HVAC GENERAL NOTES

1. MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH RECOMMENDED PRACTICE, 2018 NORTH CAROLINA MECHANICAL CODE AND ALL APPLICABLE CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION.

2. DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF WALLS, DOORS, WINDOWS, FURNITURE, LIGHTS, CEILING DIFFUSERS, ETC.

3. ALL MECHANICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE MECHANICAL CONTRACTOR.

4. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR. REFRIGERANT COMPRESSORS SHALL BE GUARANTEED FOR FIVE YEARS. WARRANTY PERIOD SHALL BE EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.

5. DRAWINGS ARE DIAGRAMMATIC AND MAY NOT SHOW ALL REQUIRED FITTINGS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TYPE, SIZE AND LOCATION OF ALL AIR DEVICES, DUCTWORK, PIPING AND EQUIPMENT WITH THE CEILING PLAN, LIGHTS, STRUCTURAL ELEMENTS AND OTHER TRADES. MECHANICAL CONTRACTOR TO FURNISH AND INSTALL ALL BENDS, OFFSETS, ELBOWS, ETC. AS REQUIRED. VERIFY ALL CLEARANCES PRIOR TO FABRICATING DUCTWORK, OR ORDERING ANY EQUIPMENT, PIPING, ETC.

6. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS AND INSTALLING THE WORK IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION.

7. THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.

8. THE MC SHALL VERIFY THE FUNCTIONALITY AND OPERATION OF ALL EXISTING MECHANICAL EQUIPMENT IN THE AREA OF WORK, REPLACE FILTERS, LEAK TEST AND RECHARGE REFRIGERANT LINES, REPLACE OR LUBRICATE BEARINGS, CHECK LINKAGES AND ACTUATORS, AND PERFORM OTHER MAINTENANCE SERVICE AS NECESSARY TO GET THE EQUIPMENT IN PROPER WORKING ORDER.

9. DUCTWORK

   A. NON-RESIDENTIAL AREAS: ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS WITH A MINIMUM PRESSURE CLASSIFICATION OF 2", SEAL CLASS C, WITH A MAXIMUM LEAKAGE RATE OF 5% RESIDENTIAL/DWELLING AREAS: ALL DUCTWORK SHALL BE FIBROUS GLASS DUCT BOARD FACED ON THE OUTSIDE WITH A FIRE RETARDANT, REINFORCED FOIL-SCRIM-KRAFT FACING, CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS. DUCT INSULATION IS TO BE MIN. R-6 WHEN LOCATED WITHIN THE CONDITIONED BUILDING ENVELOPE; MIN. R-8 WHEN LOCATED IN THE ATTIC, OUTSIDE THE BUILDING ENVELOPE OR UNCONDITIONED SPACES.

   B. ALL SQUARE ELBOWS SHALL HAVE TURNING VANES.

   C. ALL DUCT DIMENSIONS SHOWN ARE INTERNAL CLEAR DIMENSIONS.

   D. PROVIDE A MANUAL BALANCING DAMPER AT ALL SUPPLY AND RETURN BRANCH TAKEOFFS, AS WELL AS ALL OUTSIDE AIR MAIN & BRANCH DUCTS.

   E. FLEXIBLE DUCT, IF SHOWN ON DRAWINGS, SHALL BE INSULATED ROUND DUCT WITH AN OUTER GLASS REINFORCED SILVER MYLAR JACKET ENCLOSING MIN. 1-1/2" THICK GLASS FIBER INSULATION AROUND A CONTINUOUS INNER LINER, AND SHALL CONFORM TO THE REQUIREMENTS OF U.L. 181 FOR CLASS 1 FLEXIBLE AIR DUCTS. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 6 FEET FOR COMMON AREA SYSTEMS; MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT BE LIMITED FOR DWELLING UNIT SYSTEMS. "R" VALUE TO MEET/EXCEED ENERGY CODE (NCECC SECTION C 403.2.9): DUCT INSULATION IS TO BE MIN. R-6 WHEN LOCATED WITHIN THE CONDITIONED BUILDING ENVELOPE; MIN. R-8 WHEN LOCATED IN THE ATTIC, OUTSIDE THE BUILDING ENVELOPE OR UNCONDITIONED SPACES.

   F. ALL SHEET METAL DUCTWORK WITHIN 10' OF THE AIR HANDLING UNIT SHALL BE PROVIDED WITH ACOUSTICAL DUCT LINER. THIS IS IN ADDITION TO THERMAL INSULATION REQUIREMENTS.

   G. ALL DUCT SYSTEMS ARE TO BE PER U.L. STANDARDS. DUCTS ARE TO BE INSTALLED WITH NO RESTRICTIONS AND AN ABSOLUTE MINIMUM AMOUNT OF AIR LEAKAGE.

   H. ALL DUCT INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS AND PARTITIONS.

10. PIPING

    A. CONDENSATE DRAINS SHALL BE SCHEDULE 40 PVC OR TYPE L COPPER WITH SOLDERED JOINTS WHEN INSTALLED BELOW CEILING LEVEL. DRAINS INSTALLED IN A RETURN AIR PLENUM SHALL BE TYPE L COPPER WITH SOLDERED JOINTS OR SCHEDULE 40 CPVC.

    B. REFRIGERANT PIPING SHALL BE TYPE ACR WROUGHT COPPER WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS.

    C. REFRIGERANT COMPONENTS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH ASHRAE 15.

    D. MECHANICAL CONTRACTOR SHALL PROVIDE REFRIGERANT PIPING FOR ALL MECHANICAL SYSTEMS WITHIN THIS SCOPE OF WORK. COORDINATE ROUTING AND INSTALLATION WITH THE GENERAL CONTRACTOR. SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.

11. INSULATION

    A. DUCT LINER - FIBROUS GLASS DUCT LINER. WITH COATED SURFACE EXPOSED TO AIR STREAM. APPLY WITH MECHANICAL FASTENERS AND 100% COVERAGE OF ADHESIVE. LINER TO BE COATED WITH AN EPA REGISTERED ANTI-MICROBIAL AGENT. DUCT INSULATION VALUE IS TO BE MIN. R-6 WHEN LOCATED WITHIN THE CONDITIONED BUILDING ENVELOPE; MIN. R-8 WHEN LOCATED IN THE ATTIC, OUTSIDE THE BUILDING ENVELOPE OR UNCONDITIONED SPACES. DUCT LINER USED FOR ACOUSTICAL PURPOSES ONLY SHALL BE 1" THICK.

    B. DUCT WRAP - MINERAL FIBER BLANKET, WITH REINFORCED FOIL AND PAPER VAPOR RETARDANT JACKET. APPLY WITH MECHANICAL FASTENERS AND ADHESIVE. DUCT INSULATION IS TO BE MIN. R-6 WHEN LOCATED WITHIN THE CONDITIONED BUILDING ENVELOPE; MIN. R-8 WHEN LOCATED IN THE ATTIC, OUTSIDE THE BUILDING ENVELOPE OR UNCONDITIONED SPACES.

    C. INTERIOR CONDENSATE DRAINS - INSULATE CONDENSATE DRAINS LOCATED IN THE ATTIC, EXTERIOR WALLS OR UNCONDITIONED SPACES WITH 1/2" THICK FLEXIBLE ELASTOMERIC PIPE INSULATION.

    D. REFRIGERANT SUCTION LINES - INSULATE WITH 1" THICK FLEXIBLE ELASTOMERIC PIPE INSULATION. PROVIDE ALUMINUM JACKET OVER INSULATION FOR ALL EXTERIOR REFRIGERANT PIPING.

    E. AIR DISTRIBUTION - INSULATE THE TOP-SIDE OF ALL AIR DISTRIBUTION DEVICES.

12. ALL PIPING, DUCTS, VENTS, ETC., EXTENDING THROUGH WALLS & ROOF SHALL BE FLASHED & COUNTER-FLASHED IN A WATERPROOF MANNER.

13. EXTEND ALL CONDENSATE DRAINS TO JANITORS SINK, FLOOR DRAIN, SPLASH BLOCK OR AS REQUIRED PER CODE. DRAINS FROM MECHANICAL EQUIPMENT SHALL BE PROVIDED W/ A DEEP SEAL TRAP. SLOPE CONDENSATE DRAIN PIPING AT MIN. 1/8" PER FOOT.

14. NON-RESIDENTIAL AREAS: LOCATE ALL THERMOSTATS, SWITCHES AND OTHER CONTROL DEVICES AT 4'-0" ABOVE FINISHED FLOOR. FURNISH A THERMOSTATIC CONTROL DEVICE FOR EVERY DEVICE REQUIRING ONE WHETHER SHOWN ON DRAWINGS OR NOT.RESIDENTIAL/DWELLING AREAS: LOCATE ALL THERMOSTATS, SWITCHES AND OTHER CONTROL DEVICES AT 4'-0" TO ABOVE FINISHED FLOOR FOR STANDARD DWELLING UNITS; 4'-0" TO TOP OF DEVICE FOR ACCESSIBLE UNIT TYPES. FURNISH THERMOSTATIC CONTROL DEVICE FOR EVERY DEVICE REQUIRING ONE WHETHER SHOWN ON DRAWINGS OR NOT.

15. ALL EQUIPMENT SHALL BE INSTALLED PER CODE & MANUFACTURER'S REQUIREMENTS FOR PROPER OPERATION AND SERVICE/ACCESS CLEARANCES.

16. ALL EQUIPMENT SHALL BE U.L LISTED.

17. MECHANICAL CONTRACTOR SHALL BALANCE ALL MECHANICAL SYSTEMS TO AIR QUANTITIES INDICATED ON PLANS. CONTRACTOR SHALL PROVIDE A COMPLETE BALANCING REPORT FOR AT LEAST ONE SYSTEM IN EACH DWELLING UNIT TYPE, AND ALL COMMON AREA SYSTEMS IN ACCORDANCE WITH NEBB OR AABC STANDARDS.

18. CONTROL WIRING FOR ALL MECHANICAL SYSTEMS WITHIN THIS SCOPE OF WORK SHALL BE BY THE MECHANICAL CONTRACTOR.

19. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS OR DECONTAMINATION EQUIPMENT UPON ACTIVATION THE SMOKE DETECTOR SHALL SHUT DOWN THE AIR HANDLING UNIT AS REQUIRED BY 2018 NORTH CAROLINA MECHANICAL CODE 606. * IF THERE IS A FIRE ALARM SYSTEM: DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR. ACTIVATION OF THE DUCT SMOKE DETECTOR SHALL INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION. * IF THERE IS NOT A FIRE ALARM SYSTEM: DETECTORS SHALL BE FURNISHED, WIRED AND INSTALLED BY THE MECHANICAL CONTRACTOR. ACTIVATION OF THE DUCT SMOKE DETECTOR SHALL INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION.

20. PROVIDE A CLEAN SET OF FILTERS FOR ALL AIR HANDLING EQUIPMENT AT SUBSTANTIAL COMPLETION.

21. MAINTAIN A MINIMUM 10'-0" BETWEEN OUTDOOR AIR INTAKES AND EXHAUST FAN DISCHARGE AND PLUMBING VENTS, ETC. FIELD COORDINATE FINAL LOCATIONS.

22. PROVIDE 4" THICK CONCRETE PAD FOR ALL GROUND MOUNTED OUTDOOR MECHANICAL UNITS. PADS SHALL BE MINIMUM 6" LARGER THAN UNIT ON ALL SIDES.

23. RUN DUCT UP WITHIN STRUCTURE OR THROUGH JOIST WEBS WHERE POSSIBLE & WHERE REQUIRED TO MAINTAIN CEILING HEIGHTS. PROVIDE OFFSETS AND/OR TRANSITIONS IN DUCT WHERE REQUIRED WITH MAX. 45° DEG. ELBOWS. MAKE BRANCH TAPS OFF TOP, SIDES OR BOTTOM AS REQUIRED. NO BACK TO BACK 90° DEG. ELBOWS ALLOWED.

24. REFRIGERANT PIPING SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.

25. ALL EQUIPMENT SHALL BE LABELED ACCORDING TO NUMBERING / IDENTIFICATION SYSTEM PER PLANS.

26. ALL EQUIPMENT SUPPORTS ARE REQUIRED TO MEET ASCE 9.6.

27. MECHANICAL CONTRACTOR SHALL PROVIDE U.L. LISTED FIRE DAMPERS, RADIATION DAMPERS AND/OR FIRE/SMOKE DAMPERS WHERE REQUIRED FOR FIRE PROTECTION AS REQUIRED BY LOCAL CODES. M.C. SHALL PROVIDE A MEANS OF ACCESS TO TEST & RESET ALL SUCH DAMPERS AND/OR ACTUATORS.

28. ON MAKING PIPE CONNECTIONS TO EQUIPMENT, CARE SHOULD BE TAKEN TO ARRANGE PIPES SO AS NOT TO INTERFERE WITH OPENING OF ACCESS DOORS.

29. ELECTRICAL CONTRACTOR TO PROVIDE ALL HIGH VOLTAGE (120V AND GREATER) ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO ALL MECHANICAL EQUIPMENT WITHIN THIS SCOPE OF WORK. ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS FOR ALL APPROVED MECHANICAL EQUIPMENT WITH THE ELECTRICAL CONTRACTOR.

30. PRIOR TO BEGINNING ANY WORK, MECHANICAL CONTRACTOR IS RESPONSIBLE TO NOTIFY THE OWNER'S REPRESENTATIVE, ARCHITECT OR ENGINEER IF THE MECHANICAL DESIGN CONFLICTS WITH EXISTING OR UNFORESEEN FIELD CONDITIONS.

31. MECHANICAL CONTRACTOR SHALL PROVIDE A MIN. OF FOUR COPIES OF SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR ALL INSTALLED EQUIPMENT AND MATERIALS NEEDING APPROVAL PRIOR TO PURCHASING. IN ADDITION, M.C. SHALL PROVIDE THE OWNER WITH TWO COPIES OF OPERATION & MAINTENANCE MANUALS FOR ALL INSTALLED EQUIPMENT, MANUFACTURER'S & INSTALLER'S WARRANTIES AND TRAINING FOR CONTROLS OF ALL SUCH EQUIPMENT.

Mechanical Design Summary

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone: 4A

winter dry bulb: 23.1 °F
summer dry bulb: 91.7 °F
summer wet bulb: 75.6 °F

Interior design conditions

winter dry bulb: 70 °F
summer dry bulb: 75 °F
relative humidity: 50%

Building heating load (Per Unit): 11,500 btu

Building cooling load (Per Unit): 13,700 btu

Mechanical Spacing Conditioning System

Unitary
- description of unit: Mini-Split System DX
- heating efficiency: See Schedules
- cooling efficiency: See Schedules
- size category of unit: See Schedules

Boiler
- Size category. If oversized, state reason.: N/A

Chiller
- Size category. If oversized, state reason.: N/A

List equipment efficiencies: N/A

To the best of my knowledge, the mechanical design for this building complies with mechanical and equipment requirements of the 2018 North Carolina state building code and 2018 North Carolina energy conservation code.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
T	THERMOSTAT (HONEWELL VISION PRO 8000 OR EQUAL) WITH KEY LOCKING GUARD COVER
	CEILING SUPPLY DIFFUSER
	CEILING RETURN DIFFUSER
	SPIRAL DUCT SUPPLY DIFFUSER
–X–	RECTANGULAR METAL DUCT
XØ	ROUND METAL/SPIRAL DUCT
	MAIN TRUNK AND BRANCH DUCT TAKEOFF WITH VOLUME DAMPER
	FLEX DUCT
UC	1" DOOR UNDER CUT
)))	TURNING VANES
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE
AH	AIR HANDLER
HP	HEAT PUMP
AC	AIR CONDITIONING UNIT
RTU	ROOFTOP UNIT
BDD	BACK DRAFT DAMPER
REL	RELOCATE
VD	VOLUME DAMPER
AFF	ABOVE FINISHED FLOOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR

MECHANICAL DRAWING INDEX	
M0.1	MECHANICAL LEGENDS AND NOTES
M1.1	MECHANICAL PLAN

DUCTLESS SPLIT-SYSTEM AIR HANDLING UNIT SCHEDULE

TAG	MANUFACTURER / MODEL	SUPPLY FAN CFM	MCA (AMPS)	MOCP	VOLT / PHASE / HZ	NOTES
DSS-(1-7)	LG / LSN180HSV5	706	1	-	208/1/60	1,3,4,6

DUCTLESS SPLIT-SYSTEM HEAT PUMP UNIT SCHEDULE

TAG	MANUFACTURER / MODEL	TOTAL COOLING CAPACITY (MBH)	MCA (AMPS)	MOCP	VOLT / PHASE / HZ	NOTES
DSHP-(1-7)	LG / LSU180HSV5	18.0	13	20	208/1/60	2,3,5,6

1. PROVIDE MANUFACTURER'S DISCONNECT FOR INDOOR UNIT.
2. DISCONNECT PROVIDED BY ELECTRICAL FOR OUTDOOR UNIT.
3. SINGLE POINT POWER FROM OUTDOOR UNIT. INDOOR UNIT MUST BE INTERLOCKED WITH ASSOCIATED OUTDOOR UNIT.
4. PROVIDE WALL-MOUNTED THERMOSTAT.
5. PROVIDE CONCRETE PAD FOR UNIT TO SIT ON.
6. BASIS OF DESIGN IS LG. OR EQUAL BY MISUBISHI, DAIKIN, CARRIER, OR EQUIVALENT.

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NORTH CAROLINA PROFESSIONAL SEAL 056419 ENGINEER DANIEL B.A. SHARPE
8-22-24

DESIGN FOR:
BAUCOM BUSINESS PLAZA - S4
11132 U.S. 401 N
FUQUAY-VARINA, NC 27526

REV. NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

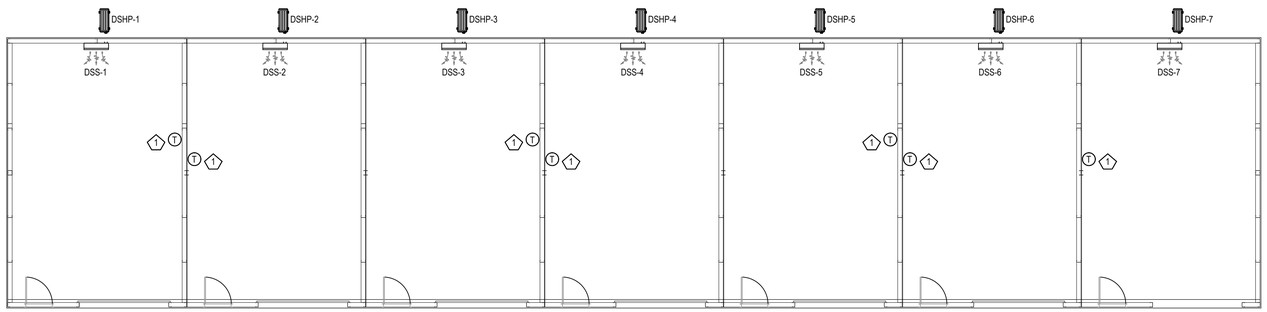
ISS. NO.	DATE	DESCRIPTION
1	8-22-24	FOR PERMITTING
2		
3		
4		
5		
6		
7		

PROJECT NO.:	DRAWN BY: DBAS
24-029	CHECKED BY: DBAS

MECHANICAL LEGENDS AND NOTES

M0.1

MECHANICAL KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	VERIFY EXACT MOUNTING LOCATION OF THERMOSTATS WITH OWNER PRIOR TO BEGINNING WORK.



1 MECHANICAL PLAN
SCALE - 1/8" = 1'0"

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PROJECT NO.:	DRAWN BY:
24-029	DBAS
	CHECKED BY: DBAS

MECHANICAL PLAN

M1.1

GENERAL ELECTRICAL NOTES

G1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH 2020 NATIONAL ELECTRICAL CODE WITH N.C AMENDMENTS AND ALL APPLICABLE LOCAL AND STATE CODES.

G2. ALL MATERIAL, EQUIPMENT AND APPLIANCES SHALL BE NEW, LABELED AND LISTED FOR ITS INTENDED USE BY A QUALIFIED THIRD-PARTY ELECTRICAL TESTING LABORATORY (I.E. UL, ETL, ETC.) AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION PER NEC ARTICLES 90.7, 110.2 AND 110.3. WHERE UNDERWRITER'S LABORATORIES LABELING IS AVAILABLE FOR THE CLASS OF MATERIAL INVOLVED, MATERIALS SHALL BE FURNISHED WITH A UL LABEL OR LISTING, OR THE ELECTRICAL CONTRACTOR SHALL PROVE IT IS NOT REQUIRED.

G3. ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.

G4. ELECTRICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. DO NOT SCALE ELECTRICAL PLANS. OBTAIN ALL DIMENSIONS FROM THE ARCHITECT'S DIMENSIONED DRAWINGS AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL PLANS FOR DOOR SWINGS AND BUILT-IN EQUIPMENT; CONDITIONS INDICATED ON THOSE PLANS SHALL GOVERN FOR THIS WORK.

G5. VERIFY ALL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE (PRIOR TO STARTING ANY WORK) SUCH AS VOLTAGE, PHASES, FAULT CURRENT, ETC... AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START. NOTIFY ENGINEER OF ANY DIFFERENCES FROM WHAT IS SHOWN ON PLANS.

G6. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE FROM THE DATE OF SUBSTANTIAL COMPLETION.

G7. A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.

G8. ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. DO NOT CUT ANY MATERIAL THAT WILL WEAKEN THE STRUCTURE WITHOUT WRITTEN PERMISSION OF THE ARCHITECT. PATCHING SHALL BE ACCOMPLISHED TO MATCH ADJACENT SURFACES IN EVERY RESPECT. ENGAGE ORIGINAL INSTALLER FOR CUTTING/PATCHING OF ROOFS.

G9. PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION AND TYPE OF LOAD SERVED FOR ALL CIRCUITS.

G10. THE ELECTRICAL CONTRACTOR SHALL REQUEST A SELECTIVE BREAKER COORDINATION STUDY FROM THE ELECTRICAL GEAR MANUFACTURER PER NEC 700 REQUIREMENTS.

G11. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND. NAMEPLATE SHALL CONTAIN EQUIPMENT DESIGNATION, VOLTAGE, FEEDER SOURCE, AIC RATING & DATE INSTALLED.

G12. PROVIDE "FLASH HAZARD" LABELS FOR ALL PANELBOARDS IN ACCORDANCE WITH NEC REQUIREMENTS.

G13. ALL TERMINALS/LUGS SHALL BE 60 DEGREE/75 DEGREE RATED.

G14. FUSES 0-600 AMPS SHALL BE UL CLASS "RK-5" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMAN UNLESS NOTED OTHERWISE.

G15. ALL WATER HEATERS SHALL HAVE DISCONNECT SIZED PER 422.11(E)(3).

G16. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REGARDLESS OF WHO SUPPLIES THE EQUIPMENT. THIS INCLUDES ALL HVAC, PLUMBING AND OWNER FURNISHED EQUIPMENT CONNECTIONS OF 120V OR HIGHER.

G17. RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILINGS, BELOW FLOOR, AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. WHERE EXPOSED RACEWAYS MUST BE USED, LAYOUT RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.

G18. ALL EXPOSED RACEWAY SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE BUILDING SURFACES AND SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. NO EXPOSED CONDUIT SHALL BE ALLOWED IN FINISHED SPACES EXCEPT AS PERMITTED BY OWNER OR ARCHITECT. EXPOSED RACEWAY IN FINISHED SPACES SHALL BE WIREMOLD TYPE.

G19. BEFORE COMMENCING WITH ANY ROUGH-IN, COORDINATE THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED DEVICES WITH THE ARCHITECTURAL INTERIOR ELEVATIONS, CASEWORK SHOP DRAWINGS, AND EXISTING CONDITIONS. IF ANY DISCREPANCIES ARE DISCOVERED, NOTIFY THE ARCHITECT FOR FURTHER DIRECTION. MINOR ADJUSTMENTS IN DEVICE LOCATION, I.E. 5'-0" IN ANY DIRECTION SHALL BE DONE AT NO ADDITIONAL COST TO THE CONTRACT.

G20. ALL WIRING SHALL BE INSTALLED IN IMC, RMC, EMT OR TYPES AC AND MC FLEXIBLE CABLES. RNC CONDUIT (PVC), SHALL ONLY BE USED UNDERGROUND AND OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. MINIMUM SIZE CONDUIT SHALL BE 3/4". AC AND MC FLEXIBLE CABLES SHALL BE USED ONLY IN AREAS PERMITTED BY CODE. INDOOR BRANCH CIRCUIT WIRING MAY BE TYPE NM, NMC, OR NMS FOR DWELLING UNITS OR OTHER BUILDINGS PERMITTED TO BE OF TYPES III, IV OR V CONSTRUCTION. DWELLING UNIT SERVICE FEEDERS MAY BE TYPE SE OR USE CABLES IN AREAS PERMITTED BY CODE. AMPACITY FOR SE AND USE CABLES SHOWN ON THE SER FEEDER SCHEDULE INCLUDED IN THESE DRAWINGS IS BASED ON THE 60 C AMPACITY OF TABLE 310.15(B)(16) FOR INSTALLATION IN INSULATION. SHOULD SER CABLE NOT BE IN CONTACT WITH INSULATION CONTACT ENGINEER FOR REVISED FEEDER SIZES (IN INSULATION SHALL BE AS DEFINED IN ARTICLE 310.15(A)(2) AND AS DETERMINED BY THE LOCAL AHJ). ALL SER FEEDERS LOCATED WITHIN TYPE I AND/OR II BUILDING AREAS (NONCOMBUSTIBLE CONSTRUCTION) SHALL BE RUN IN EMT CONDUIT PER NEC. ONCE THE CONDUIT PENETRATES THE TRANSITION SLAB AND ENTER INTO THE TYPE III, IV OR V CONSTRUCTION THE SER CABLE MAY BE RUN FREELY AS ALLOWED PER NEC. ALL OTHER WIRING IN DWELLING UNITS EXCEEDING 50 AMPERES SHALL BE INSTALLED IN EMT INDOORS OR PVC OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE.

G21. ALL FLEX SHALL BE LIQUID TIGHT FLEXIBLE METAL.

G22. PROVIDE A PULL WIRE OR FISH TAPE IN ALL EMPTY CONDUITS. PROVIDE A BLANK COVER PLATE OVER ALL UNUSED BOXES INCLUDING DATA/COMM BOXES.

G23. WHERE A SINGLE HOMERUN 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 AND IN ACCORDANCE WITH THE NEC:

1. A MAXIMUM OF THREE 20A, 1 POLE BRANCH CIRCUITS MAY BE COMBINED IN COMMON HOMERUN SHARING A COMMON NEUTRAL OR WITH SEPARATE NEUTRALS, FOR A TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO PANEL.

2. EACH MULTIWIRE BRANCH CIRCUIT SHARING A COMMON NEUTRAL SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES.

G24. CONDUCTORS SHALL BE COPPER, RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE NO. 12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED, #10 THRU #12 AWG CONDUCTORS SHALL BE SOLID. ALL INSULATION TYPES SHALL BE THWN/THHN. FEEDER CIRCUIT CONDUCTORS MAY BE COPPER OR ALUMINUM.

G25. 20A/120V BRANCH CIRCUITS EXTENDING UP TO 56' IN LENGTH, FROM PANEL TO FARTHEST DEVICE, SHALL USE AT MINIMUM NO. 12 (CU) CONDUCTORS AND 3/4"C. FOR 20A/120V BRANCH CIRCUITS EXTENDING UP TO 93' IN LENGTH, FROM PANEL TO FARTHEST DEVICE, SHALL USE NO. 10 (CU) CONDUCTORS AND 3/4"C. ANY BRANCH CIRCUIT LENGTHS THAT EXCEED 93', THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY FOR UPDATED CONDUCTOR AND CONDUIT SIZES.

G26. TO PREVENT UNDER-VOLTAGE, THE FEEDERS SHOWN ON THE VOLTAGE DROP TABLE(S) HAVE BEEN SIZED TO COMPENSATE FOR WHEREVER A MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST DEVICE DOES NOT EXCEED 5%. FOR FEEDER LENGTHS EXCEEDING THE ONE-WAY DISTANCES PROVIDED ON THE VOLTAGE DROP TABLE(S) THE ELECTRICAL CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER PRIOR TO BIDDING, PURCHASING AND ROUGHING-IN FOR UPDATED CONDUCTOR AND CONDUIT SIZES BASED ON UPDATED VOLTAGE DROP CALCULATIONS.

G27. FOR EVERY WIRING DEVICE MARK THE BRANCH CIRCUIT TO WHICH IT IS CONNECTED ON THE BACK OF EACH DEVICE PLATE, USING AN INDELIBLE MARKER PEN.

G28. COORDINATE ALL DEVICE AND DEVICE PLATE COLORS WITH OWNER/ARCHITECT. DEVICES AND DEVICE PLATES LOCATED IN CABINETRY SHALL BE A DARK COLOR TO MATCH CABINETRY FINISH.

G29. EXACT LOCATION OF ALL FLOOR-MOUNTED OUTLETS SHALL BE COORDINATED WITH THE OWNER/ARCHITECT BEFORE ROUGH-IN.

G30. TWO OR MORE ADJACENT POWER OR COMMUNICATION RECEPTACLES SHALL BE GANGED WITH A COMMON FACEPLATE - IF THEY CANNOT BE GANGED THEY SHALL BE INSTALLED WITH A MINIMUM DISTANCE BETWEEN UNITS.

G31. WALL RECEPTACLES SHOWN BACK TO BACK MAY BE OFFSET BUT SHALL BE INSTALLED DIRECTLY ADJACENT TO ONE ANOTHER.

G32. LIGHT SWITCHES SHALL BE NO MORE THAN 6" FROM EDGE OF DOOR FRAME.

G33. 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 ENSURE THAT THIS FIRE STOPPING IS ACCOMPLISHED. USE APPROVED ASSEMBLIES SUCH AS THE FOLLOWING:

* CONDUIT PENETRATIONS OF 1,2,3 & 4 HOUR GYP BOARD WALLS - U.L.#WL1001
* CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE OR BLOCK WALLS - U.L.#CAJ1001
* CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE FLOORS - U.L.#CAJ1001
* CONDUIT PENETRATIONS OF 1 HOUR GYPBOARD CEILING ASSEMBLY - L526
* MULT. CONDUIT PENETRATIONS OF 2,3 & 4 HOUR CONCRETE OR BLOCK WALL OR FLOOR - CAJ1042

G34. IN REQUIRED FIRE RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF BOXES SHALL BE IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS INCLUDED WITH THE BOX LISTING. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO ENSURE THAT THE INTEGRITY OF THE U.L. RATING IS MAINTAINED.

G35. OUTLET BOXES FOR DEVICES MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATE WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBER IN THE WALL.

G36. PRIOR TO ORDERING ANY EQUIPMENT THE ELECTRICAL CONTRACTOR SHALL PROVIDE SHOP DRAWING SUBMITTALS TO THE OWNER, ARCHITECT AND ELECTRICAL ENGINEER FOR THE LIGHTING FIXTURES, ELECTRICAL GEAR, FIRE ALARM SYSTEM AND OTHER SIMILAR SYSTEMS. SHOP DRAWING SUBMITTALS SHALL BE PROVIDED REGARDLESS IF THE EQUIPMENT BEING SUPPLIED IS THE SAME AS WHAT IS SPECIFIED ON THE PLANS.

G37. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RESTRAINTS TO RESIST THE EARTHQUAKE EFFECTS ON THE ELECTRICAL SYSTEM. THE REQUIREMENTS FOR THOSE RESTRAINTS ARE FOUND IN THE IBC, THE ANCHORING OF THE EQUIPMENT SHALL COMPLY WITH IBC SECTION 1613.

G38. IF DURING THE COURSE OF WORK THE ELECTRICAL CONTRACTOR DISCOVERS A PROBLEM WITH THE PERFORMANCE OF THE INSTALLATION RELATIVE TO THE PLANS AND SPECIFICATIONS OR NEC OR OTHER CODES, THE ELECTRICAL CONTRACTOR SHALL IMMEDIATELY BRING THE PROBLEM TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK.

G39. SEE PANEL SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES. THE "WIRE SIZE" COLUMN INDICATES THE SIZE OF THE PHASE (IE HOT) AND NEUTRAL CONDUCTORS. THE EC SHALL SIZE THE EQUIPMENT GROUNDING CONDUCTORS PER NEC TABLE 250.122, THE EC SHALL SIZE THE CONDUIT (IF REQUIRED) PER NEC ANNEX C. THE QUANTITY OF CONDUCTORS IS BASED ON THE "POLE" COLUMN AND FOLLOWS THE PROCESS BELOW, PARALLEL SET QUANTITIES ARE MULTIPLIED BY THE NUMBER OF SETS:

120V/277V - 1 POLE
1 - PHASE (IE HOT) - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - NEUTRAL - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - GROUND - PER NEC TABLE 250.122
CONDUIT SIZED PER NEC ANNEX C (IF REQUIRED)

208V/240V/480V - 2 POLE
2 - PHASE (IE HOT) - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - NEUTRAL (EC VERIFY IF REQUIRED FOR INSTALLED EQUIPMENT) - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - GROUND - PER NEC TABLE 250.122
CONDUIT SIZED PER NEC ANNEX C (IF REQUIRED)

208V/240V/480V - 3 POLE
3 - PHASE (IE HOT) - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - NEUTRAL (EC VERIFY IF REQUIRED FOR INSTALLED EQUIPMENT) - CONDUCTOR SIZE PER "WIRE SIZE" COLUMN IN PANEL SCHEDULE
1 - GROUND - PER NEC TABLE 250.122
CONDUIT SIZED PER NEC ANNEX C (IF REQUIRED)

G40. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GEAR MANUFACTURER WHERE THE HIGHEST CONTINUOUS TRIP SETTING FOR WHICH THE ACTUAL DEVICE INSTALLED IN A CIRCUIT BREAKER IS RATED OR CAN BE ADJUSTED IS 1200A OR HIGHER SHALL HAVE ARC ENERGY REDUCTION IN ACCORDANCE WITH NEC 240.87.

G41. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A, B, AND C RESPECTIVELY ON 208Y/120 VOLT THREE-PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. ISOLATED GROUND WIRES SHALL BE GREEN WITH YELLOW BANDS OR STRIPES. THIS IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLENUMS.

G42. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code - Prescriptive

Lighting schedule:

lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
→ See Light Fixture Schedule on sheet

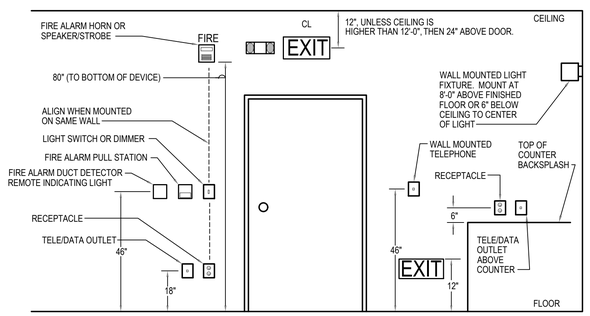
total interior wattage specified vs. allowed: 755 Watts Specified vs. 2629 Watts Allowed
total exterior wattage specified vs. allowed: N/A

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- ☐ C406.2 More Efficient HVAC Equipment Performance
- ☒ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building/space complies with the electrical system and equipment requirements of the 2018 North Carolina Energy Conservation Code.



NOTES:
1. ALL DIMENSIONS ARE TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED.

1 TYPICAL DEVICE MOUNTING ELEVATION
NOT TO SCALE

ELECTRICAL SYMBOL LEGEND

	DUPLEX RECEPTACLE, 20A, 120 VOLT, +18" A.F.F. (U.N.O.) "GFCI" INDICATES GROUND FAULT PROTECTION "WP" INDICATES WEATHERPROOF
	QUADPLEX RECEPTACLE, 20A, 120 VOLT, +18" A.F.F. (U.N.O.)
	SIMPLEX RECEPTACLE, 20A, 120 VOLT, +18" A.F.F. (U.N.O.)
	208/230 VOLT 1Ø RECEPTACLE
	208/230 VOLT 3Ø RECEPTACLE
	DUPLEX RECEPTACLE RECESSED IN FLOOR WITH BRASS COVER
	QUADPLEX RECEPTACLE RECESSED IN FLOOR WITH BRASS COVER
	DUPLEX RECEPTACLE MOUNTED IN CEILING
	QUADPLEX RECEPTACLE MOUNTED IN CEILING
J	JUNCTION BOX
	DISCONNECT SWITCH, FUSED, HEAVY DUTY. NEMA 1 FOR INTERIOR, NEMA 3R FOR EXTERIOR. FUSE ACCORDING TO NAMEPLATE DATA
	NON-FUSED PULL DISCONNECT SWITCH. NEMA 1 FOR INTERIOR, NEMA 3R FOR EXTERIOR.
	TELEPHONE/DATA JACK (JUNCTION BOX WITH 1" CONDUIT STUBBED TO ABOVE CEILING) CONDUCTORS AND TERMINATIONS PROVIDED AND INSTALLED BY COMMUNICATIONS CONTRACTOR.
$	SINGLE POLE SWITCH
$3	3 WAY SWITCH
$WS	WALL MOUNT INFRARED OCCUPANCY SENSOR WITH UP TO 30 MINUTE TIME-ON SETTING AND MANUAL OVERRIDE, MIN. COVERAGE 500+ SQFT. WATTSTOPPER MODEL WS-250 OR EQUAL, 120.277V RATED
$M	MOTOR RATED SWITCH RATED AT 20 AMPS, VOLTAGE TO MATCH EQUIPMENT
$WP	20 AMP SWITCH IN WEATHERPROOF BOX WITH WEATHERPROOF COVER
	ELECTRICAL PANEL
PC	DUSK/DAWN PHOTOCELL
GC	GENERAL CONTRACTOR
EC	ELECTRICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
RECEPT	RECEPTACLE
LTS	LIGHTS
IG	ISOLATED GROUND
WP	WEATHER PROOF (DEVICE TO HAVE WEATHERPROOF IN-USE COVER)
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER

LUMINAIRE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	CCT	MOUNTING	MAX WATTS	BALLAST/DRIVER	REMARKS
A	8' LED STRIP LIGHT	NATURALED	FX-CSL-36SW-48FR-8CCT3-MV	4000K	SURFACE	36	LED	1
B	EXTERIOR GOOSE NECK	NUVO	65-661	VARIES	SURFACE	50	LED	1
C	FLOOD LIGHT	NUVO	65-715	3000K	SURFACE	20	LED	1

1. PROVIDE WITH INTEGRAL MOTION SENSOR.

GENERAL NOTES:

A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
D. ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
E. FIXTURES TO BE INSTALLED IN CEILINGS, INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE, SHALL BE IC RATED BY MANUFACTURER.
F. LIGHTING FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS, SUBSTITUTIONS SHALL INCLUDE PT. BY PT. CALCULATIONS.
G. LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOTCANDLE LEVELS IN THEIR RESPECTIVE AREA. HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDINGSUCH DEVIATION FOR THE ARCHITECT/ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.
H. SUBSTITUTIONS APPROVED BY THE ENGINEER PREVIOUS TO BID ARE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO THE FIXTURE SPECIFIED, UNLESS OTHERWISE NOTED. THIS INCLUDES LENS, COLORS, REFLECTORS, PHOTOMETRICS, HOUSING MATERIAL, FINISHES, ETC. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH CUT SHEETS FOR APPROVAL. SUBSTITUTE FIXTURES SHALL BE PRICED WITH THE SPECIFIED FIXTURE AND LISTED SEPARATELY SO THE ARCHITECT, ENGINEER AND OWNER CAN MAKE AN INFORMED DECISION.
I. ANY FIXTURE WITH THE TEXT "NL" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE INDICATED CIRCUIT.
J. ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.
K. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
L. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.
M. ELECTRICAL CONTRACTOR SHALL CONNECT ALL LED EMERGENCY FIXTURES TO CLOSEST AVAILABLE LIGHTING CIRCUIT UNLESS NOTED OTHERWISE.
N. LED MODULES SHALL BE REPLACEABLE.
O. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN. THE ABOVE FIXTURE TYPES ARE LISTED AS THE DESIGN BASIS.

ELECTRICAL DRAWING INDEX	
E0.1	ELECTRICAL LEGENDS AND NOTES
E1.1	LIGHTING PLAN
E1.2	POWER PLAN
E2.1	PANEL SCHEDULES
E2.2	ONE-LINE DIAGRAM AND DETAILS

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NORTH CAROLINA PROFESSIONAL SEAL 056419 ENGINEER DANIEL B.A. SHARPE
8-22-24

DESIGN FOR:
BAUCOM BUSINESS PLAZA - S4
11132 U.S. 401 N
FUQUAY-VARINA, NC 27526

REV. NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

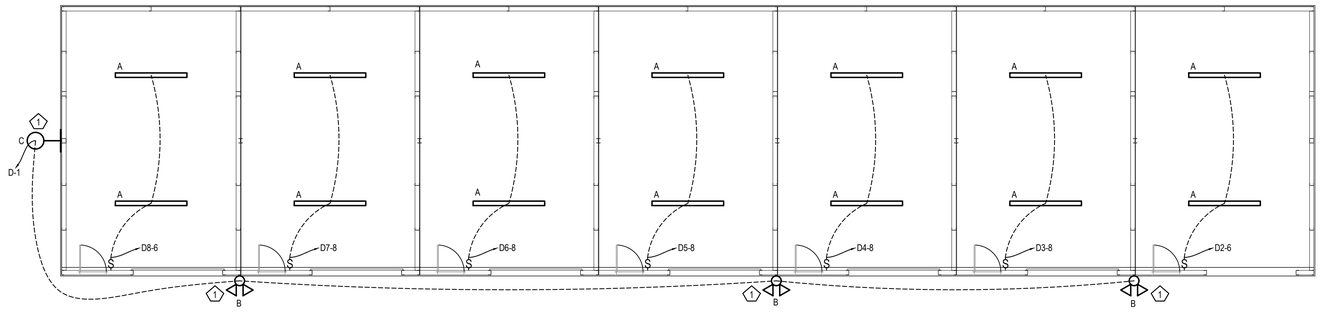
ISS. NO.	DATE	DESCRIPTION
1	8-22-24	FOR PERMITTING
2		
3		
4		
5		
6		
7		

PROJECT NO.: 24-029
DRAWN BY: DBAS
CHECKED BY: DBAS

ELECTRICAL LEGENDS AND NOTES

E0.1

◇ LIGHTING KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	LIGHTING TO BE CONTROLLED BY INTEGRAL MOTION SENSORS TO FIXTURES.



1 LIGHTING PLAN
SCALE - 1/8" = 1'0"

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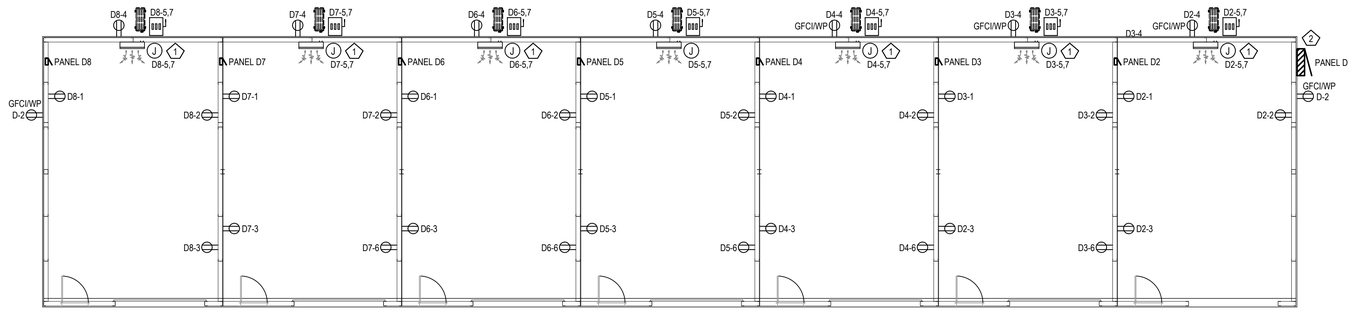
6		
7		

PROJECT NO.:	DRAWN BY: DBAS
24-029	CHECKED BY: DBAS

LIGHTING PLAN

E1.1

POWER KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	SINGLE POINT POWER FROM OUTDOOR UNIT. INDOOR UNIT MUST BE INTERLOCKED WITH ASSOCIATED OUTDOOR UNIT.
2	VERIFY EXACT MOUNTING LOCATION OF DIGITAL SUB-METERS WITH OWNER PRIOR TO BEGINNING WORK.



1 POWER PLAN
SCALE - 1/8" = 1'0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 056419 DANIEL B.A. SHARPE
8-22-24

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4		
5		
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PROJECT NO.:	DRAWN BY: DBAS
24-029	CHECKED BY: DBAS

POWER PLAN

E1.2

PANELBOARD D

200 AMP MAIN BREAKER | **225** AMP BUS RATING | **208Y/120** VOLTS | **3** PHASE | **4** WIRE | **60 HZ.** | **30** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **S4** | ENCLOSURE RATING: **NEMA 3R** | MOUNTING: **SURFACE**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	HOUSE LIGHTING	20/1	0.13	0.36		20/1	EXTERIOR RECEPTACLES	2
3	PANEL D2 **(1)**	60/2			1.80	1.80	60/2	PANEL D3 **(1)**	4
5							1.71	1.89			6
7	PANEL D4 **(1)**	60/2	1.80	1.80			60/2	PANEL D5 **(1)**	8
9					1.89	1.89			10
11	PANEL D6 **(1)**	60/2					1.80	1.80	60/2	PANEL D7 **(1)**	12
13			1.89	1.89					14
15	PANEL D8 **(1)**	60/2			1.80				20/1	SPARE	16
17							1.71		20/1	SPARE	18
19	SPACE								SPACE	20
21	SPACE								SPACE	22
23	SPACE								SPACE	24
25	SPACE								SPACE	26
27	SPACE								SPACE	28
29	SPACE								SPACE	30
	TOTAL PHASE KVA PER PHASE		7.87	9.18	8.91		DEMAND KVA:	29.52	
	TOTALCONNECTED KVA		25.96				DEMAND AMPS:	82	
	AMPS PER PHASE		66	77	74				

NOTES:
1 PROVIDE DIGITAL SUB METER RATED FOR 100A 208/240V FOR EACH SUBPANEL. VERIFY WITH OWNER FOR REMOTE MONITORING CAPABILITES.
2
3
4

PANELBOARD D2

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	20/1	SPARE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.71		DEMAND KVA:	4.03
	TOTALCONNECTED KVA		3.51			DEMAND AMPS:	19
	AMPS PER PHASE		15	14			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D3

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	0.18	20/1	RECEPTACLE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.89		DEMAND KVA:	4.21
	TOTALCONNECTED KVA		3.69			DEMAND AMPS:	20
	AMPS PER PHASE		15	16			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D4

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	0.18	20/1	RECEPTACLE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.89		DEMAND KVA:	4.21
	TOTALCONNECTED KVA		3.69			DEMAND AMPS:	20
	AMPS PER PHASE		15	16			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D5

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	0.18	20/1	RECEPTACLE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.89		DEMAND KVA:	4.21
	TOTALCONNECTED KVA		3.69			DEMAND AMPS:	20
	AMPS PER PHASE		15	16			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D6

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	0.18	20/1	RECEPTACLE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.89		DEMAND KVA:	4.21
	TOTALCONNECTED KVA		3.69			DEMAND AMPS:	20
	AMPS PER PHASE		15	16			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D7

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	0.18	20/1	RECEPTACLE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.89		DEMAND KVA:	4.21
	TOTALCONNECTED KVA		3.69			DEMAND AMPS:	20
	AMPS PER PHASE		15	16			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

PANELBOARD D8

100 AMP MAIN LUG ONLY | **100** AMP BUS RATING | **208Y/120** VOLTS | **1** PHASE | **3** WIRE | **60 HZ.** | **8** POLES | **10** KA SHORT CIRCUIT RATING | LOCATION: **STORAGE UNIT** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **RECESSED**

CIRCUIT NO.	DESCRIPTION	BREAKER AMPS/POLES	LOAD KVA PHASE A	LOAD KVA PHASE B	BREAKER AMPS/POLES	DESCRIPTION	CIRCUIT NO.
1	RECEPTACLE	20/1	0.18	0.18	20/1	RECEPTACLE	2
3	RECEPTACLE	20/1			0.18	0.18	20/1	EXTERIOR SERVICE RECEPTACLE	4
5	MINI SPLIT	20/2	1.35	0.09	20/1	LIGHTING	6
7					1.35	20/1	SPARE	8
	TOTAL PHASE KVA PER PHASE		1.8	1.71		DEMAND KVA:	4.03
	TOTALCONNECTED KVA		3.51			DEMAND AMPS:	19
	AMPS PER PHASE		15	14			

NOTES:
1 PANELBOARD 100A RATED WITH 100A RATED MAIN LUGS, PROTECTED BY 60A BREAKER IN MAIN DISTRIBUTION PANEL D
2
3
4

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NORTH CAROLINA PROFESSIONAL SEAL 056419 ENGINEER DANIEL B.A. SHARPE
8-22-24

DESIGN FOR:
BAUCOM BUSINESS PLAZA - S4
11132 U.S. 401 N
FUQUAY-VARINA, NC 27526

REV. NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

ISS. NO.	DATE	DESCRIPTION
1	8-22-24	FOR PERMITTING
2		
3		
4		
5		
6		
7		

PROJECT NO.:	DRAWN BY: DBAS
24-029	CHECKED BY: DBAS

PANEL SCHEDULES

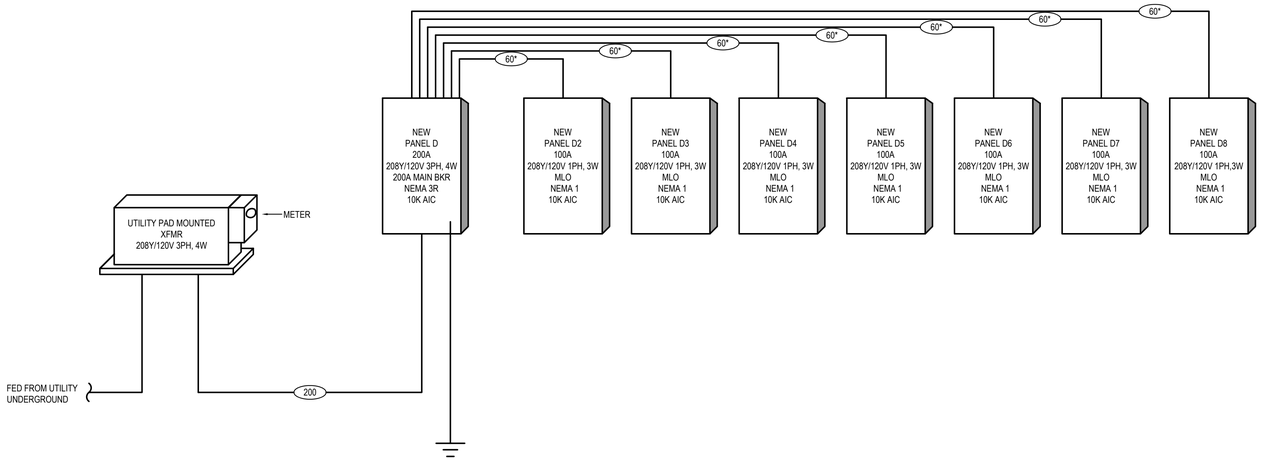
E2.1

FEEDER SCHEDULE - 3 PHASE

STANDARD OVERCURRENT PROTECTION SIZE	FEEDER WIRE - # SETS (CONDUCTOR SIZE, EQUIP. GND., CONDUIT SIZE) CONDUCTOR TYPE: THHN - DRY; THWN - WET			
	COPPER WIRE	GEC	ALUMINUM WIRE	GEC
30	1 [4 #10, #10G, 3/4"C]		1 [4 #8, #8G, 3/4"C]	
35	1 [4 #8, #10G, 3/4"C]		1 [4 #6, #8G, 1"C]	
40	1 [4 #8, #10G, 3/4"C]		1 [4 #6, #8G, 1"C]	
45	1 [4 #6, #10G, 1"C]		1 [4 #4, #8G, 1-1/4"C]	
50	1 [4 #6, #10G, 1"C]		1 [4 #4, #8G, 1-1/4"C]	
60	1 [4 #4, #10G, 1-1/4"C]		1 [4 #3, #8G, 1-1/4"C]	
70	1 [4 #4, #8G, 1-1/4"C]		1 [4 #2, #6G, 1-1/4"C]	
80	1 [4 #3, #8G, 1-1/4"C]		1 [4 #1, #6G, 1-1/2"C]	
90	1 [4 #2, #8G, 1-1/4"C]		1 [4 #1/0, #6G, 2"C]	
100	1 [4 #1, #6G, 1-1/2"C]	#8	1 [4 #1/0, #6G, 2"C]	#6
110	1 [4 #1, #6G, 1-1/2"C]	#8	1 [4 #1/0, #4G, 2"C]	#6
125	1 [4 #1, #6G, 1-1/2"C]	#6	1 [4 #2/0, #4G, 2"C]	#4
150	1 [4 #1/0, #6G, 2"C]	#6	1 [4 #3/0, #4G, 2"C]	#4
175	1 [4 #2/0, #6G, 2"C]	#4	1 [4 #4/0, #4G, 2-1/2"C]	#2
200	1 [4 #3/0, #6G, 2"C]	#4	1 [4 #250KCMIL, #4G, 2-1/2"C]	#2
225	1 [4 #4/0, #4G, 2-1/2"C]	#2	1 [4 #300KCMIL, #2G, 3"C]	#1/0
250	1 [4 #250KCMIL, #4G, 2-1/2"C]	#2	1 [4 #350KCMIL, #2G, 3"C]	#1/0
300	1 [4 #300KCMIL, #4G, 3"C]	#2	1 [4 #500KCMIL, #2G, 3"C]	#1/0
350	2 [4 #2/0, #3G, 2"C]	#2	2 [4 #4/0, #1G, 2-1/2"C]	#1/0
400	2 [4 #3/0, #3G, 2"C]	#2	2 [4 #250KCMIL, #1G, 2-1/2"C]	#1/0
450	2 [4 #4/0, #2G, 2-1/2"C]	#1/0	2 [4 #300KCMIL, #1/0G, 3"C]	#3/0
500	2 [4 #250KCMIL, #2G, 2-1/2"C]	#1/0	2 [4 #350KCMIL, #1/0G, 3"C]	#3/0
600	2 [4 #350KCMIL, #1G, 3"C]	#2/0	2 [4 #500KCMIL, #2/0G, 3"C]	#4/0
700	2 [4 #500KCMIL, #1/0G, 3"C]	#2/0	3 [4 #350KCMIL, #3/0G, 3"C]	#4/0
800	3 [4 #300KCMIL, #1/0G, 3"C]	#3/0	3 [4 #400KCMIL, #3/0G, 3"C]	#4/0
1000	3 [4 #400KCMIL, #2/0G, 3"C]	#3/0	4 [4 #350KCMIL, #4/0G, 3"C]	#4/0
1200	4 [4 #350KCMIL, #3/0G, 3"C]	#3/0	4 [4 #500KCMIL, #250KCMIL G, 3"C]	#250 KCMIL
1600	5 [4 #400KCMIL, #4/0G, 3"C]	#3/0	6 [4 #400KCMIL, #350KCMIL G, 3"C]	#250 KCMIL
2000	6 [4 #400KCMIL, #250KCMIL G, 3"C]	#3/0	7 [4 #500KCMIL, #400KCMIL G, 3"C]	#250 KCMIL
2500	7 [4 #500KCMIL, #350KCMIL G, 3"C]	#3/0	9 [4 #500KCMIL, #600KCMIL G, 3"C]	#250 KCMIL
3000	8 [4 #500KCMIL, #400KCMIL G, 3"C]	#3/0	10 [4 #500KCMIL, #600KCMIL G, 3"C]	#250 KCMIL
4000	11 [4 #500KCMIL, #500KCMIL G, 3"C]	#3/0	13 [4 #500KCMIL, #750KCMIL G, 3"C]	#250 KCMIL

FEEDER SCHEDULE NOTES:
1. ALL FEEDER SIZES MAY NOT BE LISTED IN ONE-LINE DIAGRAM
2. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED. REFER TO APPLICABLE TABLE IN ANNEX C OF NEC.
3. IF CONDUIT OTHER THAN EMT IS REQUIRED, BASE BID ON NEXT TRADE SIZE ABOVE THAT INDICATED.
4. 'GEC' DENOTES GROUNDING ELECTRODE CONDUCTOR PER NEC TABLE 250.66.

* EC SHALL VERIFY WITH AUTHORITY HAVING JURISDICTION AND UTILITY COMPANY THAT ALUMINUM CONDUCTORS ARE ACCEPTABLE FOR USE AS UTILITY TRANSFORMER SECONDARIES AND FEEDER CIRCUITS.



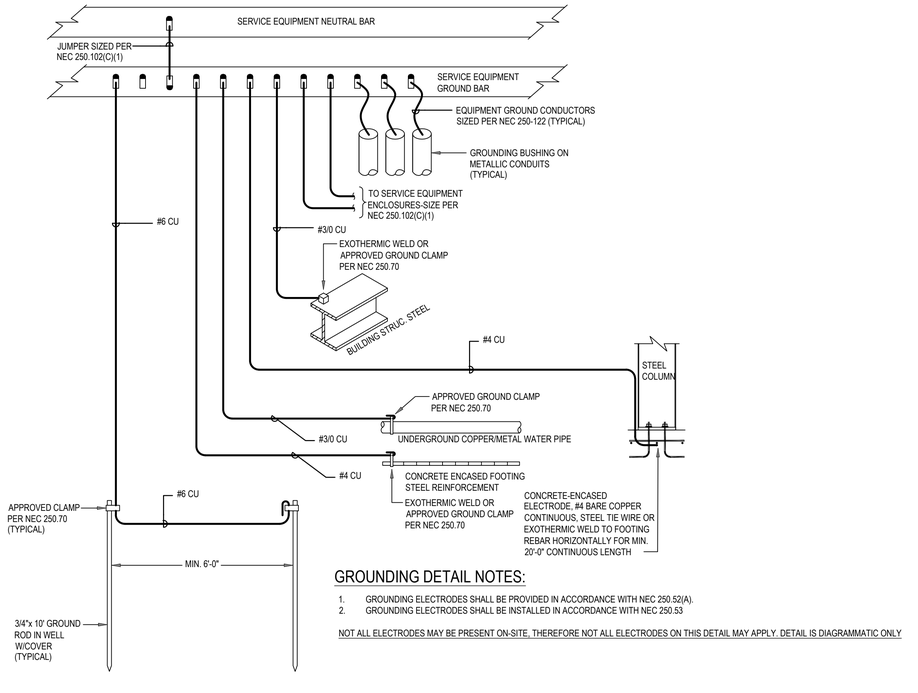
1 ONE-LINE DIAGRAM
NOT TO SCALE

FEEDER SCHEDULE - 1 PHASE

STANDARD OVERCURRENT PROTECTION SIZE	FEEDER WIRE - # SETS (CONDUCTOR SIZE, EQUIP. GND., CONDUIT SIZE) CONDUCTOR TYPE: THHN - DRY; THWN - WET			
	COPPER WIRE	GEC	ALUMINUM WIRE	GEC
30*	1 [3 #10, #10G, 3/4"C]		1 [3 #8, #8G, 3/4"C]	
35*	1 [3 #8, #10G, 3/4"C]		1 [3 #6, #8G, 1"C]	
40*	1 [3 #8, #10G, 3/4"C]		1 [3 #6, #8G, 1"C]	
45*	1 [3 #6, #10G, 1"C]		1 [3 #4, #8G, 1-1/4"C]	
50*	1 [3 #6, #10G, 1"C]		1 [3 #4, #8G, 1-1/4"C]	
60*	1 [3 #4, #10G, 1-1/4"C]	#8	1 [3 #3, #8G, 1-1/4"C]	#6
70*	1 [3 #4, #8G, 1-1/4"C]	#8	1 [3 #2, #6G, 1-1/4"C]	#6
80*	1 [3 #3, #8G, 1-1/4"C]	#8	1 [3 #1, #6G, 1-1/2"C]	#6
90*	1 [3 #2, #8G, 1-1/4"C]	#8	1 [3 #1/0, #6G, 2"C]	#6
100*	1 [3 #1, #6G, 1-1/2"C]	#8	1 [3 #1/0, #6G, 2"C]	#6
110*	1 [3 #1, #6G, 1-1/2"C]	#8	1 [3 #1/0, #4G, 2"C]	#6
125*	1 [3 #1, #6G, 1-1/2"C]	#6	1 [3 #2/0, #4G, 2"C]	#4
150*	1 [3 #1/0, #6G, 2"C]	#6	1 [3 #3/0, #4G, 2"C]	#4
175*	1 [3 #2/0, #6G, 2"C]	#4	1 [3 #4/0, #4G, 2-1/2"C]	#2
200*	1 [3 #3/0, #6G, 2"C]	#4	1 [3 #250KCMIL, #4G, 2-1/2"C]	#2
225*	1 [3 #4/0, #4G, 2-1/2"C]	#2	1 [3 #300KCMIL, #2G, 3"C]	#1/0
250*	1 [3 #250KCMIL, #4G, 2-1/2"C]	#2	1 [3 #350KCMIL, #2G, 3"C]	#1/0
300*	1 [3 #300KCMIL, #4G, 3"C]	#2	1 [3 #500KCMIL, #2G, 3"C]	#1/0
350*	2 [3 #2/0, #3G, 2"C]	#2	2 [3 #4/0, #1G, 2-1/2"C]	#1/0
400*	2 [3 #3/0, #3G, 2"C]	#2	2 [3 #250KCMIL, #1G, 2-1/2"C]	#1/0
450*	2 [3 #4/0, #2G, 2-1/2"C]	#1/0	2 [3 #300KCMIL, #1/0G, 3"C]	#3/0
500*	2 [3 #250KCMIL, #2G, 2-1/2"C]	#1/0	2 [3 #350KCMIL, #1/0G, 3"C]	#3/0
600*	2 [3 #350KCMIL, #1G, 3"C]	#2/0	2 [3 #500KCMIL, #2/0G, 3"C]	#4/0
700*	2 [3 #500KCMIL, #1/0G, 3"C]	#2/0	3 [3 #350KCMIL, #3/0G, 3"C]	#4/0
800*	3 [3 #300KCMIL, #1/0G, 3"C]	#3/0	3 [3 #400KCMIL, #3/0G, 3"C]	#4/0
1000*	3 [3 #400KCMIL, #2/0G, 3"C]	#3/0	4 [3 #350KCMIL, #4/0G, 3"C]	#4/0

FEEDER SCHEDULE NOTES:
1. ALL FEEDER SIZES MAY NOT BE LISTED IN ONE-LINE DIAGRAM
2. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED. REFER TO APPLICABLE TABLE IN ANNEX C OF NEC.
3. IF CONDUIT OTHER THAN EMT IS REQUIRED, BASE BID ON NEXT TRADE SIZE ABOVE THAT INDICATED.
4. 'GEC' DENOTES GROUNDING ELECTRODE CONDUCTOR PER NEC TABLE 250.66.

* EC SHALL VERIFY WITH AUTHORITY HAVING JURISDICTION AND UTILITY COMPANY THAT ALUMINUM CONDUCTORS ARE ACCEPTABLE FOR USE AS UTILITY TRANSFORMER SECONDARIES AND FEEDER CIRCUITS.



GROUNDING DETAIL NOTES:

1. GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC 250.52(A).
2. GROUNDING ELECTRODES SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53

NOT ALL ELECTRODES MAY BE PRESENT ON-SITE, THEREFORE NOT ALL ELECTRODES ON THIS DETAIL MAY APPLY. DETAIL IS DIAGRAMMATIC ONLY

1 SERVICE GROUNDING DETAIL
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 056419 ENGINEER DANIEL B.A. SHARPE
8-22-24

DESIGN FOR:
BAUCOM BUSINESS PLAZA - S4
11132 U.S. 401 N
FUQUAY-VARINA, NC 27526

REV. NO.	DATE	DESCRIPTION
1		
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ISS. NO.	DATE	DESCRIPTION
1	8-22-24	FOR PERMITTING
2		
3		
4		
5		
6		
7		

PROJECT NO.:	DRAWN BY: DBAS
24-029	CHECKED BY: DBAS

ONE-LINE DIAGRAM AND DETAILS

E2.2