

DATE: October 11, 2024

TO: Firms Interested in the Goldston Library Addition

FROM: Michele Peluso, Chatham County Procurement Manager

SUBJECT: Addendum No.3– Goldston Library Addition

Please include addendum acknowledgement in your submittal.

*The bid date has been extended to October 22, 2024, at 2 PM.* If delivering the bid prior to the bid opening and not planning to attend, please deliver to Finance at 12 East Street, Pittsboro, NC 27312. If attending the bid opening, please deliver the before the 2:00 PM deadline to 964 East Street, Pittsboro, NC 27312.

The *bid form has been updated* to reflect an allowance for the tile. Please see page two of this addendum.

### **Additional Questions:**

1. **Q:** The existing service is 225-amp 240/120 volt single phase with a new remote panel sized at 100 amps 240/120 volts. The calculated load for the new addition would exceed the 100 amps and also would cause the main panel to exceed 225 amps.

**A:** See the Mechanical and Electrical drawings attached. Both disciplines reflect what will be on the permit set, even though the Mechanical only shows some air flows that will be needed for permit, but don't affect the design, or cost.

2. **Q:** there is no mention of data outlets or communications drawing. Will this be covered by another contractor?

**A:** See the Mechanical and Electrical drawings attached. Both disciplines reflect what will be on the permit set, even though the Mechanical only shows some air flows that will be needed for permit, but don't affect the design, or cost.

3. **Q:** There is not an exact tile to be quoted, no unit price or allowance for it. How do we need to quote this?

**A:** The notes on the bid set called to match the floor and wall tile that is currently in the existing toilets, with color samples to be provided. The bid form has been updated and attached to include a \$2.00/sq ft allowance for the tile. Takeoff estimate to be the responsibility of the bidder.

### Request for Bids: Goldston Library Addition BID FORM

| BIDDE  | ER acknowledges receipt of the       | e following | ADDENDUM:        |                           |
|--------|--------------------------------------|-------------|------------------|---------------------------|
|        |                                      |             |                  |                           |
|        | R agrees to perform all the wo       | rk describe | ed in the BID DC | OCUMENTS for the          |
|        | BID                                  | SCHEDUL     | E                |                           |
| Item   | Description                          | Unit        |                  | Total                     |
| 1      | Addition                             | LS          |                  | \$                        |
| 2      | Unforeseen Conditions Allowance      |             |                  | \$ <mark>20,000.00</mark> |
| 3      | Tile Allowance                       | Sq Ft       | \$2.00/sq ft     | \$                        |
| 4      | Cost for Additional 3 Parking Spaces | LS          |                  | \$                        |
| 5      | Other Fees                           |             |                  | \$                        |
| 6      | Project Total (excluding tax)        |             |                  | \$                        |
| Propos | sed estimated Sales Tax to b         | e paid in t | the project = \$ |                           |
| Respec | ctfully submitted:                   |             |                  |                           |
| Signat | ture                                 |             | Address          |                           |
| Title  |                                      |             | Date             |                           |
| Contra | actor's GC License<br>er             |             |                  |                           |

SEAL - (if BID is by a corporation)

### HVAC GENERAL NOTES

- I. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT IN STRICT ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL CODE, ALL STATE AND LOCAL CODES AND STANDARDS, AND PER MANUFACTURER'S DIRECTIONS.
- 2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, LICENSE, INSPECTIONS, APPROVALS, AND FEES.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES BEFORE INSTALLATION OF ANY MATERIALS OR EQUIPMENT.
- 4. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.
- 5. DO NOT SCALE DRAWINGS FOR MEASUREMENTS.
- 6. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DUCT DIMENSIONS.
- 7. ALL PENETRATIONS THROUGH EXTERIOR WALLS & ROOF SHALL BE FLASHED & COUNTERFLASHED IN A WATERPROOF MANNER (COLOR TO MATCH EXTERIOR).
- 8. SEAL ALL PENETRATIONS OF RATED WALLS WITH FIRE DAMPER OR SEALANT MATERIAL APPROVED BY LOCAL CODE. TO BE INSTALLED PER MFG.
- 9. ALL SUSPENDED MATERIALS AND EQUIPMENT SHALL BE INDIVIDUALLY SUPPORTED FROM THE BUILDING STRUCTURE. DO NOT SUSPEND ITEMS FROM THE CEILING OR ITS SUPPORT SYSTEM.
- 10. INSTALL ALL CONTROL DEVICES, INCLUDING THERMOSTATS AND SWITCHES, 4'-0" ABOVE FINISHED FLOOR FROM TOP OF DEVICE. PROVIDE THE REQUIRED DEVICE(S) FOR ALL SYSTEMS WHETHER LOCATED ON THE PLANS OR NOT.
- II. LOCATE CEILING DIFFUSERS IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLANS (IF PROVIDED).
- 12. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AROUND MECHANICAL UNITS FOR MAINTENANCE AND FILTER REMOVAL.
- 13. ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED W/ WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, TO AVOID INTERFERENCE.
- 14. ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTS SHALL BE INSULATED AS FOLLOWS:

CONDITIONED SPACES NON-CONDITIONED SPACES R-8 MINIMUM

HVAC Unit Location

Multi-Purpose Office

Work Room Office

tory Time

Hallway

CONCEALED SHEET METAL DUCT MAY BE EXTERNALLY INSULATED WITH MINERAL FIBER BOARD OR BLANKET OR MAY BE INTERNALLY INSULATED WITH DUCT LINER. THE FIRST 15' FROM THE AIR HANDLER SHALL BE INTERNALLY

R-6 MINIMUM

15. CERTIFIED TEST AND BALANCE CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNER'S REPRESENTATIVE WITH COMPLETE BALANCE REPORT. IF BALANCING DAMPERS ARE NOT PROVIDED IN RETURN DUCTWORK, CONTRACTOR SHALL BALANCE SUPPLY SIDE TO AIR QUANTITIES INDICATED ON PLANS AND SHALL BALANCE OUTSIDE AIR AND RETURN AIR FLOWS AT THE AIR HANDLER TO AIR QUANTITIES INDICATED IN THE SCHEDULE. PROVIDE NEW AIR FILTERS FOR EACH UNIT.

Zone

Occupancy

Classrms (5-8)

Corrido

| 6. | AS REQUIRED BY LOCAL CODES, MECHANICAL CONTRACTOR SHALL PROVIDE |
|----|---|
|    | U.L. LISTED FIRE DAMPERS WHERE REQUIRED FOR FIRE PROTECTION     |
|    | REQUIREMENTS OF THE HVAC SYSTEM & THE UL ASSEMBLY.              |

- 17. PROVIDE I YEAR WARRANTY ON ALL EQUIPMENT AND 5 YEAR WARRANTY ON
- 18. ALL INTAKE OPENINGS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ALL EXHAUST LOCATIONS.
- 19. CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC. DRAINS FROM AIR HANDLING UNITS SHALL BE TRAPPED. PIPING SHALL BE INSULATED WHERE ROUTED THROUGH ATTIC SPACES.
- 20. A COMPLETE SYSTEM OF SEISMIC RESTRAINTS SHALL BE DESIGNED BY MASON INDUSTRIES & SEALED BY THEIR REGISTERED ENGINEER & INSTALLED BY THIS CONTRACTOR, AS REQ'D BY APPLICABLE CODES FOR THE LOCALE OF THIS PROJECT.
- 21. ALL MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS. RUNOUTS FROM MAIN/BRANCH DUCTS MAY BE FLEXIBLE DUCT CONFORMING TO THE REQUIREMENTS OF UL 181 FOR CLASS I FLEXIBLE AIR DUCTS.
- 22. THE MECHANICAL CONTRACTOR SHALL PROVIDE REFRIGERANT AND LOW VOLTAGE CONTROL LINES FROM THE CONDENSER(S) TO THE AIR HANDLING UNIT(S). COORDINATE ROUTING AND INSTALLATION WITH THE GENERAL CONTRACTOR. SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.
- 23. ELECTRICAL CONTRACTOR TO PROVIDE ALL HIGH VOLTAGE ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO SPLIT SYSTEM UNIT(S). ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR.
- 24. OUTSIDE AIR DUCTWORK SHALL BE WRAPPED WITH 11/2" FIBERGLASS DUCT WRAP WITH VAPOR BARRIER.
- 25. REFRIGERANT PIPING, NOT SHOWN ON PLANS, SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, INSTALLATION INSTRUCTIONS AND LOCAL CODES.
- 26. MECHANICAL CONTRACTOR SHALL VERIFY LOCATION OF ALL PENETRATIONS FOR RELIEF HOODS, OUTSIDE AIR HOODS, LOUVERS, AND WALL CAPS WITH ARCHITECT & OWNER PRIOR TO INSTALLATION.
- 27. MECHANICAL CONTRACTOR SHALL PAINT ALL RELIEF HOODS, INTAKE HOODS, LOUVERS, AND VENT CAPS. CONFIRM COLOR WITH ARCHITECT & OWNER PRIOR TO INSTALLATION.
- 28. PENETRATIONS OF RATED WALLS, PARTITIONS AND FLOORS OF NON-COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH NONCOMBUSTIBLE MATERIALS. PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOOR OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-814.
- 29. ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR MECHANICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

|             |                |                      |            |                  |               |             |                | SPLI           | T SYS          | ГЕМ Н                     | EAT P             | JMP L      | JNIT SC     | CHEDU       | JLE             |           |           |        |                   |            |             |       |
|-------------|----------------|----------------------|------------|------------------|---------------|-------------|----------------|----------------|----------------|---------------------------|-------------------|------------|-------------|-------------|-----------------|-----------|-----------|--------|-------------------|------------|-------------|-------|
|             |                |                      |            |                  |               | AIR HAN     | DLING UNIT     | DATA           |                |                           |                   |            |             |             |                 | {         | HEAT PUMP |        |                   |            |             |       |
|             |                |                      |            | FAN              | DATA          |             | coo            | LING           | HEAT           | AUX.                      | ELEC              | CTRICAL D  | ATA         |             | GE              | NERAL DAT | Ä         |        | ELE               | CTRICAL D  | ATA         |       |
| UNIT<br>TAG | AREA<br>SERVED | MANUF.<br>MODEL      | FAN<br>CFM | ESP<br>(" OF WG) | MOTOR<br>(HP) | OA<br>(CFM) | TOTAL<br>(MBH) | SENS.<br>(MBH) | TOTAL<br>(MBH) | HEAT<br>(K₩ <b>@</b> 240) | VOLTAGE<br>(V/PH) | MCA<br>(A) | MOCP<br>(A) | UNIT<br>TAG | MANUF.<br>MODEL | TONNAGE   | SEER 2    | HSPF 2 | VOLTAGE<br>(V/PH) | MCA<br>(A) | MOCP<br>(A) | NOTES |
| AH-I        | ADDITION       | CARRIER<br>EVACNBOOG | 2000       | 0.50"            | 3/4           | 275         | 57.0           | 42.7           | 33.0           | 10                        | 208/10            | 53.8       | 60          | HP-I        | CARRIER         | 5.0       | 14.3      | 7.5    | 240/1¢            | 33.2       | 50          | 1-12  |

- NOTES: I. COOLING CAPACITIES ARE RATED IN ACCORDANCE WITH ARI STANDARD 210/240 AT 95°F AMBIENT OUTDOOR AIR TEMP., 80°F DRY BULB, 67°F WET BULB ENTERING AIR TEMP., AND AIR QUANTITY LISTED BY MFG. UNITS ABOVE 5 TONS ARE RATED IN ACCORDANCE WITH ARI STANDARD 340.
- 2. REFRIG. PIPING TO BE SIZED PER TOTAL INSTALL. EQUIV. LENGTH. LONG-LINE APP.TO BE PROVIDED WHENEVER MFG. RECOMM. LENGTHS ARE EXCEEDED, INCL. LIQ. LINE SOLENOID VALVES, ACCUMULATOR, ETC. MAX T.E.L. IS PER MFG.
- 4. PROVIDE 3 SETS OF NEW FILTERS FOR EACH UNIT. PROVIDE ONE AT INSTALLATION, ONE PRIOR TO AIR
- BALANCE AND ONE AT TURNOVER TO OWNER.
- 5. SYSTEMS SHALL HAVE A MINIMUM 14.3 SEER2 AND 7.5 HSPF2 RATING.

3. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR AIR HANDLING UNIT.

- 6. PROVIDE MANUFACTURER'S 7-DAY PROGRAMMABLE THERMOSTAT W/ HUMIDITY CONTROLS AND MANUAL OVERRIDE.
- 7. PROVIDE BI-FLOW TXV FOR HEAT PUMP OPERATION.

- 8. AHU TO USE HORIZONTAL APPLICATION.
- 9. RUN CONDENSATE TO EXTERIOR DOWN TO GRADE, AWAY FROM FOOT TRAFFIC, TOWARDS STORM RUN-OFF. IF NOT POSSIBLE FOR A GRAVITY RUN, PROVIDE CONDENSATE PUMP.
- 10. OUTDOOR THERMOSTAT TO LOCK-OUT ELECTRIC HEAT WHEN TEMPERATURE IS 40°F OR HIGHER. PROVIDE UNIT WITH EMERGENCY HEAT OVERRIDE OPTION.
- II. LOW AMBIENT KIT DOWN TO O'F.
- 12. CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF UNIT DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY UNITS. INFORMATION ON ALTERNATE UNITS PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT UNIT (OR THE ALTERNATE PACKAGE AS A WHOLE).

|             |         |                |     |       |     | FAN SC                     | HEDULE                      |                          |        |                |         |
|-------------|---------|----------------|-----|-------|-----|----------------------------|-----------------------------|--------------------------|--------|----------------|---------|
| UNIT<br>NO. | SERVICE | AREA<br>SERVED | CFM | S.P.  | RPM | TYPE <b>\$</b> ARRANGEMENT | MIN. MOTOR HP<br>\$ VOLTAGE | MANUFACTURER # MODEL NO. | DRIVE  | CONTROL SCHEME | REMARKS |
| EF-I        | EXHAUST | STAFF RR       | 80  | 0.10" | MFG | FAN/LIGHT                  | 43 WATTS/0.4 A<br>120/1¢    | BROAN MODEL<br>HD80L     | DIRECT | A              | 1-4     |

- 3. COLOR BY ARCHITECT
- 2. BACKDRAFT DAMPER 4. INTEGRAL DISCONNECT SWITCH

CONTROL OPTIONS:

A. CONTROL W/ ROOM LIGHTS

|        |          |              |                |               | DIFFU      | SER S  | SCHE     | DULE    |        |                              |       |
|--------|----------|--------------|----------------|---------------|------------|--------|----------|---------|--------|------------------------------|-------|
| SYMBOL | CFM      | NECK<br>SIZE | MODULE<br>SIZE | FRAME<br>TYPE | PATTERN    | DAMPER | MATERIAL | SERVICE | FINISH | MANUFACTURER<br>\$ MODEL NO. | NOTES |
| A      | AS NOTED | AS NOTED     | 12x12          | SURFACE       | 4-WAY      | YES    | STEEL    | SUPPLY  | NOTE 2 | TITUS TDC                    | 1-3   |
| B      | AS NOTED | AS NOTED     | 12x12          | SURFACE       | PERFORATED | NO     | STEEL    | RETURN  | NOTE 2 | TITUS PAR                    | I-3   |

- I. DIFFUSER DESIGNATIONS ON PLANS AS FOLLOWS: DIFFUSER OR
  - DIFFUSER TYPE AS NOTED ABOVE AIR QUANTITY
- 2. FINISH TO MATCH / BE ABLE MATCH CEILING OR WALL OR DOOR.
- 3. FACTORY INSULATION BACKING ON GRILLES EXPOSED TO NON-CONDITIONED AREAS. ALTERNATELY, FIELD SUPPLY AND INSTALL.

| MECH                   | HANICAL LEGEND  |
|------------------------|---|
| 18x14<br>60<br>60<br>1 | RECTANGULAR DUCT  ROUND METAL DUCT  FLEXIBLE ROUND DUCT                       |
|                        | VOLUME DAMPER SUPPLY TAP WITH VOLUME DAMPER                                   |
|                        | SUPPLY TAP  SUPPLY DIFFUSER/GRILLE OR RISER  RETURN REGISTER/GRILLE OR RISER  |
|                        | EXHAUST REGISTER/GRILLE OR RISER SIDEWALL DIFFUSER/GRILLE CEILING EXHAUST FAN |
| ₩-                     | I" DOOR UNDER CUT   |

| MECH          | HANICA     | L VENT     | ILATION     | N CALC     | ULATIONS        | 5                      |                 |                 |
|---------------|------------|------------|-------------|------------|-----------------|------------------------|-----------------|-----------------|
| pant Density  | Outoor Air | Zone       | Outdoor Air | Floor Area | Initial Zone    | Zone Area Distribution | Required Zone   | Design Zone     |
| ople/1000 sf) | CFM/Person | Population | CFM/SQFT    |            | Outdoor Airflow | Effectivness           | Outdoor Airflow | Outdoor Airflow |
|               | (Rp)       | (Pz)       | (Ra)        | (Az)       | (Vbz)           | (Ez)                   | (Voz)           | (CFM)           |
| 5             | 5          | 4.76       | 0.06        | 952        | 80.9            | 0.8                    | 101.2           |                 |
| 25            | 7.5        | 7.4        | 0           | 296        | 55.5            | 0.8                    | 69.4            |                 |
| 5             | 5          | 0.775      | 0.06        | 155        | 13.2            | 0.8                    | 16.5            |                 |

Calculations are base on the 2018 NCMC Table 403.3, Vbz = RpPz + RaAz, Voz = Vbz/Ez

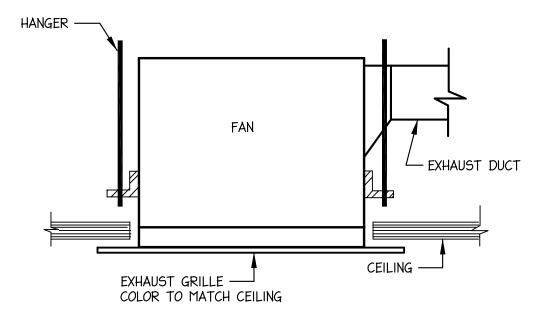
### **GRAVITY VENTILATOR SCHEDULE** MANUFACTURER PRESSURE MOUNTING FUNCTION DESIG. DROP SERVED # MODEL # GV-I OUTSIDE AIR INTAKE ROOF 0.06" GRSI-10

71.4

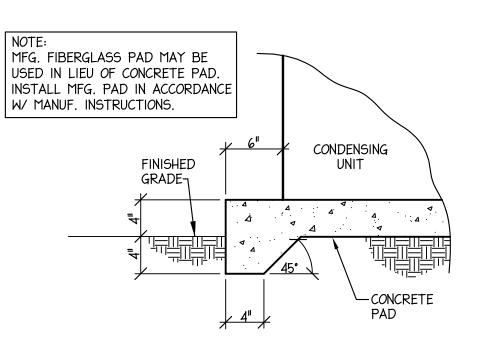
258.4

- 2. COLOR TO MATCH ROOF. 4. INSTALL W/ INSECT SCREEN.

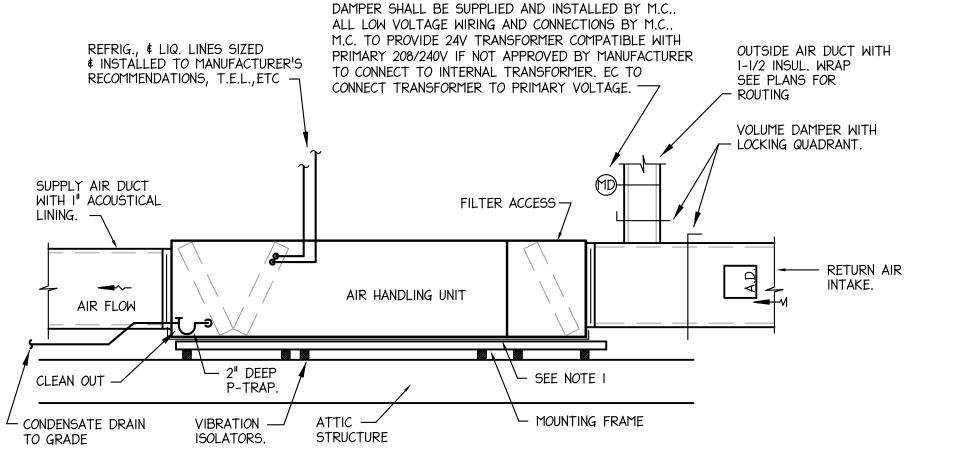












1. 1岁" DEEP AUXILIARY DRAIN PAN WITH MICROFLOAT SWITCH. INTERLOCK FLOAT SWITCH WITH AIR HANDLER. INSTALL FLOAT SWITCH IN ONE CORNER OF PAN AND TILT PAN TO THAT CORNER.







0

9235 | Goldst

Ř

FR

REVISIONS

DATE 10-09-2024

DRAWN BY

PWI

PROJECT NO.

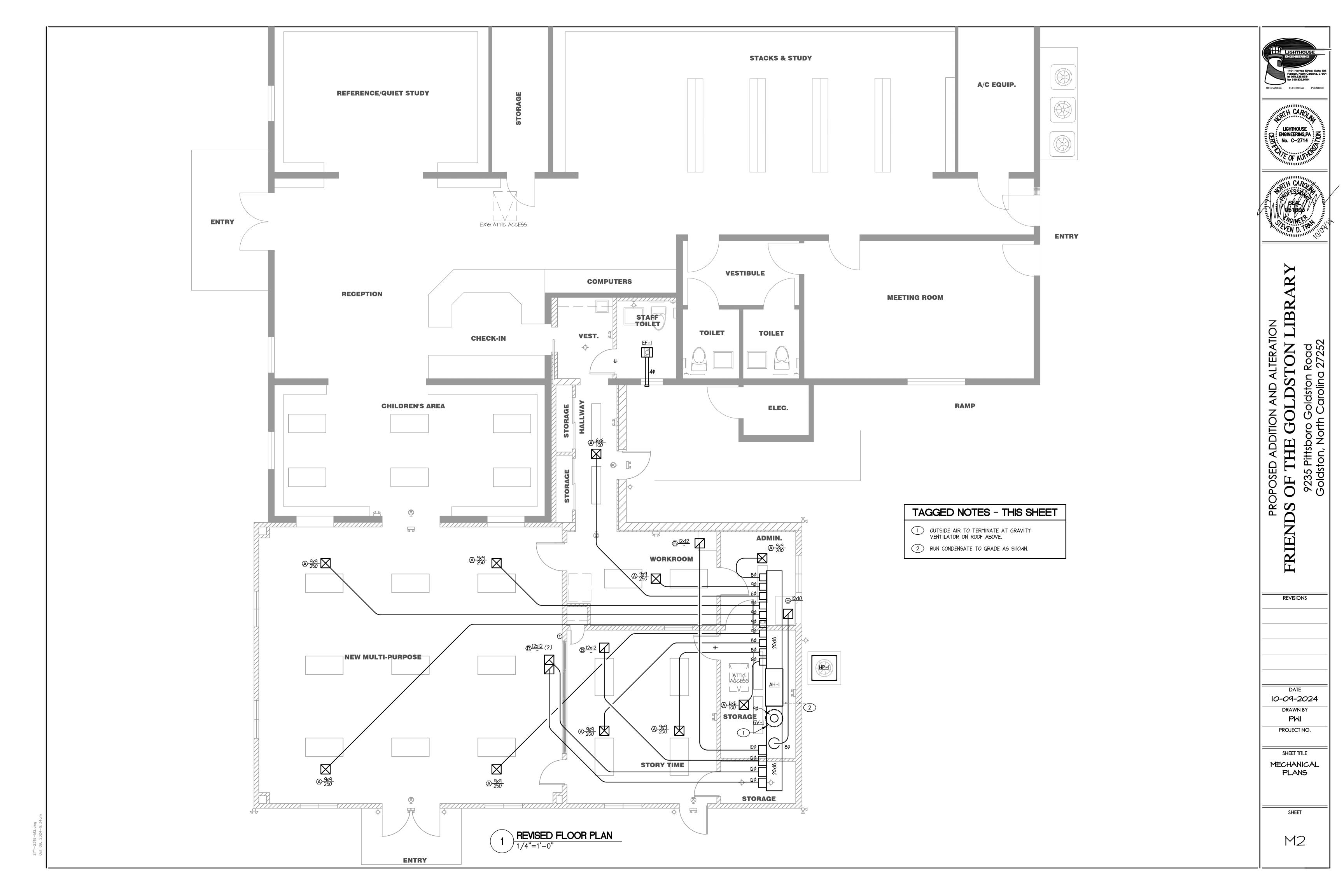
SHEET TITLE

**MECHANICAL** 

LEGEND AND

SCHEDULES

SHEET



### GENERAL ELECTRICAL NOTES

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES.
- 2. ALL MATERIAL, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
- ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR. DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE ONLY THE GENERAL ARRANGEMENT. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
- 4. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.
- 5. ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL POWER CONNECTIONS TO HVAC, PLUMBING AND OTHER EQUIPMENT AS REQUIRED.
- 6. A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE
- ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 8. CONDUCTORS #8 AND SMALLER SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS. CONDUCTORS #6 AND LARGER MAY BE ALUMINUM RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #14 AWG WITHIN RESIDENTIAL UNITS AND #12 ELSEWHERE. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID, UNLESS OTHERWISE NOTED. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE THHN OR THWN AS REQUIRED.
- 9. ALL WIRING SHALL BE INSTALLED IN GALVANIZED RIGID CONDUIT, INTERMEDIATE METAL CONDUIT, OR EMT. EXCEPT AS ALLOWED BELOW. EMT SHALL NOT BE USED IN OR UNDER CONCRETE SLABS, OR IN MASONRY WALLS. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. MINIMUM CONDUIT SIZE TO BE 1/2". TYPE NM, MC AND AC CABLE MAY BE USED WHERE PERMISSIBLE BY NEC. FLEXIBLE CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LUMINAIRES, BUT SHALL NOT EXCEED 6' IN LENGTH.
- 10. PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
- II. PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND.
- 12. FUSES 0 600 AMPS SHALL BE UL CLASS "RK-I" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.
- 13. ALL TERMINALS/LUGS SHALL BE 60/75° RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
- 14. VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START-UP. NOTIFY ENGINEER OF ANY CHANGES AS MAY BE REQUIRED.
- 15. E.C. TO VERIFY DEVICE PLATE COLOR AND MATERIAL WITH ARCHITECT PRIOR TO PURCHASE.
- 16. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.).
- 17. PENETRATIONS OF REQUIRED SMOKE PARTITIONS SHALL BE SEALED USING METHODS APPROVED UNDER THE STATE BUILDING CODE. COORDINATION WITH THE GENERAL CONTRACTOR SHALL BE MAINTAINED TO ENSURE THAT THIS SMOKE STOPPING IS ACCOMPLISHED.
- 18. WHERE PENETRATIONS ARE MADE THROUGH A REQUIRED FIRE-RESISTIVE WALL, FLOOR, OR PARTITION FOR THE PURPOSE OF RUNNING RACEWAY CARRYING ELECTRICAL, TELEPHONE, TELEVISION, OR LOCAL COMMUNICATION AND/OR SIGNALING CIRCUITS, THE OPENING AROUND THE RACEWAY SHALL BE FIRE STOPPED PER THE STATE BUILDING CODE. COORDINATION WITH THE GENERAL CONTRACTOR SHALL BE MAINTAINED TO INSURE THAT THIS FIRE STOPPING IS ACCOMPLISHED. USE APPROVED U.L. OR EQUIVALENT ASSEMBLIES.
- 19. IN REQUIRED FIRE RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQUIRED BY U.L. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO INSURE THAT THE INTEGRITY OF THE U.L. RATING IS MAINTAINED.
- 20. WHERE A HOME RUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT, DO NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN. THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS: A MAXIMUM OF THREE 20A BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN WITH SEPARATE NEUTRALS FOR A MAXIMUM TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO THE PANEL.
- 21. COORDINATE WITH THE CABLE TV AND TELEPHONE UTILITIES FOR SERVICE ENTRANCE AND CABLING REQUIREMENTS PRIOR TO ANY PURCHASING. INSTALLATION MUST COMPLY WITH THEIR RESPECTIVE REGULATIONS AND REQUIREMENTS.
- 22. RECEPTACLES IN COMMERCIAL AREAS SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 5200/5300 SERIES; GROUND FAULT RECEPTACLES SHALL BE EQUAL TO HUBBELL GF-5362. ALL I5A/20A I20V RECEPTACLES IN PRIMARY/ KINDERGARDEN AREAS SHALL BE TAMPER PROOF, EQUAL TO COOPER TR SERIES; GROUND FAULT RECEPTACLES SHALL BE EQUAL TO COOPER VGF SERIES. LIGHTING SWITCHES SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 1200 SERIES. ENSURE DEVICES ARE INSTALLED IN COMPLIANCE WITH ANSI AII7.1 FOR ADA REQUIREMENTS.
- 23. ALL EXTERIOR FIXTURES AND DEVICES SHALL BE RATED FOR OPERATION AT 0° F AND SHALL BE DAMP OR WET LABELED AS REQUIRED.
- 24. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. IN ACCORDANCE WITH LOCAL SEISMIC CODE REQUIREMENTS. PROVIDE SEISMIC RESTRAINTS, ACCESSORIES AND INSTALLATION DETAIL AS REQUIRED.
- 25. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.
- 26. OUTLETS SHALL BE STAGGERED BETWEEN STUDS TO REDUCE SOUND TRANSMISSION.

|                |                        |  | L   | LIGHTING       | G FIX   | TUR        | RE SCHE           | EDUL           | .E                           |  |
|----------------|------------------------|--|-----|----------------|---------|------------|-------------------|----------------|------------------------------|--|
| MARK           | MANUF.                 | CATALOG<br>NUMBER  | NO. | AMP DATA  TYPE | VOLTS   | BAL<br>NO. | LAST DATA<br>TYPE | INPUT<br>WATTS | MOUNTING                     | DESCRIPTION  |
| А              | HE WILLIAMS            | BP-24-LS-8-CS-DIM-UNV<br>BP24SMK-W                           | -   | LED<br>3500K   | UNV     | 1          | -                 | 39             | SURFACE                      | MULTI-PURPOSE, STORY TIME - 2'x4' SURFACE<br>MOUNTED LED BACKLIT FLAT PANEL;<br>COORDINATE MOUNTING WITH ARCHITECT.            |
| В              | HE WILLIAMS            | BP-14-LS-8-CS-DIM-UNV<br>BPI4SMK-W                           | -   | LED<br>3500K   | UNV     | 1          | -                 | 30             | SURFACE                      | STORAGE, ADMIN - 1'x4' SURFACE MOUNTED LED<br>BACKLIT FLAT PANEL; COORDINATE MOUNTING<br>WITH ARCHITECT.                       |
| С              | HE WILLIAMS            | 6DR-TL-L20/830-DIM-UNV-<br>OW-OF-CS-N-FI                     | -   | LED            | UNV     | -          | -                 | 19             | RECESSED                     | STORAGE, VESTIBULE - RECESSED LED; CONFIRM REFLECTOR & TRIM WITH ARCHITECT.  |
| D              | VONN                   | PROCYON<br>VMWII200  | 1   | LED<br>3000K   | 120     | 1          | -                 | 24             | WALL<br>(HEIGHT BY<br>ARCH)  | BATHROOM - LED BATHROOM WALL LAMP<br>WITH WHITE FINISH.  |
| E              | SCOTT<br>ARCHITECTURAL | S9410-L16  | ı   | LED<br>3500K   | 120/277 | 1          | -                 | 16             | WALL<br>(HEIGHT BY<br>ARCH)  | EXTERIOR BUILDING - EXTERIOR LED WALL SCONCE; HEIGHT BY ARCHITECT.   |
| F              | BR <i>O</i> AN         | HD80L<br>(COORDINATE PURCHASE AND<br>INSTALLATION WITH M.C.) | 1   | LED            | 120     | 1          | -                 | 43             | RECESSED                     | BATHROOM - FAN/LIGHT COMBINATION UNIT<br>WITH 80CFM FAN AND WHITE ACRYLIC<br>DIFFUSER.   |
| FLx            | STONCO                 | SL20-SCT-GI-8-BZ   | 1   | LED            | 120/277 | 1          | -                 | 20             | WALL<br>(HEIGHT BY<br>OWNER) | EXTERIOR - MOTION LED FLOOD LIGHT WITH SELECTABLE COLOR TEMPS. AND BRONZE FINISH; INTEGRATED MOTION & DAYLIGHT SENSOR.         |
| G              | SIGNIFY                | FSS-4-40L-830-277-DIM  | -   | LED            | 120     | ı          | -                 | 30             | SURFACE                      | ATTIC - 48" LED STRIP LIGHT W/ ACRYLIC<br>LENS; PROVIDE WIRE GAURD.  |
|                | SIGNIFY CHLORIDE       | CLR2W  | -   | LED            | UNV     | 1          | NA                | 4              | SURFACE                      | SURFACE LED EMERGENCY LIGHT. MOUNT AT 96" AFF TO BOTTOM. MAX 56' SPACING. PROVIDE WITH 90 MINUTE BATTERY BACKUP.               |
| EMX            | SIGNIFY CHLORIDE       | PLACEMBZ-BAC   | 8   | 3W LED         | 120/277 | 1          | -                 | 24             | WALL                         | SURFACE MOUNTED EXTERIOR EMERGENCY LIGHT,<br>MOUNT AT 8'-6" AFF. CONNECT TO UNSWITCHED<br>LEG OF EXTERIOR LIGHTING CIRCUIT.    |
| <b>S</b><br>EX | SIGNIFY CHLORIDE       | CN-6-GC-A-I  | -   | LED            | UNV     | 1          | NA                | 4              | SURFACE                      | EDGE-LIT EXIT SIGN WITH GREEN LETTERS, CLEAR PANEL AND BRUSHED ALUMINUM HOUSING. PROVIDE TWO-FACED OPTION WHERE NOTED ON PLAN. |

- CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE).
- EXIT AND EMERGENCY LIGHTING FIXTURES SHALL BE CIRCUITED TO AN UNSWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT, UNLESS NOTED OTHERWISE. WHERE FIXTURE IS LOCATED RECESSED IN A RATED FLOOR/CEILING ASSEMBLY PROVIDE WITH TENMAT 1-HOUR OR 2-HOUR FIRE RATED LIGHT COVER TO MATCH ASSEMBLY
- COLOR TEMPERATURES OF LED LAMPS SHALL BE CONFIRMED WITH THE ARCHITECT.
- CONFIRM MANUFACTURER, TYPE AND FINISH OF ALL LIGHTING FIXTURES AND ACCESSORIES WITH ARCHITECT AND OWNER PRIOR TO PURCHASE AND INSTALLATION.

# LIGHTING SYSTEMS

**ENERGY CONSERVATION CODE SECTION 405** 

(SEE BELOW)

### LIGHTING POWER DENSITY CALCULATION COMPLIANCE

INTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.4.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

INTERIOR WATTAGE SPECIFIED VS. ALLOWED

SECTION 406 COMPLIANCE -  $\square$  N/A

THIS PROJECT IS CLASSIFIED AS -

EXTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.6.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

TRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED NONTRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED NA VS. NA DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE LIGHTING SYSTEMS REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE, SECTION C405 AND ANY LOCAL AMENDMENTS THEREOF.

SIGNED: PAUL SCOTT, PE NAME: ELECTRICAL ENGINEER

 $\square$  406.1.1  $\square$  406.1.2  $\square$  406.1.3  $\square$  406.1.4  $\square$  406.1.5  $\square$  406.1.6

# **ELECTRICAL DEMOLITION NOTES**

- DRAWINGS ARE BASED ON EXISTING PLANS AND NON-DESTRUCTIVE FIELD INVESTIGATIONS. THE CONTRACTOR SHALL VISIT THE EXISTING BUILDING AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS. THE CONTRACTOR SHALL EXAMINE RELATED DRAWINGS TO AVOID CONFLICTS.
- 2. PROVIDE ELECTRICAL DEMOLITION WORK AS NECESSARY TO INSTALL NEW WORK. ELECTRICAL CONTRACTOR SHALL REPOUTE AND RECONNECT ANY CIRCUITS THAT WILL REMAIN IN USE BUT INTERFERES WITH NEW CONSTRUCTION.
- MATERIAL BEING REMOVED UNDER DEMOLITION (AND NOT TO BEING RELOCATED) SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED COMPLETELY FROM THE SITE, UNLESS OTHERWISE NOTED.
- 4. EXISTING CONDUITS THAT WILL NOT BE REUSED SHALL BE REMOVED IN CEILING PLENUMS AND WALLS. OTHERS MAY BE ABANDONED BELOW FLOOR SLABS. CONTRACTOR SHALL REMOVE ALL WIRING FROM ABANDONED CONDUITS. CUT-OFF ABANDONED CONDUITS BELOW FLOOR AND GROUT FLUSH WITH NON-CONTRACTING GROUT.
- ABANDONED DEVICES SHALL BE REMOVED WITH THE JUNCTION BOX. WALLS SHALL BE PATCHED TO MATCH ADJACENT SURFACES.
- 6. CONTRACTOR SHALL EXERCISE CARE IN REMOVING DEMOLITION ITEMS AND SHALL REPAIR OR REPLACE AT HIS COST ANY DAMAGE CAUSED TO EXISTING CONSTRUCTION AND EQUIPMENT TO REMAIN.
- 7. SCHEDULE WORK IN EXISTING BUILDING AT TIME CONVENIENT TO OWNER.
- 8. DEVICES TO BE REMOVED AND NOT REINSTALLED SHALL HAVE JUNCTION BOXES, CONDUCTORS, CONDUIT AND ALL ASSOCIATED APPURTENANCES REMOVED BACK TO LAST ACTIVE DEVICE OR PANELBOARD.

# ELECTRICAL ABBREVIATIONS

DIMENSION INDICATES HEIGHT ABOVE FINISHED FLOOR AT WHICH CENTER OF DEVICE IS TO BE MOUNTED

ABOVE FINISHED FLOOR. AFG ABOVE FINISHED GRADE.

AFF

P.C.

UON

ELECTRICAL CONTRACTOR. E.C. FPN FUSE PER EQUIPMENT NAMEPLATE REQUIREMENTS.

G.C. GENERAL CONTRACTOR. M.C. MECHANICAL CONTRACTOR.

> PLUMBING CONTRACTOR. INDICATES DEVICE TO HAVE WEATHERPROOF COVER.

UNLESS OTHERWISE NOTED. NIGHT LIGHT, LIGHT NOT SWITCHED.

# SYSTEM COMMISSIONING NOTES (NCECC C408)

COMMISSIONING REQUIREMENTS ARE NOT REQUIRED FOR THIS BUILDING, PER EXEMPTION UNDER NCECC C408.1, WHICH ALLOWS COMMISSIONING EXEMPTIONS FOR BUILDINGS LESS THAN OR EQUAL TO 10,000 SQUARE FEET OF CONDITIONED SPACE. THIS BUILDING CONTAINS 6,000 (INCLUDING 1,800 NEW / RENOVATED) SQUARE FEET OF CONDITIONED SPACE.

ELECTRICAL SYMBOL LEGEND CIRCUIT CONDUCTORS CONCEALED IN FLOOR, WALL OR CEILING. ARROWHEAD INDICATES HOMERUN TO PANEL NOTED. INDICATES HOT LEG OF CIRCUIT TO BE CARRIED OVER TO NEXT DEVICE. SEE PLANS FOR CONTROL SCHEME. **(** JUNCTION BOX CEILING MOUNTED. JUNCTION BOX FLOOR MOUNTED. Ю JUNCTION BOX WALL MOUNTED AT HEIGHT INDICATED ON DRAWINGS. SINGLE POLE SWITCH, 20A, 120/277 VOLT, 46" A.F.F. TO CENTER. "3" INDICATES 3-WAY SWITCH. "4" INDICATES 4-WAY SWITCH. "D" INDICATES DIMMER SWITCH OF TYPE TO SUIT LOAD. "H" INDICATES HINGE MOUNTED PUSH OFF SWITCH. "K" INDICATES KEY OPERATED SWITCH. "M" INDICATES 120V, 20A MOTOR RATED TOGGLE SWITCH. SS INDICATES FLUORESCENT FIXTURES DUAL SWITCHED, INBOARD/OUTBOARD SWITCHED SEPARATELY.  $\Theta$ SINGLE RECEPTACLE, 20 AMP, 120 VOLT, 18" A.F.F. TO CENTER. DUPLEX RECEPTACLE, 15 AMP, 120 VOLT, 18" A.F.F. TO CENTER. **=** "GFI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE. "WP" INDICATES WEATHERPROOF "EWC" INDICATES MOUNT GFI RECEPTACLE BESIDE ENCLOSURE OF ELECTRIC WATER COOLER. QUADRUPLEX RECEPTACLE, AS ABOVE, 18" A.F.F. DUPLEX RECEPTACLE, AS ABOVE, SPLIT WIRED, TOP HALF SWITCHED, 18" A.F.F. DUPLEX RECEPTACLE, AS ABOVE, MOUNTED 6" ABOVE COUNTER TOP OR 4" ABOVE BACKSPLASH, AS APPROPRIATE, OR AT HEIGHT INDICATED. DUPLEX RECEPTACLE, AS ABOVE, MOUNTED 6" ABOVE COUNTER TOP OR 4" ABOVE BACKSPLASH, AS APPROPRIATE, OR AT HEIGHT INDICATED, WITH GFI PROTECTION. RECESSED FLUSH FLOOR DUPLEX RECEPTACLE WITH BRASS COVERPLATE. COORDINATE EXACT FINISH WITH ARCHITECT AND OWNER. 240V RECEPTACLE, SEE PLANS FOR NEMA CONFIGURATION. TELEPHONE OUTLET, 18" A.F.F. TO CENTER OR ALIGN MOUNTING HEIGHT WITH ADJACENT DEVICE, UNLESS OTHERWISE NOTED. PROVIDE 3/4 CONDUIT TO ACCESSIBLE CEILING. ALIGN MOUNTING HEIGHT WITH ADJACENT DEVICE. DATA OUTLET, 18" A.F.F. TO CENTER OR ALIGN MOUNTING HEIGHT WITH ADJACENT 4 DEVICE, UNLESS OTHERWISE NOTED. PROVIDE I" CONDUIT TO ACCESSIBLE CEILING. TELEPHONE/DATA OUTLET, 18" A.F.F. TO CENTER OR ALIGN MOUNTING HEIGHT

> FRAME SIZE, NUMBER OF POLES AND FUSING. PROVIDE NEMA I ENCLOSURE INSIDE. PROVIDE NEMA 3 ENCLOSURE FOR ALL SWITCHES LOCATED OUTSIDE. "FPN" INDICATES FUSE PER EQUIPMENT NAMEPLATE "NF" INDICATES NON-FUSED. "MS" INDICATES MOTOR STARTER OF TYPE TO SUIT LOAD.

ACCESSIBLE CEILING.

ELECTRICAL PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS. FAN, PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. PROVIDE DISCONNECTING MEANS AS REQUIRED.

WITH ADJACENT DEVICE, UNLESS OTHERWISE NOTED. PROVIDE I" CONDUIT TO

HEAVY DUTY FUSIBLE/NON-FUSIBLE DISCONNECT SWITCH, NUMBERS INDICATE

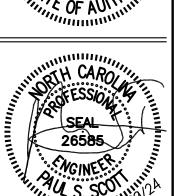
WATER HEATER, PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR. PROVIDE DISCONNECTING MEANS AS REQUIRED.

ELECTRIC UTILITY METER LOCATION.

120V MULTI-STATION SMOKE ALARM WITH EMERGENCY POWER SOURCE BACK-UP, CONNECT TO 120V CIRCUIT AS INDICATED, EQUAL TO BRK 7020BSL.







 $\mathbf{\Omega}$ 0 oro ( Ō 9235 Golds' SSI F O Ř

REVISIONS

10-09-2024 DRAWN BY JRS

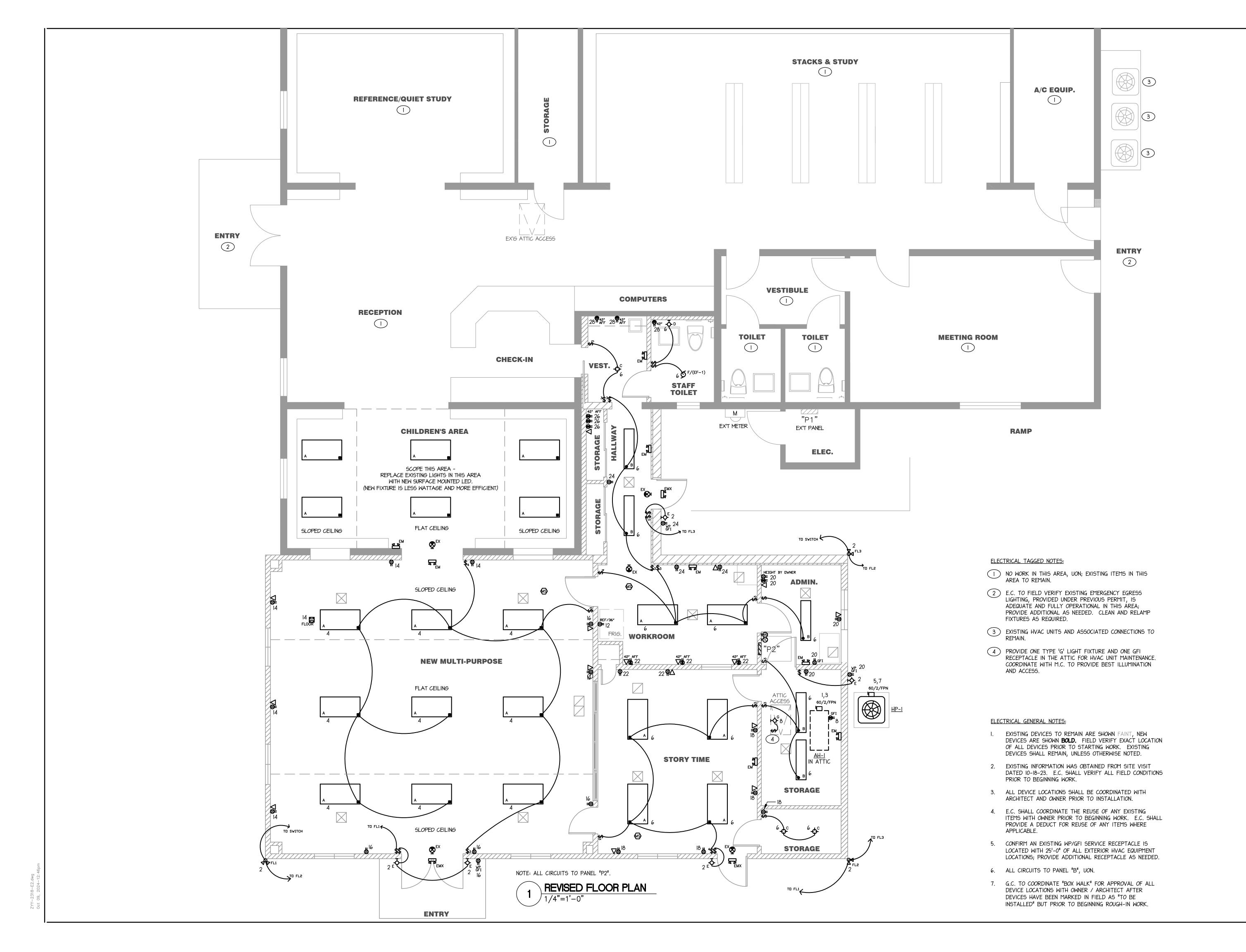
PROJECT NO.

SHEET TITLE ELECTRICAL LEGEND AND SCHEDULES

SHEET

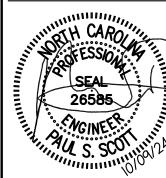


ELECTRICAL LEGEND AND SCHEDULES ELECTRICAL PLANS ELECTRICAL RISER DIAGRAM









Pittsboro G ston, North ( PROPOSED,
SOFTI
P235 Pi
Goldsto

**REVISIONS** 

DATE 10-09-2024 DRAWN BY JRS

PROJECT NO.

SHEET TITLE ELECTRICAL PLANS

SHEET

| VOLTAGE: 240/120V<br>AMPS: 225 - MCB |                      |              |             | P        | <u>ANE</u> | TING | P1            |             |              |      | I PHASE 3 WIRE<br>SURFACE MOUNTED<br>NEMA I |  |  |  |  |
|--------------------------------------|----------------------|--------------|-------------|----------|------------|------|---------------|-------------|--------------|------|---|--|--|--|--|
| - DESCRIPTION -                      | POLE                 | WIRE<br>SIZE | BRK<br>SIZE | CCT<br># | Α          | В    | CCT<br>#      | BRK<br>SIZE | WIRE<br>SIZE | POLE | - DESCRIPTION -                             |  |  |  |  |
| REC: RM 105                          | 1                    | -            | 20          | 1        | -/-        |      | 2             | 20          | -            | 1    | LTS: RM 103,104                             |  |  |  |  |
| REC: RM 105                          | 1                    | 1            | 20          | 3        |            | -/-  | 4             | 20          | 1            | 1    | LTS: RM 100,101,102                         |  |  |  |  |
| REC: RM 104,106                      | 1                    | 1            | 20          | 5        | -/-        |      | 6             | 20          | -            | 1    | LTS: RM 107,108,109,110,112                 |  |  |  |  |
| REC: 101,0UTSIDE                     | 1                    | 1            | 20          | 7        |            | -/-  | 8             | 20          | -            | 1    | LTS: RM 105,106,111                         |  |  |  |  |
| REC: RM 101                          | 1                    | 1            | 20          | 9        | -/-        |      | 10            | 20          | -            | 1    | LTS: EXTERIOR                               |  |  |  |  |
| REC: RM 101                          | 1                    | 1            | 20          | 11       |            | -/-  | 12            | 20          | -            | 1    | LTS: EXTERIOR                               |  |  |  |  |
| REC: RM 102, COPIER                  | 1                    | 1            | 20          | 13       | -/-        |      | 14            | 20          | -            | 1    | HVAC: HEAT                                  |  |  |  |  |
| REC: RM 102                          | 1                    | 1            | 20          | 15       |            | -/-  | 16            | 20          | 1            | 1    | HVAC: HEAT                                  |  |  |  |  |
| REC: RM 100,0UTSIDE                  | 1                    | 1            | 20          | 17       | -/-        |      | 18            | 20          | 1            | 1    | HVAC: HEAT                                  |  |  |  |  |
| REC: RM 103,111,EXTERIOR             | 1                    | 1            | 20          | 19       |            | -/-  | 20            | 20          | -            | 1    | USED  |  |  |  |  |
| REC: RM 107 (EWC)                    | 1                    | 1            | 20          | 21       | -/-        |      | 22            | 20          | -            | 1    | HVAC: EXHAUST FANS                          |  |  |  |  |
| LTS: ELECT.                          | 1                    | 1            | 20          | 23       |            | -/-  | 24            | 30          | -            | 2    | WASTEWATER PUMP (GP-1)                      |  |  |  |  |
| REC: RM 110                          | 1                    | 1            | 20          | 25       | -/-        |      | 26            |             |              |      |   |  |  |  |  |
| REC: RM 110                          | 1                    | 1            | 20          | 27       |            | -/-  | 28            | 30          | 1            | 2    | WASTEWATER PUMP (GP-1)                      |  |  |  |  |
| WATER HEATER                         | 2                    | 1            | 30          | 29       | -/-        |      | 30            |             |              |      |   |  |  |  |  |
|                                      |                      |              |             | 31       |            | 1    | 32            | 30          | -            | 2    | WASTEWATER PUMP (GP-1)                      |  |  |  |  |
| SPACE                                | 1                    | 1            | -           | 33       | -/-        |      | 34            |             |              |      |   |  |  |  |  |
| SPACE                                | 1                    | 1            | 1           | 35       |            | -/-  | 36            | 20          | 1            | 2    | WATER HEATER                                |  |  |  |  |
| SPACE                                | 1                    | 1            | 1           | 37       | -/-        |      | 38            |             |              |      |   |  |  |  |  |
| SPACE                                | 1                    | 1            | -           | 39       |            | 1    | 40            | 1           | 1            | 1    | SPACE                                       |  |  |  |  |
| SPACE                                | 1                    | -            | 1           | 41       | -/-        |      | 42            | -           | -            | 1    | SPACE                                       |  |  |  |  |
| TOTAL                                |                      |              |             |          |            | -    | DEMAND kVA: - |             |              |      |   |  |  |  |  |
| PANEL R                              | PANEL RMS SYM. AMPS: |              |             |          |            |      |               |             |              |      | RISER DEMAND AMPS: -                        |  |  |  |  |

EXISTING LOADS ARE SHOWN FAINT.

PANEL IS EQUAL TO EATON POW-R-LINE PRL-IA.

E.C. TO FIELD VERIFY ALL EXISTING CONDITIONS AND LOCATIONS OF EQUIPMENT PRIOR TO BIDDING WORK.

| VOLTAGE: 240/120V |                 |              |             | _    |         | EW _         |          |             |              |       | 1 PHASE 3 WIRE           |
|-------------------|-----------------|--------------|-------------|------|---------|--------------|----------|-------------|--------------|-------|--------------------------|
| AMPS: 125 - MLO   |                 |              |             | P    | ANE     | :L: F        | 2        |             |              |       | FLUSH MOUNTED<br>NEMA 1  |
| - DESCRIPTION -   | POLE            | WIRE<br>SIZE | BRK<br>SIZE | Ісст |         | R PHASE<br>B | CCT<br># | BRK<br>SIZE | WIRE<br>SIZE | DOI 5 |                          |
| HVAC: AH-I        | 2               | SIZE<br>4    | SIZE<br>60  | #    | 5.1/0.2 |              | 2        | SIZE<br>20  | SIZE<br>12   | 1     | LTS: EXTERIOR            |
| TVAC: ATT         |                 | ~            | 60          | 3    | 0.2     | 5.1 / 0.4    | 4        | 20          | 12           | H     | LTS: MULTI-PURPOSE       |
| HVAC: HP-I        | 12              | 6            | 50          | 5    | 3.2/0.6 |              | 6        | 20          | 12           | 1     | LTS: INTERIOR ALTERATION |
| 11470. 111 1      |                 | ້            | "           | 7    | 7 0.8   | 3.2/0.3      | 8        | 20          | 12           | i     | LTS/REC: ATTIC           |
| SPACE             | $\top_{\Gamma}$ | -            | _           | 9    | -/-     | 7 0.5        | 10       | 20          | -            | İ     | SPARE                    |
| SPACE             | 1               | -            | -           | 11   |         | - /0.8       | 12       | 20          | 12           | 1     | EQ: REFIRFGERATOR        |
| SPACE             | 1               | -            | -           | 13   | -/1.1   |              | 14       | 20          | 12           | 1     | REC: MULTIPURPOSE        |
| SPACE             | 1               | -            | -           | 15   |         | -/1.1        | 16       | 20          | 12           | 1     | REC: MULTIPURPOSE        |
| SPACE             | 1               | -            | -           | 17   | - /0.9  |              | 18       | 20          | 12           | 1     | REC: STORAGE, STORYTIME  |
| SPACE             | 1               | -            | -           | 19   |         | - /0.9       | 20       | 20          | 12           | 1     | REC: EXT, STORAGE, ADMIN |
| SPACE             | 1               | -            | -           | 21   | -/0.9   |              | 22       | 20          | 12           | 1     | REC: WORKRM, STORYTIME   |
| SPACE             | 1               | -            | -           | 23   |         | -/0.6        | 24       | 20          | 12           | 1     | REC: WORKROOM, HALL      |
| SPACE             | 1               | -            | -           | 25   | - /0.6  |              | 26       | 20          | 12           | 1     | REC: STORAGE             |
| SPACE             | 1               | -            | -           | 27   |         | - /0.6       | 28       | 20          | 12           | 1     | REC: VESTIBULE, TOILET   |
| SPACE             |                 | -            | -           | 29   | -/-     |              | 30       | 20          | -            | 1     | SPARE                    |

PANEL SHALL BE EQUAL TO SIEMENS ES LOAD CENTER.
PROVIDE HACR BREAKERS FOR HVAC EQUIPMENT.

TOTAL CONNECTED kVA 25.6

PANEL RMS SYM. AMPS: SEE RISER

BREAKERS SO LONG AS THE DEVICE(S) CONFORM TO NEC CODE REQUIREMENTS FOR GFCI PROTECTION AND CAN BE MOUNTED IN A READILY ACCESSIBLE LOCATION.

DEMAND kVA: 27.7

DEMAND AMPS: 115

4. ATC - CIRCUIT THROUGH 24-HR, 7-DAY, SINGLE-POLE ASTRONOMICAL TIMECLOCK. LOCATE

TIMECLOCK ADJACENT TO PANEL.

5. TC - CIRCUIT THROUGH 7-DAY TIMECLOCK WITH MULTIPLE OUTPUTS. LOCATE TIMECLOCK ADJACENT TO PANEL.

# CIRCUIT DIRECTORY TO BE UPDATED PER NEC 408.4

### REVISED

| <br>  VOLTAGE: 240/120V  |      |              |             |          | EXIS       | TING        |                    |             |              |      | 1 PHASE 3 WIRE              |
|--------------------------|------|--------------|-------------|----------|------------|-------------|--------------------|-------------|--------------|------|-----------------------------|
| AMPS: 225 - MCB          |      |              |             | P        | <b>ANE</b> | <b>EL</b> : | <b>P1</b>          |             |              |      | SURFACE MOUNTED             |
| 7 220 7                  |      |              |             |          |            | r Phase     | <u> </u>           |             |              |      | NEMA I                      |
| - DESCRIPTION -          | POLE | WIRE<br>SIZE | BRK<br>SIZE | CCT<br># | Α          | В           | CCT<br>#           | BRK<br>SIZE | WIRE<br>SIZE | POLE | - DESCRIPTION -             |
| REC: RM 105              | 1    | 12           | 20          | 1        | 0.7/0.5    | 1           | 2                  | 20          | 12           | 1    | LTS: RM 103,104             |
| REC: RM 105              | 1    | 12           | 20          | 3        |            | 0.7/0.5     | 4                  | 20          | 12           | 1    | LTS: RM 100,101,102         |
| REC: RM 104,106          | 1    | 12           | 20          | 5        | 0.7/0.5    |             | 6                  | 20          | 12           | 1    | LTS: RM 107,108,109,110,112 |
| REC: 101, OUTSIDE        | 1    | 12           | 20          | 7        |            | 0.7/0.5     | 8                  | 20          | 12           | 1    | LTS: RM 105,106,111         |
| REC: RM 101              | 1    | 12           | 20          | 9        | 0.7/0.3    |             | 10                 | 20          | 12           | 1    | LTS: EXTERIOR               |
| REC: RM 101              | 1    | 12           | 20          | 11       |            | 0.7/0.3     | 12                 | 20          | 12           | 1    | LTS: EXTERIOR               |
| REC: RM 102, COPIER      | 1    | 12           | 20          | 13       | 1.0 / 0.4  |             | 14                 | 20          | 12           | 1    | HVAC: HEAT                  |
| REC: RM 102              | 1    | 12           | 20          | 15       |            | 0.7/0.4     | 16                 | 20          | 12           | 1    | HVAC: HEAT                  |
| REC: RM 100, OUTSIDE     | 1    | 12           | 20          | 17       | 0.7/0.4    |             | 18                 | 20          | 12           | 1    | HVAC: HEAT                  |
| REC: RM 103,111,EXTERIOR | 1    | 12           | 20          | 19       |            | 0.7/0.5     | 20                 | 20          | 12           | 1    | USED                        |
| REC: RM 107 (EWC)        | 1    | 12           | 20          | 21       | 1.0 / 0.3  |             | 22                 | 20          | 12           | 1    | HVAC: EXHAUST FANS          |
| LTS: ELECT.              | 1    | 12           | 20          | 23       |            | 0.2/1.0     | 24                 | 30          | 12           | 2    | EQ: WASTEWATER PUMP         |
| REC: RM 110              | 1    | 12           | 20          | 25       | 0.7/1.0    |             | 26                 |             |              |      | (GP-I)                      |
| REC: RM 110              | 1    | 12           | 20          | 27       |            | 0.7/1.0     | 28                 | 30          | 12           | 2    | EQ: WASTEWATER PUMP         |
| WATER HEATER             | 2    | 10           | 30          | 29       | 2.3/1.0    |             | 30                 | ]           |              |      | (GP-2)                      |
|                          |      |              |             | 31       |            | 2.2/1.0     | 32                 | 30          | 12           | 2    | EQ: WASTEWATER PUMP         |
| SPACE                    | 1    | 1            | -           | 33       | - /1.0     |             | 34                 |             |              |      | (GP-3)                      |
| SPACE                    | 1    | 1            | -           | 35       |            | - /1.0      | 36                 | 20          | 12           | 2    | WATER HEATER                |
| SPACE                    | 1    | 1            | -           | 37       | - /1.0     |             | 38                 |             |              |      |                             |
| PANEL P2"                | 2    | *            | 125         | 39       |            | 13.0/_      | 40                 | -           | -            | 1    | SPACE                       |
|                          |      |              |             | 41       | 12.6/_     |             | 42                 | -           | -            | 1    | SPACE                       |
|                          |      |              |             |          | 26.8       | 25.8        |                    |             |              |      |                             |
| TOTAL (                  | CONN | NECTE        | ED k\       | /A       | 52         | 2.6         | DEMAND kVA: 52.2   |             |              |      | D kVA: 52.2                 |
| PANEL R                  | MS : | SYM.         | AMF         | 95:      | SEE R      | ISER        | R DEMAND AMPS: 218 |             |              |      |                             |

EXISTING LOADS ARE SHOWN FAINT; NEW AND/OR REVISED LOADS ARE SHOWN BOLD.

PANEL IS EQUAL TO EATON POW-R-LINE PRL-IA.
 PROVIDE AN UPDATED TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE

LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS.

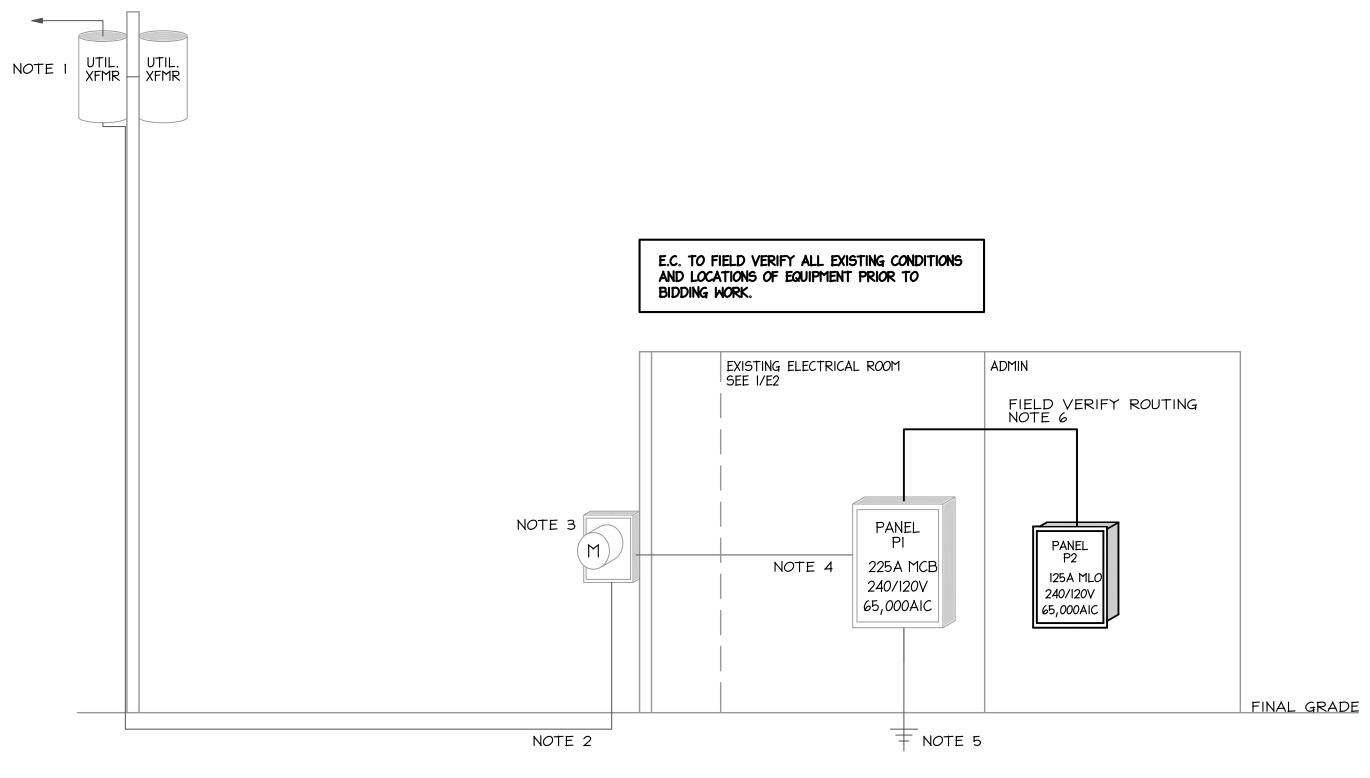
3. E.C. SHALL COORDINATE EXISTING BREAKER DESIGNATIONS SHOWN ON PANEL SCHEDULE AND AT EQUIPMENT WITH ACTUAL PANEL LAYOUT AND EXISTING CIRCUITING IN FIELD. CIRCUIT

ASSIGNMENTS MAY BE ADJUSTED AS REQUIRED.

4. \* - SEE RISER DIAGRAM FOR FURTHER INFORMATION.

| PANEL "P1"              | LOAD SU       | <b>MM</b> A | RY          |            |
|-------------------------|---------------|-------------|-------------|------------|
| LOAD<br>TYPE            |               | kVA<br>CONN | DEM<br>FACT | kVA<br>DEM |
| LOADS ON 225AMP MCB     |               |             |             |            |
| LIGHTS + EF             |               | 4.1         | 1.25        | 5.1        |
| RECEPTACLES             | IST I0kVA     | 10.0        | 1.0         | 10.0       |
|                         | REMAINDER     | 6.6         | 0.5         | 3.3        |
| HVAC                    | LARGEST MOTOR | 7.0         | 1.25        | 8.8        |
|                         | REMAINDER     | 11.1        | 1.0         | 11.1       |
| WATER HEATERS           |               | 6.5         | 1.0         | 6.5        |
| EQUIPMENT               |               | 6.8         | 1.0         | 6.8        |
| EXISTING / USED DESIGNA | TIONS         | 0.5         | 1.25        | 0.6        |
| MISCELLANEOUS           |               | -           | 1.0         | -          |
| TOTALS                  |               | 52.6        |             | 52.2       |
| TOTAL AMPS @ 240/120V   | 217.5         |             |             |            |

| PANEL "P2" LOAD SUMMARY |               |             |             |            |
|-------------------------|---------------|-------------|-------------|------------|
| LOAD<br>TYPE            |               | kVA<br>CONN | DEM<br>FACT | kVA<br>DEM |
| LOADS ON 125AMP CB      |               |             |             |            |
| LIGHTS + EF             |               | 1.3         | 1.25        | 1.6        |
| RECEPTACLES             | IST 10kVA     | 6.9         | 1.0         | 6.0        |
|                         | REMAINDER     | _           | 0.5         | -          |
| HVAC                    | LARGEST MOTOR | 7.0         | 1.25        | 8.8        |
|                         | REMAINDER     | 9.6         | 1.0         | 9.6        |
| EQUIPMENT               |               | 0.8         | 1.0         | 0.8        |
| MISCELLANEOUS           |               | -           | 1.0         | -          |
| TOTALS                  |               | 25.6        |             | 27.7       |
| TOTAL AMPS @ 240/120V   | 115.4         |             |             |            |



# 1 EXISTING POWER RISER DIAGRAM DIAGRAMMATIC ONLY

## EXISTING POWER RISER DIAGRAM NOTES:

ITEMS SHOWN FAINT ARE EXISTING. EXISTING INFORMATION WAS OBTAINED FROM SITE VISIT DATED 09-29-20. E.C. SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BEGINNING WORK.

- I. EXISTING POLE MOUNTED UTILITY TRANSFORMER(S). E.C. TO NOTIFY UTILITY OF ADDITIONAL LOAD TO BE ADDED BY THIS PROJECT AND CONFIRM THE EXISTING TRANSFORMER IS SIZED
- 2. EXISTING SERVICE LATERAL CONDUCTORS TO METER.
- 3. EXISTING METER BASE.
- 4. EXISTING 225A FEEDER.
- 5. EXISTING GND. TO GROUNDING ELECTRODE SYSTEM.
- 6. 3#2/O AL., #4 AL. GND, IN 2" CONDUIT.







# ZARY S. SCOLLER

# PROPOSED ADDITION AND ALTERATIC FRIENDS OF THE GOLDSTON L 9235 Pittsboro Goldston Road Goldston, North Carolina 27252

REVISIONS

DATE
10-09-2024
DRAWN BY

JRS

PROJECT NO.

SHEET TITLE

ELECTRICAL

RISER DIAGRAM

SHEET

=3