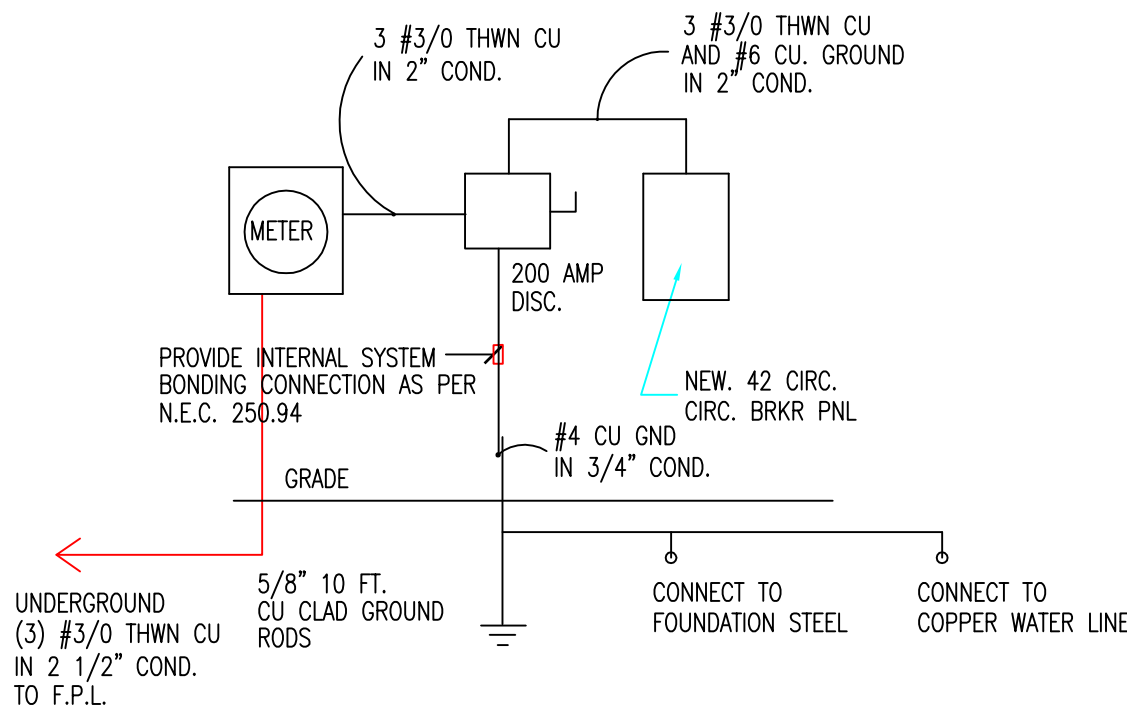
25-34	GEN. PURP. 2558 X .003	7.67 KW
35-42	SPARES	
TOTAL KW =		50.40 KW

NEC LOAD CALCULATIONS SECTION 220-30

A/C AT 100%	=	10.0 KW	
IST 10 KW AT 100%	=	10.0 KW	
REMAINDER AT 40%	=	16.16 KW	
TOTAL	=	36.16 KW	

36.16 / 240 = 150.6 AMPS

AF = ARC FAULT CIRCUIT INTERRUPTER TO BE PROVIDED WITH SEPERATE NEUTRALS.



ELECTRICAL RISER DIAGRAM

NTS

NOTE:
CODE USED N.E.C. 2017
FL. BLDG CODE 2020 SEVENTH EDITION

NOTE:
DISHWASHER AND DISPOSAL SHALL BE GFI PROTECTED AND IN A READILY ACCESSIBLE LOCATION.

AFCI PROTECTION MUST BE INSTALLED IN A READLY ACCESSIBLE LOCATION

BRANCH CIRCUIT EXTENSION OR MODIFICATION IN DWELING UNITS SHALL BE AFCI PROTECTED

RECEPTACLE COVERS IN WET LOCATIONS TO BE LISTED AND IDENTIFIED AS "EXTRA DUTY"

AT LEAST 75% OF LIGHTING MUST BE OF HIGH EFFICIANCY LED OR FLOURECENT

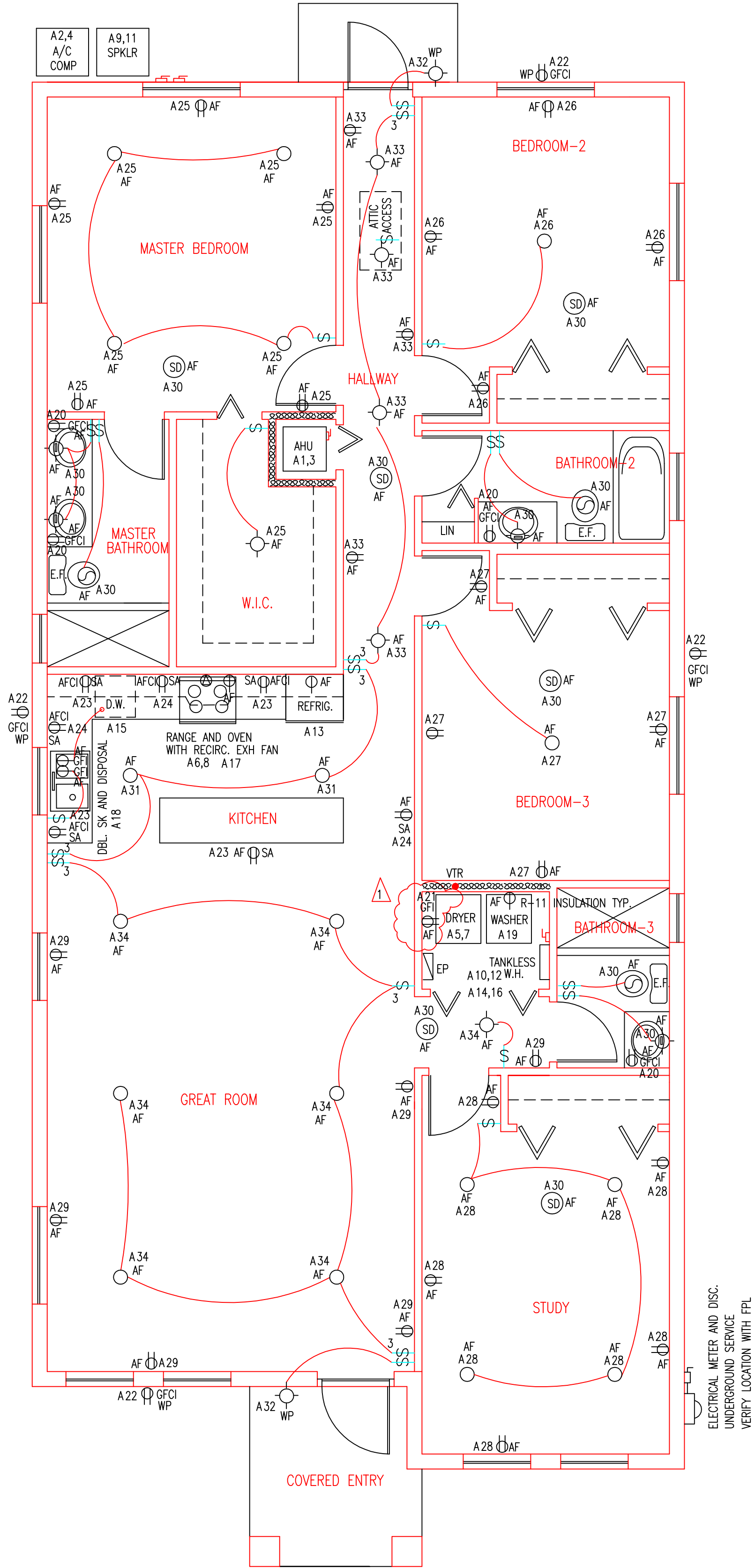
AT LEAST 90% OF THE LAMPS SHALL HAVE AN EFFICIANCY OF AT LEAST 45 LUMENS OR NOT LESS THAN 65 LUMENS.

NOTE:
ALL EXTERIOR RECEPTACLES SHALL MEET THE REQUIREMENT OF NEC ARTICAL 406.9 "RECEPTACLES IN DAMP OR WET LOCATIONS"

ALL 15 AND 20 AMPERE, 125- AND 250 VOLT RECEPTACLES INSTALLED IN WET LOCATIONS SHALL HAVE AN ENCLOSURE THAT IS WATERPROOF WHETHER OR NOT ATTACHMENT PLUG CAP IS INSERTED. ALL 15-AND 20 AMPERE 125- AND 250 VOLT NON LOCKING RECEPTACLES SHALL BE LISTED "WEATHER RESISTANT"

NOTE:
GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONEL SHALL BE PROVIDED AS REQUIRED IN 210.8(A) THROUGH (E) THE GROUND -FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READLY ACCESSIBLE LOCATION.

- NOTE:
- PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL 15 AND 20 AMP RECEPTACLES
 - PROVIDE 4 CONDUCTORS TO ALL COOKING UNITS AND DRYERS.

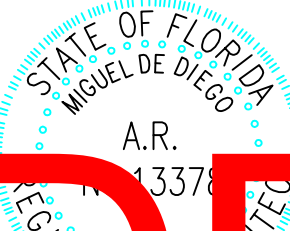


ELECTRICAL PLAN

SCALE: 1/4"=1'-0"

(SD) ALL SMOKE DETECTORS MUST BE COMBINATION SMOKE / CARBON MONOXIDE ALARM DETECTORS THEY MUST BE (120V) HARD WIRED, INTERCONNECTED WITH A BATTERY BACKUP AND AT LEAST 4 INCHES AWAY FROM THE NEAREST SIDEWALL TO THE EDGE OF THE DETECTOR. DETECTORS CAN BE NO CLOSER THAN 3 FEET TO THE DOOR OF ANY BATHROOM OR KITCHEN, AND NO CLOSER THAN 3 FEET TO A FAN AND OR AIR CONDITIONING DUCT OUTLET. IF DETECTORS ARE NOT MOUNTED ON A SIDEWALL, THEY MUST BE LOCATED BETWEEN 4 AND 12 INCHES FROM THE CEILING TO THE TOP EDGE OF THE DETECTORS. ALL DETECTORS SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
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9-19-2022



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PZ23-12000051
12/20/2023

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