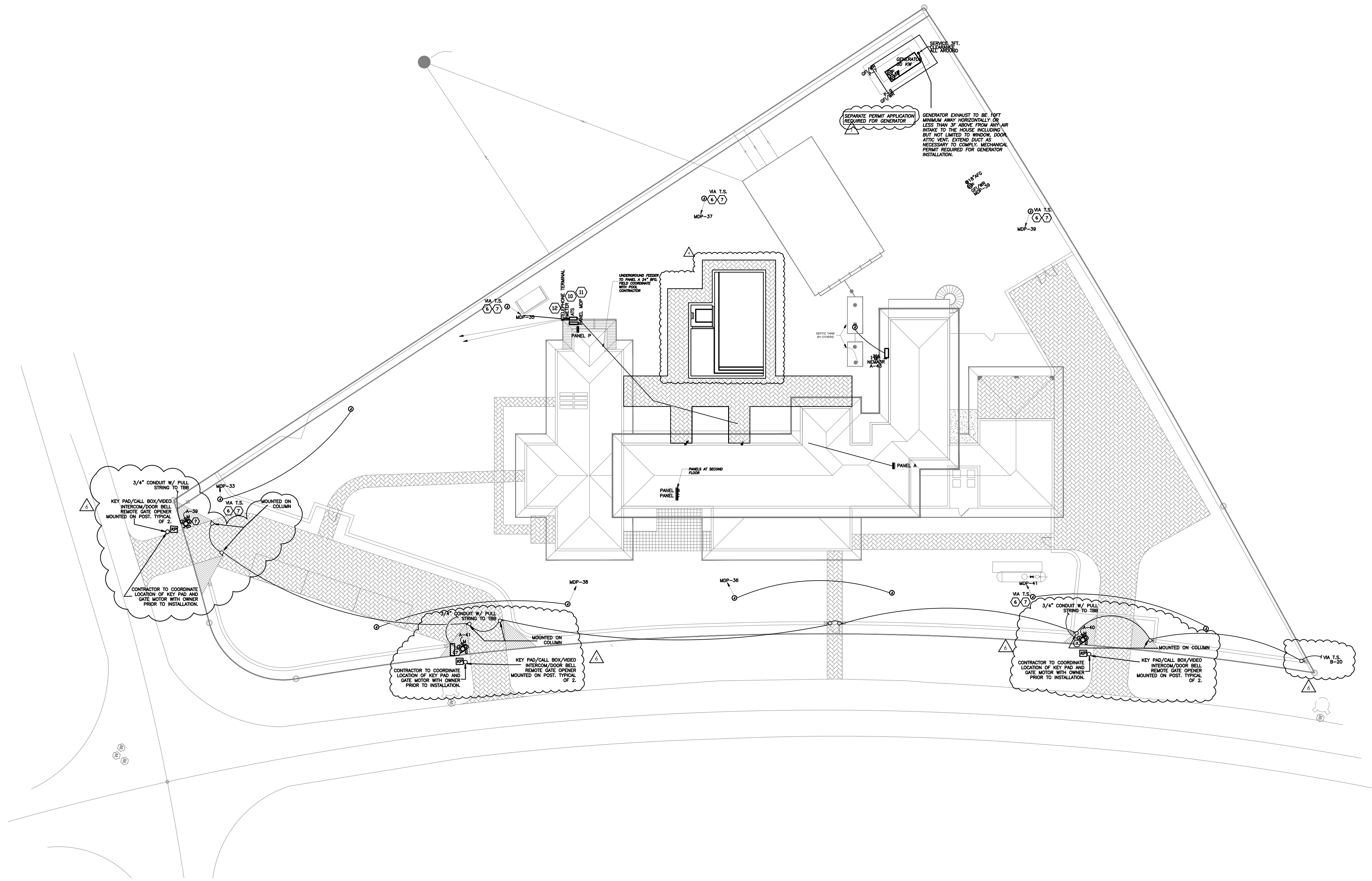


REV	DATE	DESCRIPTION
0	5/1/24	SUBMIT FOR BID/02/01/24 REV 01
1	6/20/24	01/ COMMENTS
2	6/26/24	COORDINATION
3	6/26/24	COORDINATION
4	6/27/24	AS-BUILT REV

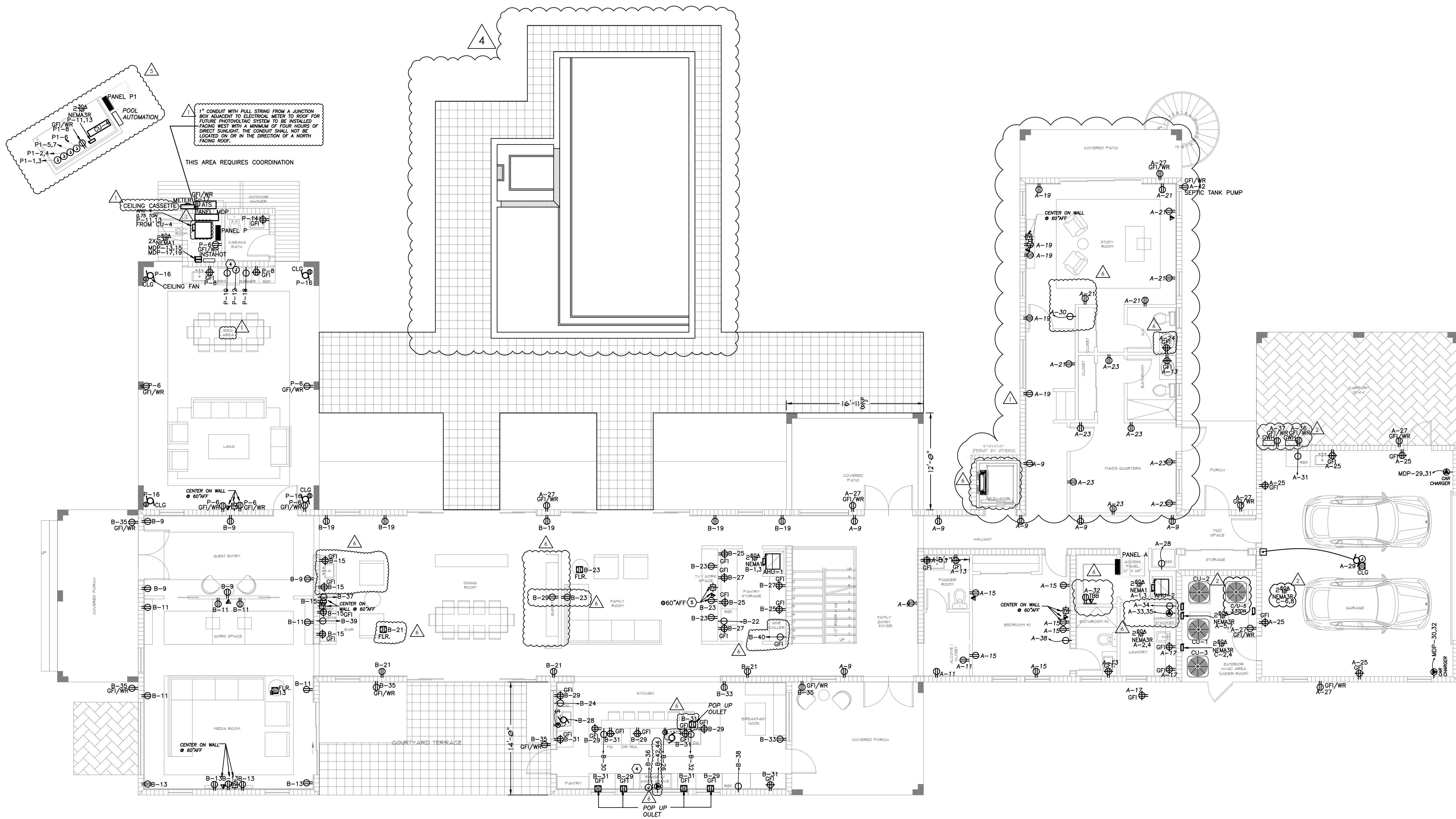
ELECTRICAL CONSTRUCTION NOTES:

1. LOW VOLTAGE 24V SMOKE AND CARBON MONOXIDE ALARM COMBO. THIS CIRCUIT SHALL BE ARC FAULT PROTECTED. ALARMS SHALL BE INSTALLED A MINIMUM OF 3 FEET FROM ANY AIR SUPPLY OR RETURN AIR GRILL AND 3 FEET OF A DOOR TO A BATH CONTAINING A SHOWER OR TUB. CONTRACTOR SHALL VERIFY OPERATION OF ALL EXISTING SMOKE ALARMS AND REPLACE OR ADD AS NEEDED.
2. PROVIDE J BOX FOR CEILING FAN AT ALL CENTER LIGHT FIXTURE. TYPICAL ALL ROOMS.
3. LIGHT FIXTURES IN CLOSET SHALL NOT BE INSTALLED WITHIN 12" OF SHELF.
4. HOOD FAN COORDINATE MOUNTING PRIOR TO INSTALLATION.
5. CONTRACTOR SHALL COORDINATE ALL TELEPHONE AND CABLE TV OUTLET M.H. PRIOR TO INSTALLATION. TYPICAL ENTIRE HOUSE. WIRE ALL TELEPHONE OUTLETS WITH CAT 5.
6. CONTRACTOR SHALL COORDINATE WITH LANDSCAPE ARCH. FINAL LIGHTS LOCATION PRIOR TO INSTALLATION.
7. ALL OUTDOOR ELECTRICAL JUNCTION BOXES SHALL BE WEATHER PROOF, TYPICAL.
8. TO REAR LANDSCAPE LIGHTS (50). COORDINATE WITH LANDSCAPE. DRAWING EXACT LOCATION PRIOR TO BIDDING. PROVIDE ONE SWITCH PER LANDSCAPE CIRCUIT.
9. TO FRONT LANDSCAPE LIGHTS (20). COORDINATE WITH LANDSCAPE. DRAWING EXACT LOCATION PRIOR TO BIDDING. PROVIDE ONE SWITCH PER CIRCUIT.
10. TELEPHONE/DATA /CABLE TV. TERMINAL CABINET. CONTRACTOR SHALL RUN (2) 1 1/2" CONDUIT TO UTILITY EASEMENT AND COORDINATE WITH UTILITY COMPANIES PRIOR TO BIDDING.
11. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE FLOOD LEVEL, TYPICAL.
12. ELECTRICAL SERVICE LOCATION, CONTRACTOR SHALL COORDINATE WITH FPL ALL REQUIREMENTS PRIOR TO BIDDING. REFER TO RISER DIAGRAM FOR SERVICE CONDUCTOR SIZES.
13. RUN A SEPARATE HOME RUN FROM EACH DATA, CABLE AND TELEPHONE OUTLET TO TELEPHONE/CABLE BOARD.
14. PROVIDE ACCESS PANEL 15X15 AND VENTILATION. PROVIDE SOLID COPPER BONDING JUMPER INSULATED TO ALL METAL PIPING SYSTEM AND ALL GROUNDED METAL PARTS IN CONTACT WITH THE CIRCULATING WATER. TYPICAL ALL JACUZZI TUB.
15. POOL UNDER SEPARATE PERMIT. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POOL CONTRACTOR POWER REQUIREMENTS AND PROVIDE CB ACCORDINGLY AT PANEL P.
16. COORDINATE MOUNTING HEIGHT WITH WINDOW AND BASE BOARD. TYPICAL ALL WALL OUTLETS.

ALL ELECTRICAL INSTALLATION SHALL COMPLY WITH NEC 110.11, 110.12, 110.28 AND 358.12.5



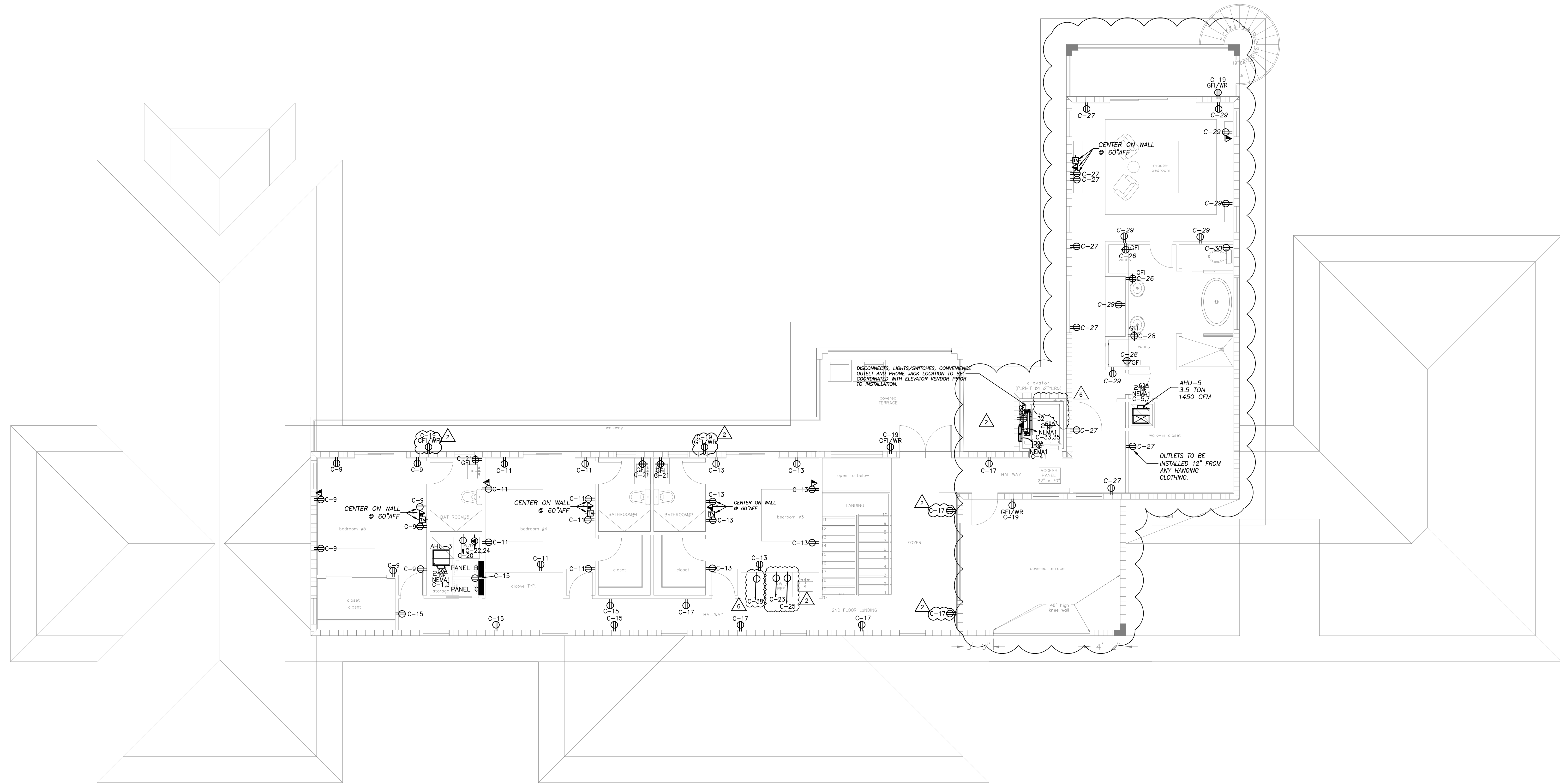
ELECTRICAL SITE PLAN
SCALE: 1/16" = 1'-0"



POWER FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"

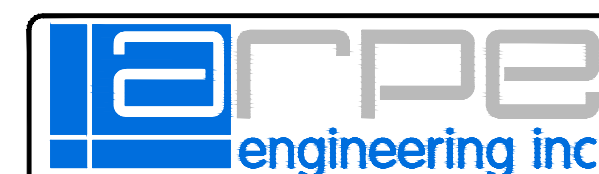
REV	DATE	DESCRIPTION
0	5/21/24	Issued for bids, client review
1	6/26/2024	CLIENT COMMENTS
2	6/21/24	OWNER CHANGES
3	6/11/2024	AS-BUILT REV

SHEET NO.	REV
E-13	0



 POWER SECOND floor plan
SCALE: 3/16" = 1'-0"

2 NEW SHEET



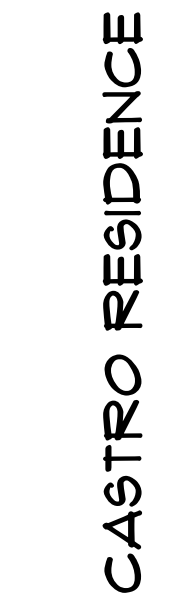
2020 Ponce de Leon, Suite 1002
Coral Gables, Florida 33134
Phone > 305 444 9809
Fax > 305 444 9827

Engineering Design:
> Mechanical > Electrical
> Plumbing > Fire Protection
www.arpe-eng.com

JOB # 22-1008

Amarilis Rodriguez, P.E.
License Number 60236
C.A. 26399

Signature _____
Date _____



LIGHTING 1ST FLOOR PLAN

12715 ROLLING ROAD DRIVE
PINECREST, FL 33156

REAL

PREPARED BY: SY

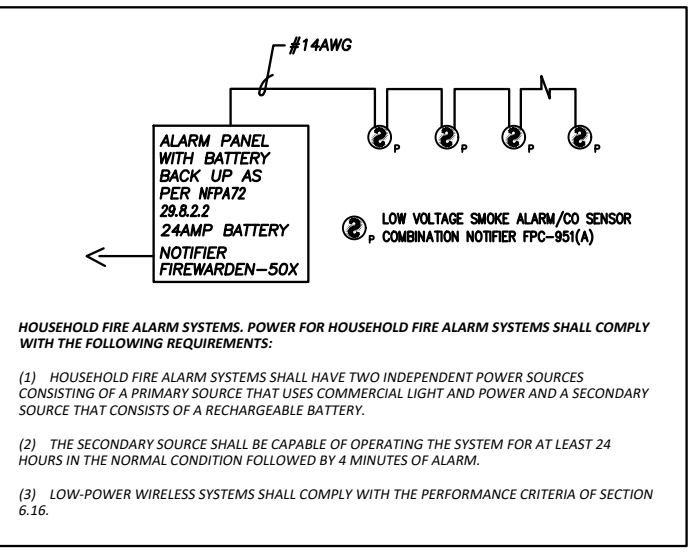
CHECKED BY: NAC

SCALE: AS SHOWN

JOB NO.: 22-PRO-0028

SHEET NO. REV

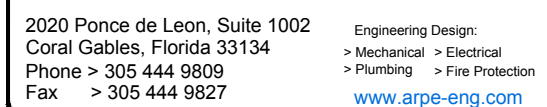
E-2		0
-----	--	---



1 LOW VOLTAGE 24V SMOKE AND CARBON MONOXIDE ALARM COMBO. THIS CIRCUIT SHALL BE ARC FAULT PROTECTED. ALARMS SHALL BE INSTALLED A MINIMUM OF 1 FEET FROM ANY AIR SUPPLY OR RETURN AIR GRILL AND 3 FEET OF A DOOR TO A BATH CONTAINING A SHOWER OR TUB. CONTRACTOR SHALL VERIFY OPERATION OF ALL EXISTING SMOKE ALARMS AND REPLACE OR ADD AS NEEDED.

JOB # 22-1008

Amarilis Rodriguez, P.E.
License Number 60236
C.A. 26359



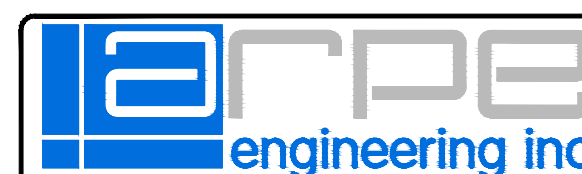
Signature _____
Date _____

PAPER SIZE: ARCH EXPAND E1 (30" X 42")

REV	DATE	DESCRIPTION
0	1/21/24	Issued for ISS, DESI, REVIEW
1	06/21/24	OWNER CHANGES
2	06/21/2024	AS-BUILT REV

SHEET NO.	REV
E-2.1	0

2 NEW SHEET



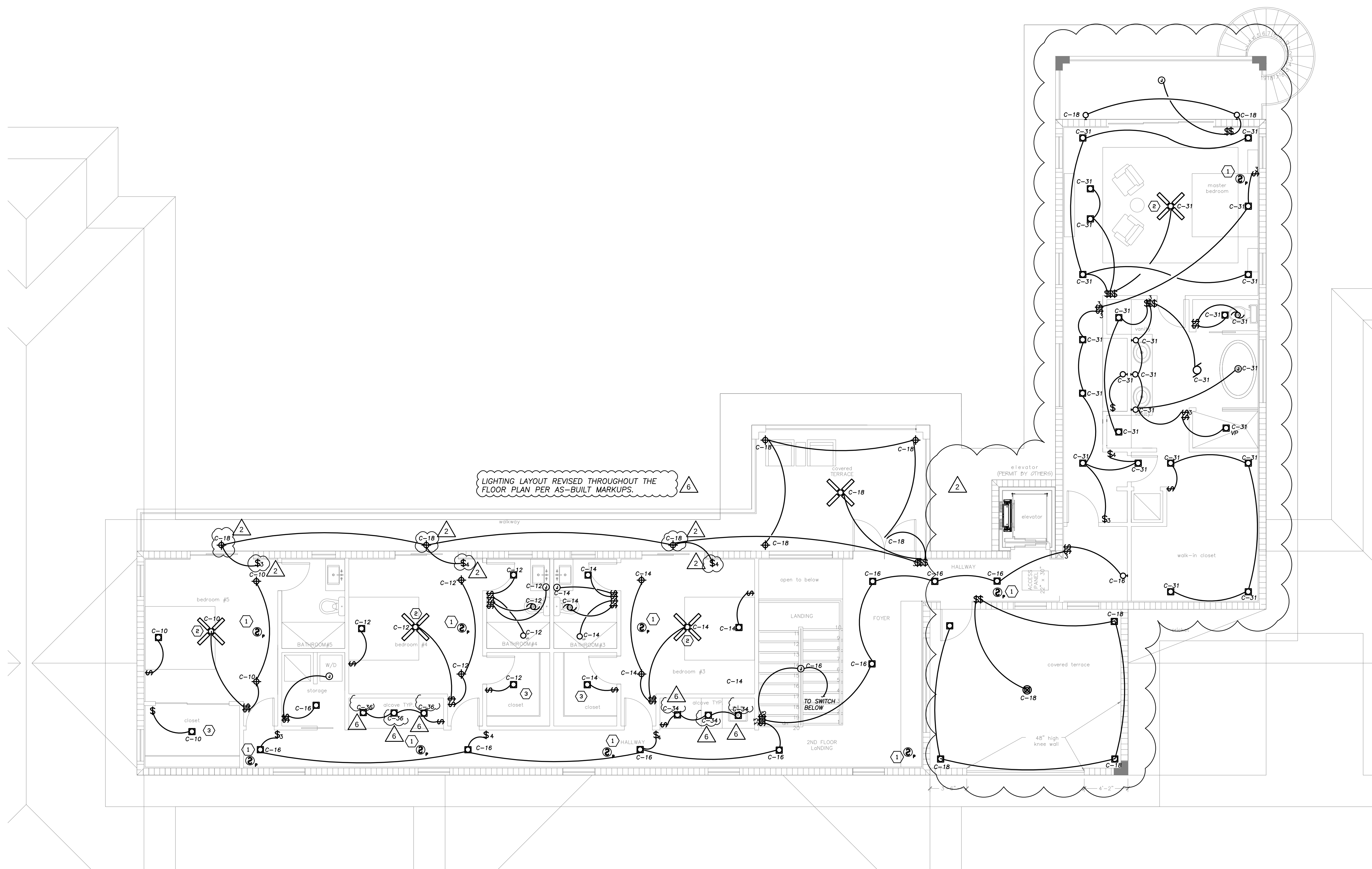
2020 Ponce de Leon, Suite 1002
Coral Gables, Florida 33134
Phone > 305 444 9809
Fax > 305 444 9827

Engineering Design:
> Mechanical > Electrical
> Plumbing > Fire Protection
www.arpe-eng.com

JOB # 22-1008

Amarilis Rodriguez, P.E.
License Number 60236
C.A. 26399

Signature _____
Date _____



LIGHTING SECOND floor plan
SCALE: 3/16" = 1'-0"

ELECTRICAL LEGEND

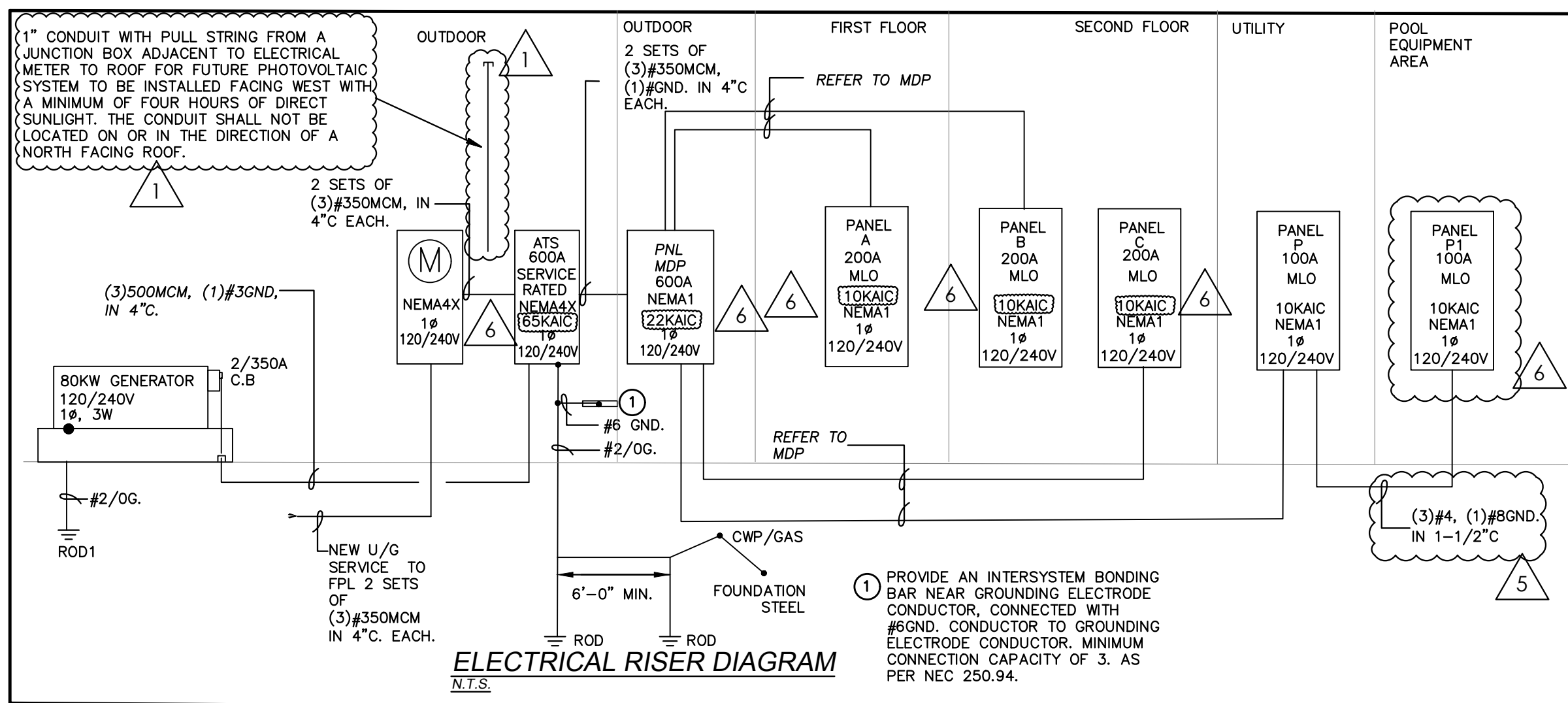
A	LIGHT FIXTURE DESIGNATION, FLOODLIGHT, SEE LIGHTING FIXTURE
⊙	LIGHT FIXTURE DESIGNATION, SEE LIGHTING FIXTURE SCHEDULE
⊙	LIGHTING FIXTURE, SURFACE MOUNTED
⊙	LIGHTING FIXTURE, RECESSED MOUNTED
⊙	LIGHTING FIXTURE, WALL MOUNTED
⊙	1 X 4 FLUORESCENT LIGHT FIXTURE
\$	TOGGLE SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.), 3-WAY
\$	TOGGLE SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.), 4-WAY
\$	TOGGLE SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.)
\$	TOGGLE SWITCH 120/277V, 20 AMP, KEYSWITCH (M.H. = 48" A.F.F.)
\$	FAN SWITCH 120/277V, 20 AMP, (HORSEPOWER RATED) (M.H. = 48" A.F.F.)
\$	DOOR JAM SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.)
\$	TOGGLE SWITCH 120/277V, 20 AMP, WITH (M.H. = 48" A.F.F.)
\$	TO MIN. TIME DELAY, RELAY BY MECH. CONT. INSTALLED BY E.C.
\$	FAN AND LIGHTING SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.), 3-WAY
\$	TOGGLE SWITCH 120/277V, 20 AMP, WITH PILOT LIGHT (M.H. = 48" A.F.F.)
\$	TOGGLE SWITCH 120/277V, 20 AMP, EXPLOSION-PROOF
\$	SPEED SWITCH 120/277V, 20 AMP, U.O.N. (M.H. = 48" A.F.F.)
\$	SINGLE PHASE MANUAL MOTOR STARTER, (M.H. = 48" A.F.F.)
\$	DIMMER SWITCH 120/277V, 20 AMP, (M.H. = 48" A.F.F.)
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, (M.H. = 18" A.F.F.)
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, RECESS FLOOR MOUNTED
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, CEILING MOUNTING
\$	USB OUTLET, (M.H. = 18" A.F.F.)
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, TOP HALF SWITCHED, M.H. = 18" A.F.F. UNLESS OTHERWISE NOTED
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, ISOLATED GND. AND SMOKE PROTECTED, (M.H. = 18" A.F.F.)
\$	SINGLE RECEPTACLE, 20 AMP, 125V, COORDINATE M.H. WITH DEDICATED EQUIPMENT
\$	FOUR-PLEX QUAD RECEPTACLE, 20A, 125V, (M.H. = 18" A.F.F.)
\$	SPECIAL PURPOSE OUTLET 220V e.g. RANGE OUTLET, COORD. W/ EQUIP.
\$	DUPLEX RECEPTACLE, 20 AMP, 125V, MOUNT ABOVE COUNTERTOP
\$	30 AMP, 125V, TWIST LOCK RECEPTACLE FOR FLOOR POLISHING MACHINE
\$	JUNCTION BOX, MOUNTING AS SHOWN
\$	GARAGE DOOR PUSH BUTTON SWITCH
\$	ELECTRIC MOTOR
\$	MOTOR STARTER
\$	COMBINATION MOTOR STARTER, TYPE AS DESIGNATED
\$	ELECTRICAL PANEL, SEE PANEL SCHEDULE SHEET(S) FOR DETAILS
\$	EXISTING EQUIPMENT TO REMAIN
\$	NEW EQUIPMENT OR WORK OF THIS PROJECT
\$	SMOKE ALARM/CO SENSOR COMBINATION
\$	120V WITH BATTERY BACK UP
\$	CIRCUIT BREAKER, TYPE AND SIZE AS PER DRAWINGS
\$	LOW VOLTAGE LIGHTING KEYPAD
\$	CLOCK
\$	BELL
\$	TELEPHONE PORT FLOOR MOUNTED
\$	DUAL TELEPHONE OUTLET MOUNTED AT 18" A.F.F. USE CAT-5 W/1" STUB UP 6" ABOVE CEILING
\$	DUAL TELEPHONE OUTLET MOUNTED AT 54" A.F.F. USE CAT-5 W/1" STUB UP 6" ABOVE CEILING
\$	COMPUTER/DATA/TELEPHONE OUTLET MOUNTED AT 18" A.F.F. USE CAT-5 W/1" STUB UP 6" ABOVE CEILING
\$	TELEVISION OUTLET (M.H. = 18" A.F.F.)

ABBREVIATIONS			
A.C.	ABOVE COUNTER	E	EXISTING DEVICE TO REMAIN
A.F.	ARC FAULT	RL	EXISTING RELOCATED
A.F.F.	ABOVE FINISHED FLOOR	G.F.L.	GROUND FAULT INTERRUPTER
A.S.W.	ABOVE SHOW WINDOW ROPT.	L.C.	LOCKABLE COVER
B.F.C.	BELOW FINISHED CEILING	M.H.	MOUNTING HEIGHT
B.F.G.	BELOW FINISHED GRADE	M.E.R.	MAIN ELECTRICAL ROOM
C.B.	CIRCUIT BREAKER	N	NEW DEVICE
CL	CENTER LINE	N.F.	NON FUSED
D	DEDICATED FOR COMPUTER, PROVIDE DEDICATED GROUND AND NEUTRAL	NL	NIGHT LIGHT
EM	BATTERY PACK W/UTILITY, CONNECT AHEAD OF ALL SWITCHES.	T.C.	TERMINAL CABINET
FLR.	FLOOR	T.S.	TIME SWITCH
		U.O.N.	UNLESS OTHERWISE NOTED
		WP.	WEATHER PROOF
		WR.	WEATHER RESISTANT
		TX	TRANSFORMER
		M.S.	MOTION SENSOR
		CLG.	CEILING

ALL ELECTRICAL INSTALLATION SHALL COMPLY WITH NEC 110.11, 110.12, 110.28 AND 358.12.5

ELECTRICAL GENERAL NOTES

- IT SHALL BE UNDERSTOOD THAT ALL WORK PERFORMED SHALL BE BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. SAID CONTRACTOR SHALL MEET ALL REQUIREMENTS SET FORTH BY ANY LOCAL ORDINANCE AND GOVERNING AUTHORITIES.
- ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LATEST EDITION NEC 2017 AND THE LATEST EDITIONS OF ALL LOCAL CODES, RULES, MATERIALS, AND ORDINANCES HAVING JURISDICTION FBC 2020, 7TH EDITION.
- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE ALL LARGES, MATERIALS, AND SUPPLIES NECESSARY TO ACCOMPLISH THE WORK SHOWN AND/OR NOTED ON THE DRAWINGS AND SPECIFICATIONS.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY ALL CONDITIONS, LOCATIONS, DIMENSIONS AND JOBS AS SHOWN AND/OR NOTED ON THE DRAWINGS. THIS SHALL INCLUDE ANY AND ALL FABRICATIONS REQUIRED PRIOR TO INSTALLATION.
- IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR THE ADVANCED ORDERING OF LONG LEAD ITEMS SO AS NOT TO INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN 10 YEARS FROM DATE OF ACCEPTANCE, UNLESS INDICATED OR SPECIFIED OTHERWISE.
- 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.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORIGINAL CONDITIONS ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT AND FURNISHINGS CAUSED DURING PERFORMANCE OF WORK.
- ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED FOR THE INTENDED USE, WITH UNDERWRITER'S LABORATORIES, INC. (UL) WHERE STANDARDS HAVE BEEN ESTABLISHED BY UL. MINIMUM ALL EQUIPMENT SHALL MEET APPLICABLE STANDARDS FOR THE TYPE OF EQUIPMENT AND INTENDED USE OF THE FOLLOWING:
A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
B. ILLUMINATING ENGINEERS SOCIETY (IES).
C. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
D. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).
NOTE: THESE STANDARDS ARE SUBORDINATE TO CODES AND STANDARDS SET BY UL.
IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR SHALL BE 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.
- ALL CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT ROUTING SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE PROPER NUMBER OF CONDUITS IN ALL RACEWAYS AS REQUIRED TO ACCOMPLISH THE PROPER FUNCTIONING OF THE DEVICE OR EQUIPMENT AS SHOWN.
- ELECTRICAL CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT UNLESS NOTED OTHERWISE.
- THE ELECTRICAL CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED, FREE FROM DEBRIS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTING.
- ARCHITECTURAL AND/OR ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REVISIONS OR SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THAT CONTRACTOR.
- COORDINATE ALL ELECTRICAL SITE WORK WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- FOR ELECTRIC POWER SYSTEM.
A. COORDINATE POWER SERVICE WITH POWER COMPANY.
B. VERIFY LOCATION OF POWER SERVICE TERMINATION WITH POWER COMPANY PRIOR TO SUBMITTING BID.
C. FOR TELEPHONE SYSTEM
A. PROVIDE GROUNDING FOR ALL TELEPHONE OUTLETS AND EQUIPMENT PER REQUIREMENTS OF TELEPHONE COMPANY.
B. TELEPHONE CONDUITS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH POWER AND LIGHTING CONDUITS.
C. MARK TERMINATIONS OF TELEPHONE CONDUIT AS DIRECTED BY TELEPHONE COMPANY.
D. E. EXTERIOR GROUND OF TELEPHONE SERVICE WITH TELEPHONE COMPANY, PRIOR TO SUBMITTING BID.
F. USE EXTERIOR GRADE 3/4" PLYWOOD BACKBOARDS FOR MOUNTING TELEPHONE EQUIPMENT AND TERMINAL STRIPS. PAINT BOARD ON ALL SIDES AND EDGES WITH TWO COATS OF FLAT BLACK ASPHALT PAINT.
- ALL CONDUITS SHALL BE IN CONDUITS. ALL CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS) EXCEPT THAT: (A) PVC CONDUITS MAY BE USED UNDERGROUND PROVIDED ELBOWS AND RISERS ARE GRS, WERE SUBJECT TO PHYSICAL DAMAGE (B) ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN OR ON WALLS OR CEILING WHERE NOT SUBJECT TO MECHANICAL DAMAGE, DAMP OR CORROSIVE CONDITIONS, (C) LIQUID TIGHT FLEXIBLE CONDUIT WHERE REQUIRED, (D) FLEXIBLE METALLIC CONDUIT (MC CABLE W/GROUNDING CONDUCTOR), WHERE REQUIRED IN DRY LOCATIONS ONLY. ALL CONDUITS IN HAZARDOUS AREAS (PER NEC) SHALL MEET THE REQUIREMENTS OF NEC CHAPTER 5. CONTRACTOR MAY USE ROMEX (R) INDOOR IN DWELLING UNITS WHEN APPROVED BY ECR.
- FOR UNDERGROUND ELECTRICAL CONDUITS, PROVIDE PULL BOXES SUCH THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF 360. PULL BOXES SHALL BE SUITABLE AND APPROVED FOR THE INTENDED USE. WHERE CONDUITS PASS UNDERNEATH PAVED AREAS THEY SHALL BE RGS. WHERE UNDERGROUND CONDUITS ARE NOT EXPOSED TO MECHANICAL DAMAGE OR ARE NOT UNDER PAVED AREAS, THEY MAY BE SCHEDULE 40 FMC, BUT ALL CONDUIT RISERS SHALL BE RGS. RGS CONDUITS SHALL EXTEND A MINIMUM OF 18" BELOW GRADE.
- APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS IN SLABS OR UNDERGROUND.
- ALL CONDUITORS SHALL BE COPPER U.O.N. TYPE THIN OR THIN INSULATION, RATED 75% WET/DRY EXCEPT WHERE OTHERWISE REQUIRED BY UL OR CODES UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG EXCLUDING CONTROL WIRING.
- WIRE WAYS SHALL BE SIZED AS REQUIRED, PER NEC, UNLESS OTHERWISE NOTED.
- ALL ELECTRICAL EQUIPMENT SHALL BE RAINIGHT (NEMA 4X) WHERE EXPOSED TO THE WEATHER. ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED NUTS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURE FOR OTHER CLASSIFIED AREAS. PROPER PLASTER RINGS SHALL BE USED WITH OUTLET BOXES. PROPER COORDINATION BETWEEN ELECTRICAL SUBCONTRACTOR AND GENERAL CONTRACTOR FOR PLASTER RING INSTALLATION WILL BE REQUIRED. NO 1200 RINGS SHALL BE ALLOWED. ALL OUTLET BOXES SHALL BE SECURELY FASTENED.
- ALL FACE PLATES SHALL BE WHITE DECORA UNLESS OTHER WERE INDICATED IN THE DRAWING.
- MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, AS INDICATED OR REQUIRED, WITH OVERLOAD PROTECTION FOR EACH PHASE. ALL MOTOR SHALL BE EQUIPPED WITH DISCONNECT MOTOR STARTER COMBINATION.
- FURNISH AND INSTALL DISCONNECT SWITCHES AND WIRING FOR AIR CONDITIONING EQUIPMENT PER MANUFACTURER RECOMMENDATIONS. CONTROLS SHALL BE PROVIDED BY DIVISION 15. ELECTRICAL CONTRACTOR SHALL VERIFY CIRCUIT PROTECTIVE DEVICE RATING FOR EQUIPMENT PROVIDED PRIOR TO INSTALLATION.
- DISCONNECT SWITCHES SHALL BE SIZED PER NEC TO ACCOMMODATE EQUIPMENT SERVED, INCLUDING REQUIRED FUSES, U.O.N. DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED, HEAVY-DUTY TYPE.
- FUSES SHALL BE CURRENT LIMITING, PER UL, RATED 600 VOLTS, UNLESS OTHERWISE NOTED.
A. NONTIME DELAY FUSES IN MAIN SWITCHES AND SWITCHES FEEDING PANELS.
B. TIME DELAY FUSES FOR MOTORS AND A/C CIRCUITS.



EMERGENCY GENERATOR NOTES

- SPECIFICATION:
IT IS THE INTENT OF THIS SPECIFICATION TO SECURE AN EMERGENCY GENERATOR SYSTEM THAT HAS BEEN PROTOTYPE TESTED, FACTORY BUILT, PRODUCTION TESTED, SITE TESTED, OF THE LATEST COMMERCIAL DESIGN, TOGETHER WITH ALL ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION AS SHOWN ON THE PLANS AND DRAWINGS, AND SPECIFICATIONS HEREIN. THE EQUIPMENT SUPPLIED AND INSTALLED SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, ALONG WITH ALL APPLICABLE LOCAL CODES AND REGULATIONS. ALL EQUIPMENT SHALL BE NEW, OF CURRENT PRODUCTION OF A MANUFACTURER WHOSE FIRM MANUFACTURES THE GENERATOR AND CONTROLS, TRANSFER SWITCH, AND ASSEMBLES THE STANDBY GENERATOR SETS AS A MATCHED UNIT SO THAT THERE IS ONE-SOURCE RESPONSIBILITY FOR WARRANTY, PARTS, AND SERVICE THROUGH A LOCAL REPRESENTATIVE WITH FACTORY-TRAINED SERVICE MEN.
- SUBMITTAL
SUBMITTAL SHALL INCLUDE PROTOTYPE TEST CERTIFICATION AND SPECIFICATION SHEETS SHOWING ALL STANDARD AND OPTIONAL ACCESSORIES TO BE SUPPLIED. SCHEDULED WIRING DIAGRAMS, DIMENSION DRAWINGS, AND INTERCONNECTION DIAGRAMS IDENTIFYING EACH REQUIRED INTERCONNECTION BETWEEN GENERATOR SET, THE TRANSFER SWITCH, AND THE REMOTE ANNUNCIATOR PANEL.
- TESTING
THERE SHALL BE THREE TEST: A DESIGN PROTOTYPE TEST, FINAL PRODUCTION TEST, AND SITE TEST. PROTOTYPE TEST PROGRAMS SHALL INCLUDE THE REQUIREMENTS OF NFPA 110 AND THE FOLLOWING: MAXIMUM KW, MAXIMUM MOTOR STARTING(KVA) AT 30% INSTANTANEOUS VOLTAGE DIP, ALTERNATOR TEMPERATURE RISE BY EMBEDDED THERMOCOUPLE AND RESISTANCE METHOD PER NEMA MG-1-22.40 AND 16.40, GOVERNOR SPEED REGULATION UNDER S-S, AND TRANSIENT CONDITIONS; VOLTAGE REGULATION AND GENERATOR TRANSIENT RESPONSE; FUEL CONSUMPTION AT 25, 50, 75, AND FULL LOAD; COMPLETE HARMONIC ANALYSIS; SINGLE PHASE SHORT CIRCUIT TEST; ALTERNATOR COOLING AIR FLOW; TORSIONAL ANALYSIS TESTING TO VERIFY THAT THE GENERATOR SET IS FREE OF HARMFUL STRESSES; ENDURANCE TESTING; COMPLETE FINAL PRODUCTION TEST WITH VARIOUS LOADS AND EXHAUST SYSTEM IN PLACE. TEST SHALL INCLUDE: SINGLE STEP PICKUP; TRANSIENT AND STEADY STATE GOVERNING; SAFETY SHUTDOWN DEVICE TESTING; VOLTAGE REGULATION; RATED POWER; MAXIMUM POWER; SITE TEST: AN INSTALLATION CHECK, START-UP, AND BUILDING LOAD TEST SHALL BE PERFORMED BY THE MANUFACTURER'S LOCAL REPRESENTATIVE. THE ENGINEER, REGULAR OPERATORS AND THE MAINTENANCE STAFF SHALL BE NOTIFIED OF THE TIME AND DATE OF THE SITE TEST. THE TEST SHALL INCLUDE: FUEL LUBRICATING OIL, AND ANTIFREEZE SHALL BE CHECKED FOR CONFORMITY TO THE MANUFACTURER'S RECOMMENDATIONS, UNDER THE ENVIRONMENTAL CONDITIONS PRESENT AND EXPECTED. ACCESSORIES CHECK SHALL INCLUDE, BUT NOT BE LIMITED TO, BLOCK HEATERS, BATTERY CHARGER, GENERATOR STRIP HEATERS, REMOTE ANNUNCIATOR, UNDER START-UP MODE, CHECK FOR EXHAUST HEATS, PAINT OR EXHAUST PASSES AWAY FROM THE BUILDING, COOLING AIR FLOW, MOVEMENT DURING STARTING AND STOPPING, VIBRATION DURING RUNNING, NORMAL AND EMERGENCY LINE-TO-LINE VOLTAGE, AND PHASE ROTATION. AUTOMATIC START-UP TEST BY MEANS OF SIMULATED POWER OUTAGE TO TEST REMOTE-AUTOMATIC STARTING, TRANSFER OF THE LOAD, AND AUTOMATIC SHUTDOWN. PRIOR TO THIS TEST, ALL TRANSFER SWITCH TIMERS SHALL BE SET FOR PROPER SYSTEM COORDINATION. ENGINE COOLANT TEMPERATURE, OIL PRESSURE, AND BATTERY CHARGE LEVEL ALONG WITH GENERATOR VOLTAGE, AMPERES, AND FREQUENCY SHALL BE MONITORED THROUGHOUT THE TEST. IN EXTERNAL LOAD BANK SHALL BE CONNECTED TO THE SYSTEM IF SUFFICIENT BUILDING LOAD IS UNAVAILABLE TO LOAD THE GENERATOR TO THE NAMEPLATE KW RATING.
- WARRANTY AND MAINTENANCE
THE EMERGENCY GENERATOR SYSTEM SHALL BE WARRANTED BY THE MANUFACTURER FOR ONE YEAR OR 2,000 HOURS, WHICHEVER COMES FIRST, FROM THE DATE OF FINAL ACCEPTANCE. OPTIONAL TWO YEAR AND FIVE YEAR WARRANTIES SHALL BE AVAILABLE UPON REQUEST. THE SERVICE CONTRACTOR SHALL INCLUDE THE FURNISHING OF FACTORY TRAINED PERSONNEL AND MAINTAIN A 24-HOUR PARTS AND SERVICE CAPABILITY AND SHOW AT TIME OF SUBMITTAL THAT THEY ARE REGULARLY ENGAGED IN A MAINTENANCE CONTRACT PROGRAM TO SEMI-ANNUALLY INSPECT AND TEST RUN THE ENGINE TO PERFORM MANUFACTURER'S RECOMMENDED PREVENTIVE MAINTENANCE SERVICE ON THE EQUIPMENT FURNISHED. THIS SERVICE CONTRACT SHALL INCLUDE OPERATION OF THE EQUIPMENT UNDER SIMULATED POWER FAILURE CONDITIONS, ADJUSTMENT OF GENERATOR AND TRANSFER SWITCH CONTROLS AS REQUIRED AND CERTIFICATION IN THE OWNER'S MAINTENANCE LOG OF REPAIRS MADE AND PROPER FUNCTIONING OF ALL ENGINE AND AUXILIARY SYSTEMS. THIS SERVICE CONTRACT SHALL BE PROVIDED AT NO ADDITIONAL CHARGE FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE. AT THE OWNER'S OPTION, THE SERVICE CONTRACT SHALL BE RENEWABLE ON A YEAR-TO-YEAR BASIS THEREAFTER WITH COSTS BEING PAID BY THE OWNER.
- ACCEPTABLE MANUFACTURERS SHALL BE LIMITED TO THE FOLLOWING:
KOHLER, KATAGHT, GENERAC OR ONAN.
FOR THIS PROJECT THE EMERGENCY GENERATOR SHALL BE A 80KW LP GAS GENERATOR AS SHOWN ON CUT SHEET, KOHLER K800R WITH ALTERNATOR 475X 120/240V, 1# 30 AMP STANDBY, AUTOMATIC TRANSFER SWITCH, 600A 120/240V 1# NEMAK, KOHLER KEF, PROVIDE LP GAS CONNECTION PIPE SIZED AS PER MANUFACTURER REQUIREMENTS.

ACCESSORIES: RESIDENTIAL GRADE SILENCER EXHAUST CAP, BATTERY, BATTERY RACK AND CABLES, FULL WEATHERPROOF ENCLOSURE, EQUALIZE/FLOAT TYPE CHARGER, HEAVY DUTY AIR CLEANER, OIL DRAIN KIT, AIR CLEANER RESTRICTION INDICATOR, SPRING ISOLATORS, 1% VOLTAGE REGULATION, DECISION MONITOR, OVER-VOLTAGE PROTECTION, PRE-HIGH ENGINE TEMPERATURE SENDER AND LAMP, PRE-OIL PRESSURE SENDER AND LAMP, AND LOW WATER LEVEL SENDER AND LAMP. THE COMPLETE INSTALLATION SHALL COMPLY WITH NFPA 37. CONTRACTOR TO INSTALL EXHAUST PIPE FOR A COMPLETE INSTALLATION. INSULATE ALL EXHAUST PIPING AND MUFFLER WITH 2" OF CALCIUM SILICATE.

ELECTRICAL RISER AND NOTES SCALE: NTS



CASTRO RESIDENCE

ELECTRICAL RISER & NOTES

12715 ROLLING ROAD DRIVE
PINECREST, FL 33156

SEAL

PREPARED BY: ST

CHECKED BY: NAC

REV	DATE	DESCRIPTION
1	5/11/20	ISSUED FOR BIDDING
2	6/24/2020	QTY CHANGES
3	8/26/2020	COORDINATION
4	9/11/2020	AS-BUILT REV

SCALE: AS SHOWN

JOB NO: 22-PRO-0028

SHEET NO. 9

E-3

arpe engineering inc
2020 Ponce de Leon, Suite 1002
Coral Gables, Florida 33134
Phone > 305.444.9809
Fax > 305.444.9827
Engineering Design:
> Mechanical & Electrical
> Plumbing > Fire Protection
www.arpe-eng.com
Signature _____
Date _____

JOB # 22-1008
Amarilis Rodriguez, P.E.
License Number 60236
C.A. 2039

