



BEADLE RESIDENCE

ELECTRICAL PLAN

P.O. BOX 3271
ST. AUGUSTINE, FL. 32085
(386) 965-0644
C.O.A. # 33259



DRAWN BY
W.H.F.

DATE
4/07/24

APPROVED
W.H.F.

REVISIONS

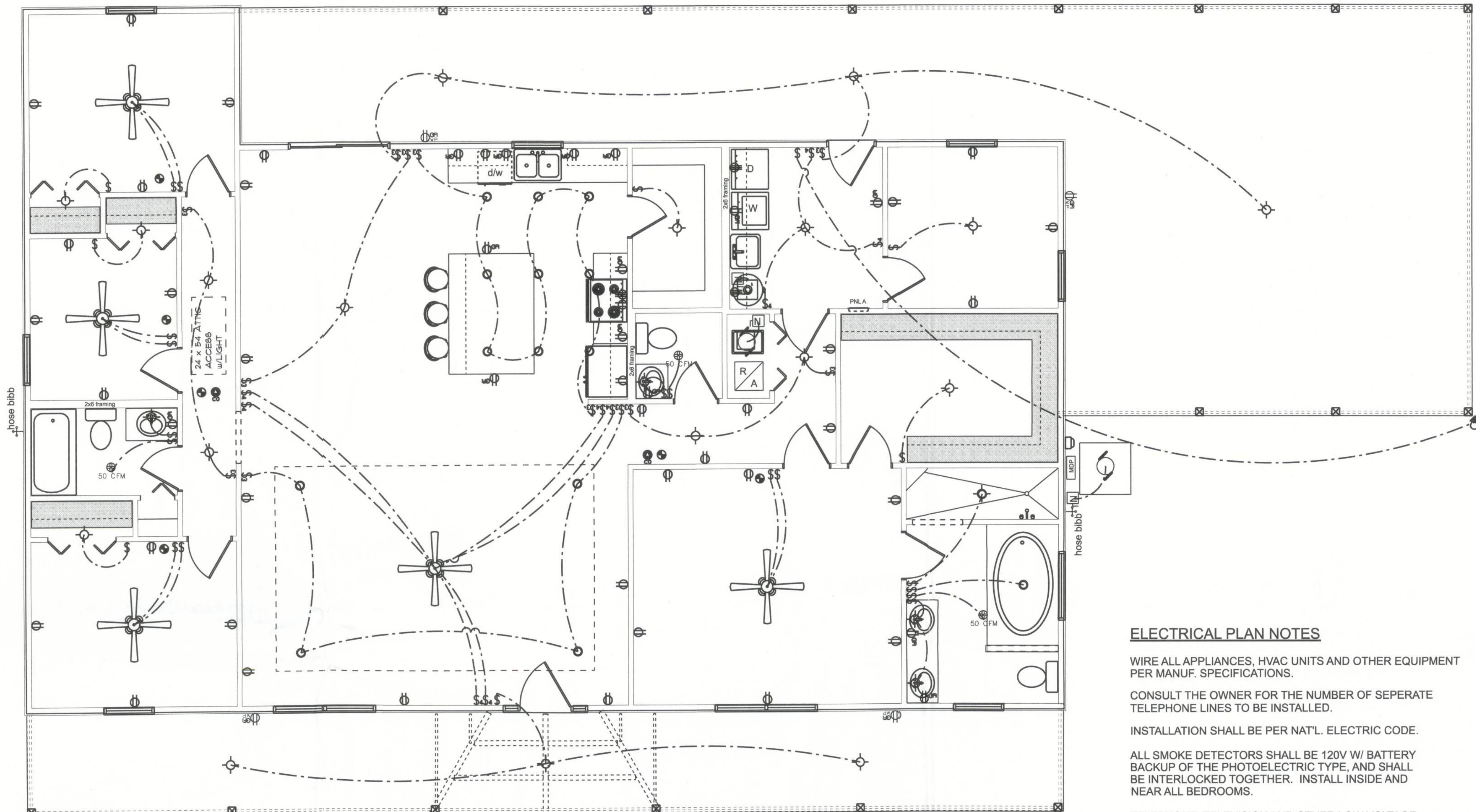
SHEET
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OF
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PROJECT NO.
24.R009

NOTE:

all 120 volt, single phase, 15 and 20 ampere branch circuits supplying outlets installed in dwelling unit family rooms, kitchens, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunroom, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter, combination type, installed to provide protection of the branch circuits.



ELECTRICAL PLAN

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

ELECTRICAL PLAN NOTES

WIRE ALL APPLIANCES, HVAC UNITS AND OTHER EQUIPMENT PER MANUF. SPECIFICATIONS.

CONSULT THE OWNER FOR THE NUMBER OF SEPERATE TELEPHONE LINES TO BE INSTALLED.

INSTALLATION SHALL BE PER NAT'L. ELECTRIC CODE.

ALL SMOKE DETECTORS SHALL BE 120V W/ BATTERY BACKUP OF THE PHOTOELECTRIC TYPE, AND SHALL BE INTERLOCKED TOGETHER. INSTALL INSIDE AND NEAR ALL BEDROOMS.

TELEPHONE, TELEVISION AND OTHER LOW VOLTAGE DEVICES OR OUTLETS SHALL BE AS PER THE OWNER'S DIRECTIONS, & IN ACCORDANCE W/ APPLICABLE SECTIONS OF NEC-LATEST EDITION.

ELECTRICAL CONTR SHALL PREPARE "AS-BUILT" SHOP DWGS INDICATING ALL ELECTRICAL WORK, INCLUDING ANY CHANGES TO THE ELEC. PLAN, ADD'NS TO THE ELEC. PLAN, RISER DIAGRAM, AS-BUILT PANEL SCHEDULE W/ ALL CKTS IDENTIFIED W/ CKT Nr., DESCRIPTION & BRKR, SERVICE ENT. & ALL UNDERGROUND WIRE LOCATIONS/ROUTING/DEPTH. RISER DIA. SHALL INCLUDE WIRE SIZES/TYPE & EQUIPMENT TYPE W/ RATINGS & LOADS. CONTRACTOR SHALL PROVIDE 1 COPY OF AS-BUILT DWGS TO OWNER & 1 COPY TO THE PERMIT ISSUING AUTHORITY.

WIRING NOTES:

WIRING, DISTRIBUTION EQUIPMENT AND DEVICES

A. CONDUCTORS: Copper, in accordance with ASTM Standards, size reference AWG. Conductors No. 10 and smaller size solid, No. 8 and Larger, Stranded. Insulation of conductor thermoplastic, type THHN (min. size No. 12) any wire installed outside, underground, in slabs or exposed to moisture shall have THWN insulation.

B. RACEWAYS: RIGID STEEL CONDUIT, full weight pipe galvanized, threaded, and minimum 1/2 inch except as noted or required for wiring. ELECTRICAL METALLIC TUBING (EMT), thin wall pipe, galvanized, threadless, compression fittings, and minim 1/2" size except as noted or required for wiring. FLEXIBLE STEEL CONDUIT: continuous single strip, galvanized, and minimum 1/2" size except as noted or required for wiring. PVC CONDUIT, heavy duty type, size as indicated. Separate raceways shall be used for each voltage system.

C. DISCONNECT SWITCHES: General Duty, horsepower rated for motor loads 250 volt rating, fused or non-fused as noted; number of poles as indicated. Enclosure NEMA 1 for indoor use and NEMA 3R for weatherproof applications. Switch to be Square "D" or equal.

D. CIRCUIT BREAKERS: molded case, thermal-magnetic, quick make, quick break, bolt-on type with manually operated insulated trip-free handle. Multi-pole types with internal common trip bar.

Terminals suitable for copper or aluminum conductors. Interrupting capacity minimum 10,000 RMS symmetrical amperes circuit circuit breakers to be Square "D", Siemens or equal, type as required.

E. PANELBOARDS: Voltage, phasing, and ampere ratings as indicated, circuit breaker type as indicated, buss bars of hard drawn copper, minimum 98% conductivity, galvanized steel back box, door and trim. All corners lapped and welded, hardware chrome plated with flush lock and catch. Hinges semi-concealed, 5 knuckles steel with nonferrous pins. 180 degree openings. Minimum gutter space 5-3/4" sides, top and bottom. Increase size where required by code. Directory holder complete with clear plastic transparent cover indicating typewritten list of feeder cables, conduit sizes, circuit number, outlets of equipment supplied, and their location. Circuit breaker type panelboards to be Square "D" type NQOD or I-Line, or equal. A plastic label shall be located on exterior of panelboard identifying the system voltage, phase, and current rating.

F. WIRING DEVICES: All devices their product of the same manufacturer. Wall switches and receptacles to be 20 amp, 125 volt, unless noted otherwise. Color to be selected by Architect.

G. DEVICE PLATES: provide for all outlets where devices are installed. Provide engraved marking for special outlets (where noted). Provide blank plates for empty or future outlet boxes. DEVICE AND DEVICE PLATE COLORS TO BE VERIFIED WITH ARCHITECT AND OWNER.

H. This contractor shall provide a temporary electrical distribution system as required; 120/208 volt, 1 phase, 100 amp, for new construction. All temporary work shall be installed in a neat and safe manner.

I. Contractor to remove and salvage all abandoned electrical equipment.

J. This contractor shall warrant all labor and materials for one year from date of final written acceptance.

GROUNDING SYSTEM:

a. EQUIPMENT: Ground non-current carrying metal parts of panel board, raceways and all lighting fixtures. All conduit shall have equipment grounding conductors.

INSTALLATION:

A. Secure all supports to building structure as specified under raceways. Support horizontal runs of metallic conduit not more than 10 feet apart. Run exposed raceways parallel with or at right angles to walls.

B. Pass raceways over water, steam or other piping when pull boxes are not required. no raceway within 3 inches of steam or hot water pipes, or appliances. expect crossing where the raceway shall be at least 2 inches from pipe cover.

C. Cut conduit ends square, ream smooth. Paint male threads of field threaded conduit with Graphite based pip compouner. Draw up tight with conduit couplings.

D. Leave wire sufficiently long to permit making final connections. In raceway over 50 feet in which wiring is not installed, furnish pull wire.

E. Verify locations of outlets and switches.

F. Support panel, junction and pull boxes independently to building structure with no weight bearing on conduits.

G. Connect conduit to motor conduit terminal bases with flexible conduit; minimum 18 inches in length and 50% slack. Do not terminate in or fasten raceways to motor foundation.

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- 1 Service/Feeder Entrance Conductors: 2 1/2" rigid conduit, min 18" deep, w. continuous ground bonding conductor, Service/Entrance Conductors shall not be spliced except that bolted connections at the Meter, Disconnecting Devices and Panel shall be allowed.
- 2 Existing Meter Enclosure, weatherproof, U.L. Listed.
- 3 Main Disconnect Switch: fused or Main Breaker, weatherproof, U.L. Listed.
- 4 Service entrance ground: 5/8" diameter iron/steel rod x 8'-0" long and/or concrete encased foundation steel rebar x 20'-0" long. Grounding conductor shall be bonded to each piece of Service/Entrance Equipment, and shall be sized per Item #5 below.
- 5 200 Ampere Feeder: 3-2/0-THHN-Cu, 1-#2-Cu-GND, 2 1/2" Conduit.
- 6 House Panel (PNL), U.L. Listed, sized per schedule.
- 7 Equipment Disconnect Switch: non-fused, in weather proof enclosure, size according to Panel Schedule loads.
- 8 Provide Ground Bond Wire to metal piping, size in accordance with the Service Ground Conductor.

