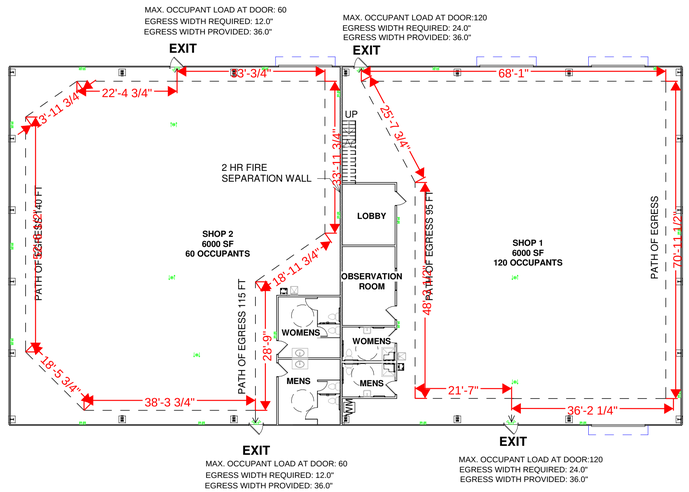
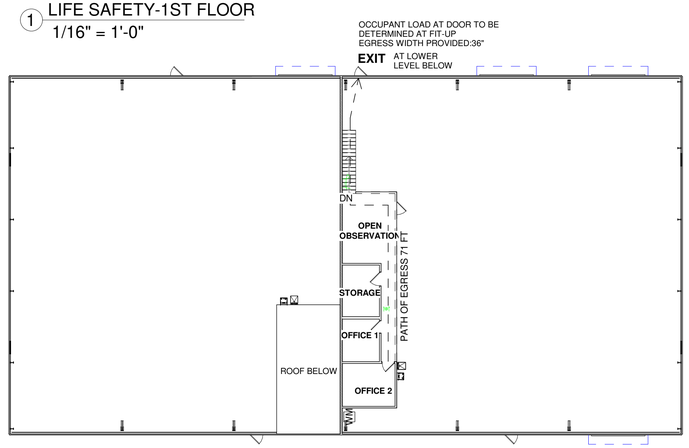
# ABBREVIATIONS

| | |
|---|---|
| & | AND |
| @ | AT, AT THE RATE OF |
| Ø | ROUND, OR DIAMETER |
| ADJ | ADJUSTIBLE |
| AFF | ABOVE FINISHED FLOOR |
| BLDG | BUILDING |
| BM | BEAM |
| BOT | BOTTOM |
| A.N.A. | BOUNDARY NAILING |
| C.L.A.A. | CENTER-LINE |
| CLG | CEILING |
| CMU | CONCRETE MASONRY UNIT(S) |
| COL | COLUMN |
| CONC | CONCRETE |
| DET | DETAIL |
| DIM | DIMENSION |
| DWG | DRAWING |
| (E) | EXISTING |
| EA | EACH |
| E.N.B. | EDGE NAIL |
| E.W. | EACH WAY |
| ELEV. | ELEVATOR, ELEVATION |
| EQUIP | EQUIPMENT |
| EXT | EXTERIOR |
| EX'G | EXISTING |
| F.L. | FLOW-LINE |
| FLR | FLOOR |
| GL | GLASS |
| GLB | GLUED-LAMINATED BEAM |
| HDR | HEADER |
| HDWD | HARDWOOD |
| H.M. | HOLLOW METAL |
| HOR | HORIZONTAL |
| LAB | LABORATORY |
| LFRE | LATERAL FORCE RESISTING ELEMENT |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MTL | METAL |
| MFR | MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| (N) | NEW |
| N.A. | NOT APPLICABLE |
| N.T.S. | NOT TO SCALE |
| o/c | ON CENTER |
| P.A. | POST ABOVE |
| PART | PARTITION |
| PL | PLANE, OR PLATE |
| PLYWD | PLYWOOD |
| PSI | POUNDS-PER-SQUARE-INCH |
| RAD | RADIUS |
| REQ | REQUIRED |
| REV | REVISION |
| RM | ROOM |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SH | SHELF |
| SHT | SHEET |
| SIM | SIMILAR |
| SPECS | SPECIFICATIONS |
| STD | STANDARD |
| STRUCT | STRUCTURAL |
| T&B | TOP AND BOTTOM |
| THK | THICK |
| TYP | TYPICAL |
| U.B.C. | UNIFORM BUILDING CODE |
| U.N.O. | UNLESS NOTED OTHERWISE |
| VERT | VERTICAL |
| w/ | WITH |
| WD | WOOD |
| WM | WASHING MACHINE |
| W.R. | WATER-RESISTANT |




1 LIFE SAFETY-1ST FLOOR
1/16" = 1'-0"




2 LIFE SAFETY-2ND FLOOR
1/16" = 1'-0"

**OCCUPANT LOAD CALCULATION:**

| OCCUPANCY | AREA(IN SQ. FT.) | OCCUPANT LOAD FACTOR | OCCUPANT LOAD |
|---|---|---|---|
| A-3 | 6000 | (PER TABLE 1004.1.2)<br>50 GROSS<br>(EXERCISE ROOMS WITH EQUIPMENT) | 120 |
| B | 6000 | 100 GROSS<br>(BUSINESS AREAS) | 60 |
| | | **TOTAL DESIGN OCCUPANT LOAD:** | **180** |

**LIFE SAFETY LEGEND**

EXIT TRAVEL DISTANCE & TIME — Length / Time sec

EMERGENCY EXIT LED LIGHT c/w BATTERY PACK

EMERGENCY LIGHT

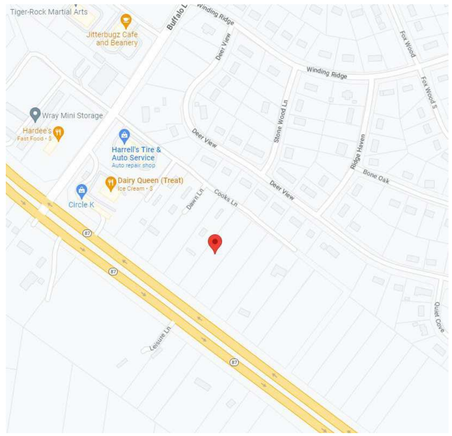
2 HR RATED WALL

PATH OF EGRESS

# PHALANX CROSSFIT

## 2659 Hwy 87 S.
## Cameron, NC 28326

**Reviewed for Fire Code Compliance**
Harnett County North Carolina — Leslie Jackson
08/17/2023 11:53:08 AM




VICINITY MAP

# GENERAL NOTES

1. PERMIT DRAWINGS DO NOT INDICATE OR DESCRIBE THE COMPLETE WORK REQUIRED FOR PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF CONSTRUCTION.
2. FACTORY AND CONTRACTOR TO VERIFY AND BECOME FAMILIAR WITH ALL SITE CONDITIONS AND DIMENSIONS. ANY DISCREPANCIES THAT CONFLICT WITH DESIGN DOCUMENTS, AND WOULD REQUIRE DESIGN MODIFICATIONS, WILL BE COORDINATED WITH THE ARCHITECT, IF NECESSARY.
3. ALL CONSTRUCTION WILL COMPLY WITH ALL CURRENT APPLICABLE BUILDING CODE(S) FOR THE AGENCY HAVING JURISDICTION, INCLUDING ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
4. THE CONTRACTOR AND FACTORY WILL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, INCLUDING INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
5. THE CONTRACTOR WILL COORDINATE AND COOPERATE WITH THE WORK OF ALL TRADES INVOLVED, INCLUDING ANY REQUIRED INSPECTIONS BY AGENCIES HAVING JURISDICTION.
6. THE CONTRACTOR WILL MAINTAIN THE SITE IN A CLEAN CONDITION AT ALL TIMES, AND REMOVE CONSTRUCTION DEBRIS AS OFTEN AS NECESSARY OR AS DIRECTED BY LOCAL AUTHORITIES.
7. THE CONTRACTOR WILL PROVIDE NECESSARY PROTECTION OF HIS WORK AND ADJACENT AREA. THIS INCLUDES NOISE AND DUST CONTROL.
8. THE BUILDING PERMIT AND ANY APPLICABLE IMPACT FEES WILL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
9. TYPICAL INTERIOR WALL CONSTRUCTION TO BE 2 X 4 WOOD STUDS WITH 1/2" GYP BD ON EACH SIDE OF STUD. PROVIDE SOUND ATTENUATION BATTS IN ALL INTERIOR RESTROOM WALLS, AND OTHER LOCATIONS IF REQUIRED BY OWNER.
10. PROVIDE BLOCKING IN WALLS AND CEILINGS FOR ANTICIPATED LOCATIONS OF HEAVY LIGHT FIXTURES, HOOKS, TOWEL BARS, ETC.
11. CONTRACTOR WILL PROVIDE LOCATION AND TAP INTO ALL UTILITIES PER CITY REQUIREMENTS.
12. CONVENTIONAL DETAILS WILL APPLY WHERE NO SPECIAL DETAIL IS PROVIDED.
13. PRODUCT SUPPLIERS WILL FIELD MEASURE AREA OF WORK, AND SUBMIT SHOP DRAWINGS TO CONTRACTOR PRIOR TO CONSTRUCTION AND INSTALLATION. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO ARCHITECT FOR REVIEW, IF NECESSARY.
14. ALL PLUMBING SUPPLY LINES IN EXTERIOR WALLS TO BE FULLY INSULATED.
15. PROVIDE SMOKE DETECTORS PER LOCAL CODE.
16. PROVIDE CLOSED CELL INSULATION WITHIN STUDS ALONG EXTERIOR WALLS.
17. PROVIDE A 1/2" GAP ON GYP BD BORDER (TOP, BOTTOM AND SIDES) AND FILL WITH ACOUSTICAL SEALANT TO PREVENT TRANSFER OF SOUND AND VIBRATION TO ADJACENT SUITES.
18. ANY PENETRATIONS OF FIRE RATED ASSEMBLIES WILL BE FIRE-BLOCKED AND SEALED PER APPROVED UL ASSEMBLIES.
19. THE CONTRACTOR WILL COORDINATE ALL MILLWORK WITH FURNITURE, EQUIPMENT, LIGHTING. AN, ELECTRICAL, AND OTHER SURROUNDINGS.
20. ANY DAMAGE TO THE BUILDING DURING THE CONSTRUCTION IS TO BE REPORTED TO THE OWNER IMMEDIATELY.
21. ALL SHIPPING CONTAINERS USED WILL MEET THE CRITERIA FOR STRUCTURAL BUILDING MATERIALS DESCRIBED IN AC462 FROM ICC-ES

# GENERAL LEGENDS

**PLAN NOTATIONS**

ROOM TAG — Room name / 101
DOOR TAG — 101
WINDOW TAG — 1i
EQUIPMENT TAG — 1i
WALL TYPE TAG — 1i

**DRAWING REFERENCES**

ELEVATION TAG — 1 Ref; DETAIL # / SHEET # WHERE DTL IS LOCATED
SECTION TAG — 1 / A101; SIM
DETAIL TAG — 1 / A101; SIM; DETAIL # / SHEET # WHERE DTL IS LOCATED

**MEASUREMENTS**

VERTICAL DISTANCE GIVE ON PLAN — NAME / ELEV X' - XX"
VERTICAL DISTANCE GIVEN ON ELEVATION — NAME / ELEV X' - XX"
DIMENSION — 4' - 2"

**NOTATION AND SYMBOLS**

EDGE OF DETAIL AREA; DRAWING CONTINUES
DELTA/DRAWING — 1
REVISION CLOUD
NORTH ARROW
CENTER LINE — ℄

# WALL LEGEND

EXTERIOR METAL WALL PANEL WITH LINER SYSTEM & FURRING W/ DRYWALL
EXTERIOR METAL WALL PANEL WITH LINER SYSTEM
WOOD STUD PARTITION

# ARCHITECTURAL NOTES

1. DRIP EDGE: PROVIDE 1" DRIP EDGE ON FLASHING OVER OPENINGS IN EXTERIOR WALLS.
2. WOOD PROTECTION: WOOD FRAMING MEMBERS THAT ARE NOT PRESSURE TREATED WITH A WOOD PRESERVATIVE AND WHICH ARE SUPPORTED BY CONCRETE IN CONTACT WITH THE GROUND WILL BE SEPARATED FROM THE CONCRETE BY AT LEAST 6 MIL POLY OR EQUAL.
3. STAIR DIMENSIONS (ALL INTERIOR AND EXTERIOR STAIRS REFER TO DRAWINGS FOR ACTUAL DIMENSIONS)
   3.1. MINIMUM RISER HEIGHT = 4"
   3.2. MAXIMUM RISER HEIGHT = 8"
   3.3. MINIMUM TREAD DEPTH = 9"
   3.4. MINIMUM NOSING = 43"
   3.5. MAXIMUM NOSING = 1"
   3.6. MINIMUM HEADROOM = 6'-8"
   3.7. MINIMUM WIDTH = 3'-0"
   3.8. HANDRAIL MINIMUM HEIGHT = 2'-10"
   3.9. HANDRAIL MAXIMUM HEIGHT = 3'-2"
   3.10. GUARD MINIMUM HEIGHT = 3'-0"

NOTE: A CLEARANCE OF NOT LESS THAN 1 ½" WILL BE PROVIDED BETWEEN HANDRAIL AND ANY SURFACE BEHIND IT.

**DRAWING INDEX**

| Sheet Number | Sheet Name |
|---|---|
| A00 | LEGENDS, INDEX |
| A101 | FIRST FLOOR PLAN |
| A102 | SECOND FLOOR PLAN |
| A103 | ELEVATIONS |
| A104 | SECTIONS AND TOILET DETAILS |

*PAPER SIZE: ARCH D

**REVISIONS**

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 00 | 05/02/2023 | FOR SUBMITTAL |

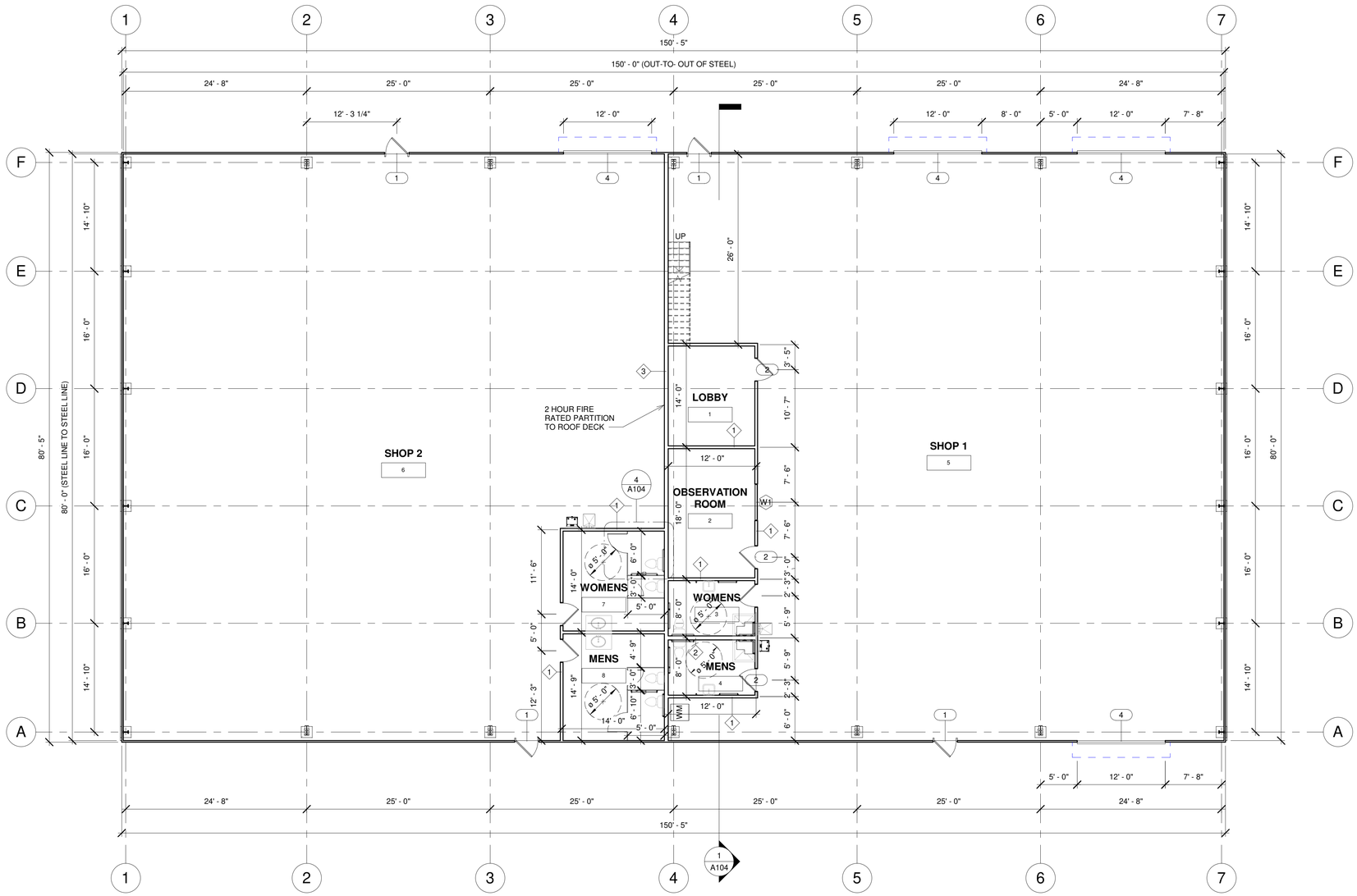
LEGENDS, INDEX

2659 Hwy 87 S.
Cameron, NC 28326

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023


EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR, SUITE 220
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM


| | |
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | MKC |
| DATE: | 07/21/2023 |
| SCALE: | AS SHOWN |
| A00 | 22-4006 |




1 1st FLOOR PLAN
1/8" = 1'-0"

**GENERAL PLAN NOTES:**

1. DO NOT SCALE DRAWINGS, DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL SCALE DETAILS.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL OPENINGS THROUGH FLOORS, CEILINGS, AND WALLS WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
3. DIMENSIONS TO INTERIOR WALLS ARE FROM INSIDE OF EXTERIOR WALL, INSIDE OF FIRE PARTITION AND CENTER OF OTHER INTERIOR WALLS .
4. DIMENSIONS TO DOORS AND WINDOWS ARE TO FACE OR TO CENTERLINE OF FINISHED OPENING.

REVISIONS

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|---|---|---|
| 00 | 05/02/2023 | FOR SUBMITTAL |

FIRST FLOOR PLAN

2659 Hwy 87 S.
Cameron, NC 28326

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 055950 RABIN P. OJHA
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| | |
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | MKC |
| DATE: | 07/21/2023 |
| SCALE: | AS SHOWN |
| A101 | 22-4006 |

*PAPER SIZE: ARCH D

**GENERAL PLAN NOTES:**

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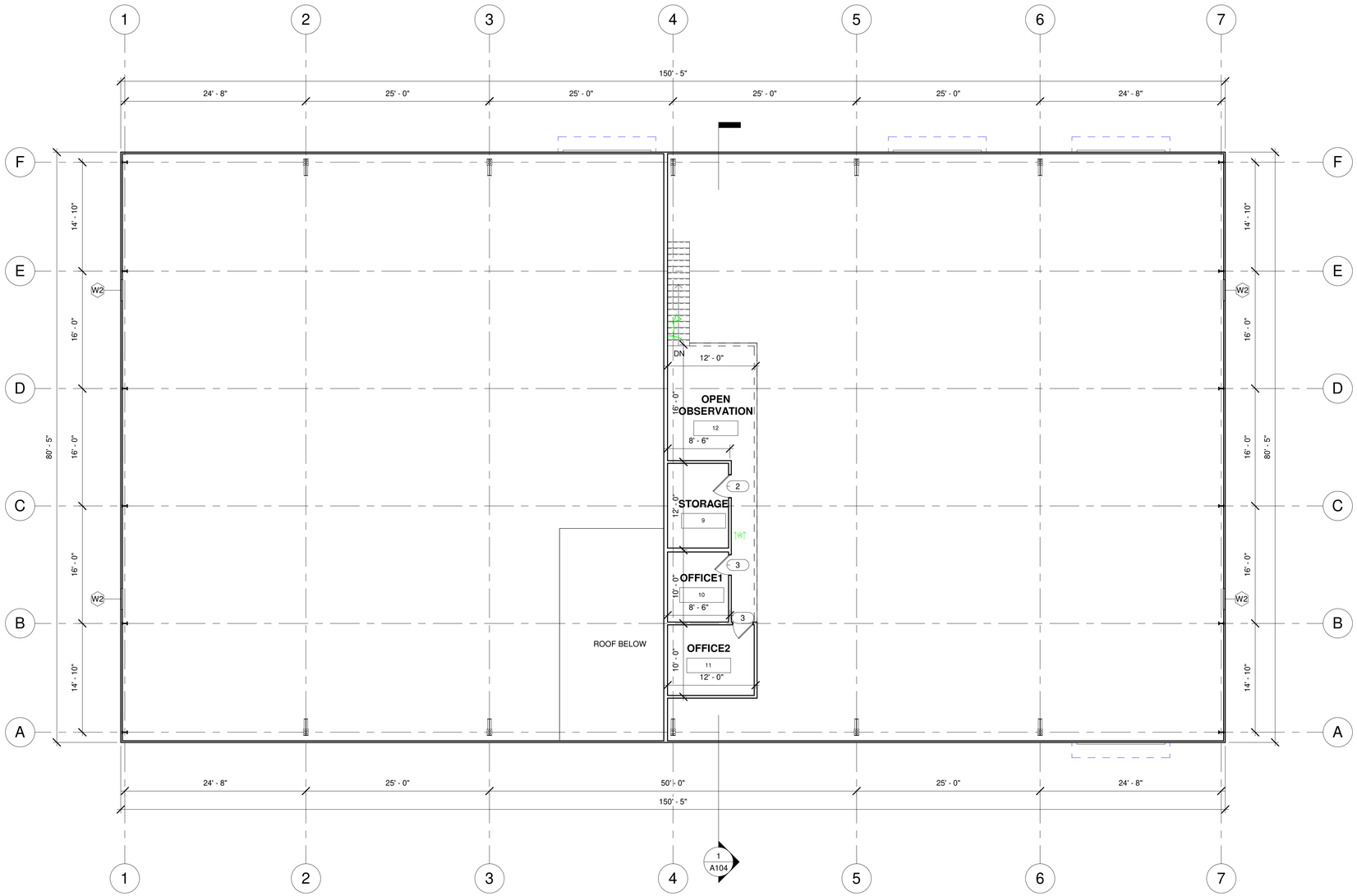
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL OPENINGS THROUGH FLOORS, CEILINGS, AND WALLS WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
3. DIMENSIONS TO INTERIOR WALLS ARE FROM INSIDE OF EXTERIOR WALL, INSIDE OF FIRE PARTITION AND CENTER OF OTHER INTERIOR WALLS .
4. DIMENSIONS TO DOORS AND WINDOWS ARE TO FACE OR TO CENTERLINE OF FINISHED OPENING.




1 2nd FLOOR PLAN
1/8" = 1'-0"

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 00 | 05/02/2023 | FOR SUBMITTAL |

REVISIONS

SECOND FLOOR PLAN

2659 Hwy 87 S.
Cameron, NC 28326

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023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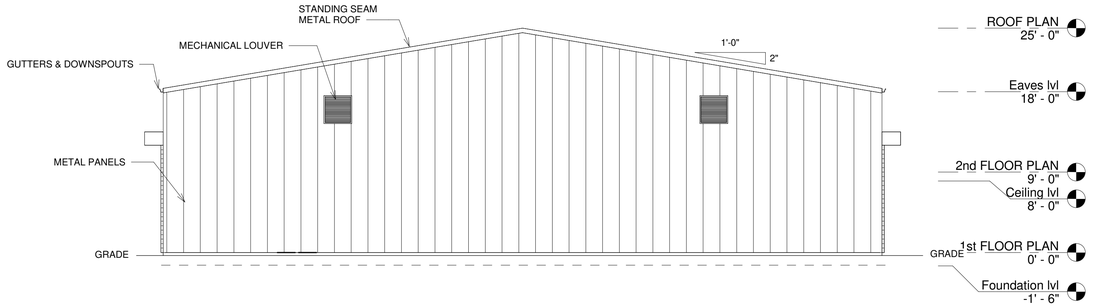
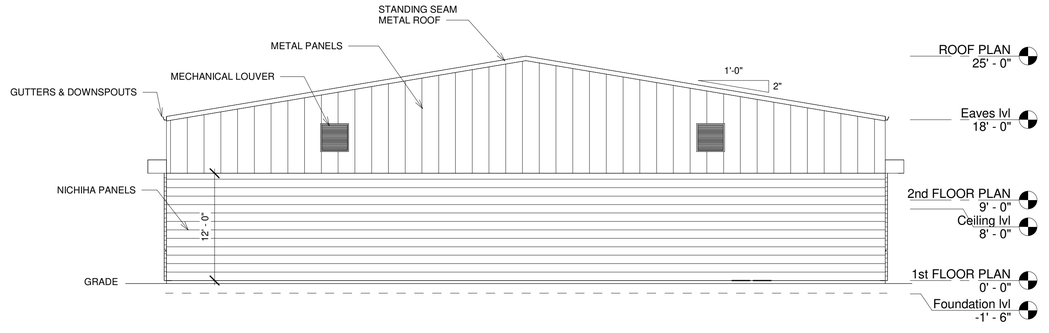
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | MKC |
| DATE: | 07/21/2023 |
| SCALE: | AS SHOWN |
| A102 | 22-4006 |

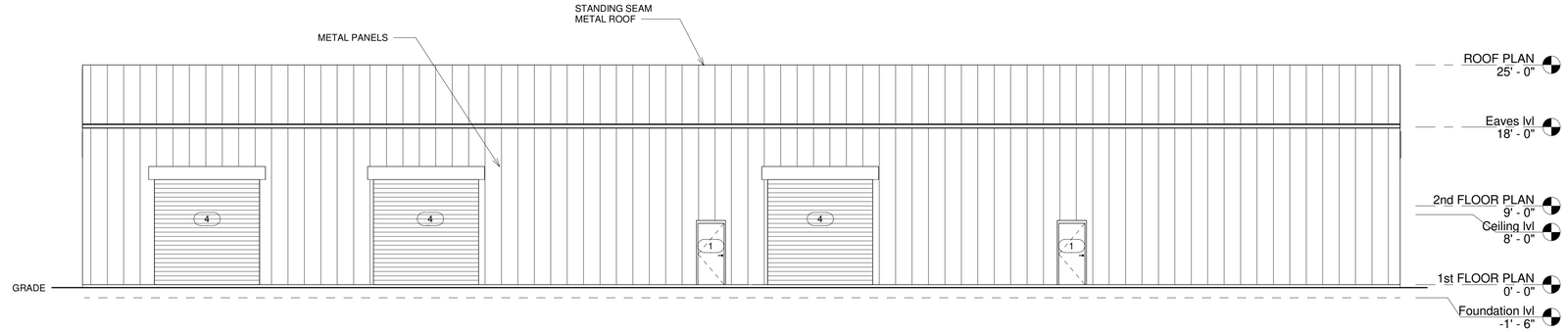
*PAPER SIZE: ARCH D



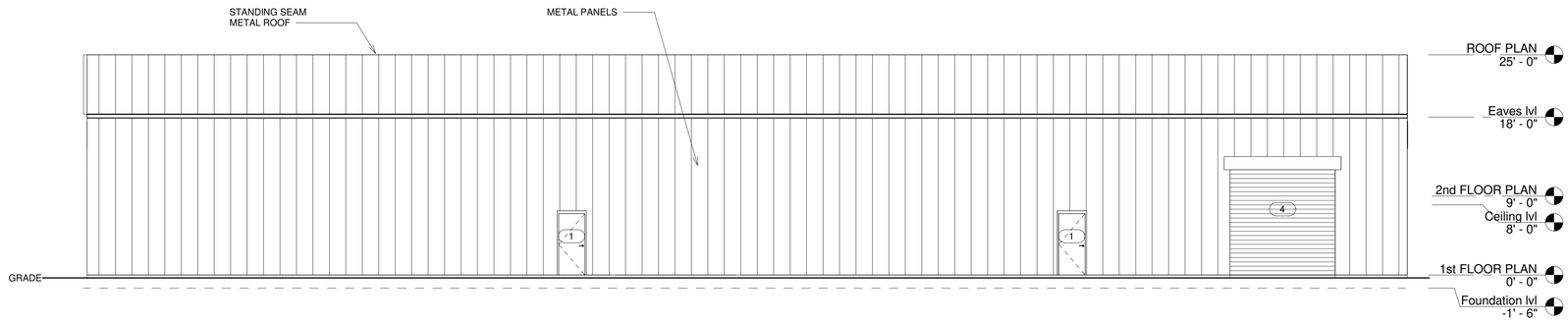

1 EAST ELEVATION
1/8" = 1'-0"




2 WEST ELEVATION
1/8" = 1'-0"




3 NORTH ELEVATION
1/8" = 1'-0"




4 SOUTH ELEVATION
1/8" = 1'-0"

| Door Schedule | | | | |
|---|---|---|---|---|
| Type Mark | Width | Height | Count | Remarks |
| 1 | 3' - 0" | 7' - 0" | 4 | |
| 2 | 3' - 0" | 7' - 0" | 7 | |
| 3 | 2' - 8" | 7' - 0" | 2 | |
| 4 | 12' - 0" | 12' - 0" | 4 | |
| Total count | | | 17 | |

| Window Schedule | | | | | |
|---|---|---|---|---|---|
| Type Mark | Assembly Code | Width | Height | Count | Description |
| W1 | B2020100 | 5' - 0" | 4' - 0" | 1 | |
| W2 | B20 | 3' - 0" | 3' - 0" | 4 | Mechanical |
| Total count | | | | 5 | |

*PAPER SIZE: ARCH D

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| 00 | 05/02/2023 | FOR SUBMITTAL |

ELEVATIONS

2659 Hwy 87 S.
Cameron, NC 28326

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
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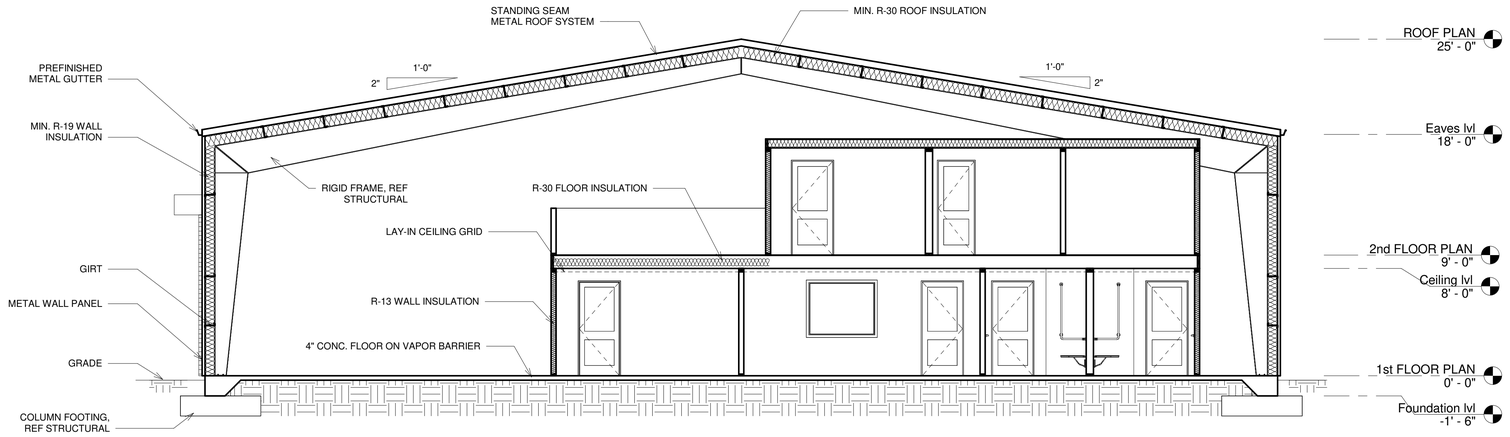
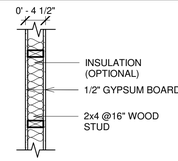
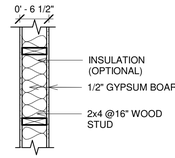
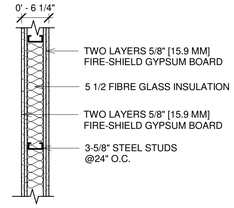
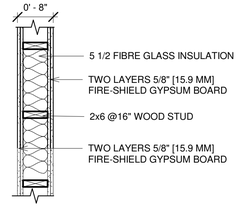
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

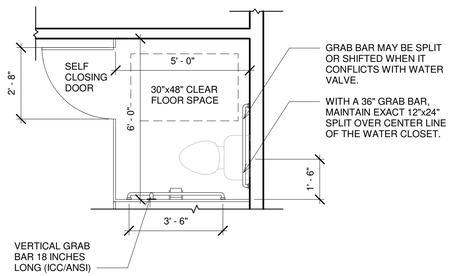
| | |
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | MKC |
| DATE: | 07/21/2023 |
| SCALE: | AS SHOWN |
| A103 | 22-4006 |



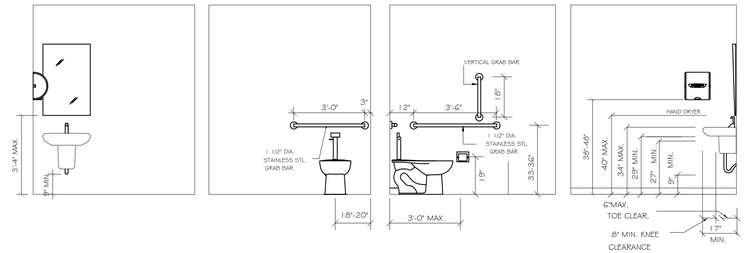

1 SECTION AT 1-1
3/16" = 1'-0"

| | WALL ASSEMBLY |
|---|---|
| 01 |   |
| 02 |   |
| 03 |   2 HOUR FIRE RATED WALL |
| OR 03 |   2 HOUR FIRE RATED WALL<br>FIRE RATING: 2 HOURS<br>SYSTEM THICKNESS: 8" [203 MM]<br>LOCATION: INTERIOR<br>FRAMING TYPE: WOOD STUD (LOAD-BEARING) |

2 WALL TYPES
3/4" = 1'-0"




4 ADA TOILET COMPARTMENT
3/8" = 1'-0"




ADA MOUNTING HEIGHT REQUIREMENTS FOR TOILET ROOMS

| | |
|---|---|
| FIXTURES | |
| WATER CLOSETS | |
| TOP OF SEAT | 17" - 19" A.F.F. |
| CONTROLS FOR FLUSH VALVES | 44" MAX. A.F.F. |
| GRAB BARS FOR WATER CLOSETS | 33" - 36" A.F.F. TO CENTER LINE |
| LAVATORIES | |
| COUNTERTOP OR RIM | 34" MAX. A.F.F. |
| BOTTOM OF APRON | 29" MIN. A.F.F. |
| KNEE CLEARANCE | 8" MIN. TO ANY OBSTRUCTION |
| TOE CLEARANCE TO WALL | 9" H X 6" D |
| LAVATORY MIRRORS | |
| BOTTOM OF REFLECTIVE SURFACE | 40" MAX. A.F.F. |
| TOP OF REFLECTING SURFACE | 74" MIN. A.F.F. |
| ACCESSORIES | |
| DISPENSERS, RECEPTACLES AND CONTROLS | 15" MIN. A.F.F. |
| TOILET PAPER HOLDER | 19" A.F.F. TO CENTER LINE |
| HAND DRYERS | 38"- 48" A.F.F. TO CONTROL SWITCH |
| SOAP DISPENSERS | 38"- 48" A.F.F. |
| PAPER TOWEL DISPENSER | 38"- 48" A.F.F. TO TOWEL |
| FIRE EXTINGUISHERS | 5'-0" MAX. TO TOP |

* A.F.F. = ABOVE FINISH FLOOR

*PAPER SIZE: ARCH D

REVISIONS

| NO. | DATE | DESCRIPTIONS |
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| 00 | 05/02/2023 | FOR SUBMITTAL |

SECTIONS AND TOILET DETAILS

2659 Hwy 87 S.
Cameron, NC 28326

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

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| | |
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | MKC |
| DATE: | 07/21/2023 |
| SCALE: | AS SHOWN |
| A104 | 22-4006 |

# GENERAL NOTES

DESIGN DATA:
APPLICABLE CODE: NCBC 2018, ACI 318-19
DESIGN LOADS: PER BUILDING SUPPLIER

SCOPE OF WORK STATEMENT: DESIGN OF CONCRETE FOUNDATIONS ONLY. STEEL DESIGN INCLUDING STEEL ANCHORS BY OTHERS.

GENERAL NOTES:

1. CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ABIDING TO ALL APPLICABLE BUILDING CODES, LOCAL CITY ORDINANCES, ZONING REQUIREMENTS, AND LICENSING/PERMIT REQUIREMENTS. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES INCLUDING WITHOUT LIMITATION TO DEMOLITION, EXCAVATION AND ERECTION PROCEDURES.
2. THE CONTRACTOR SHALL EXAMINE THE CONSTRICTION DOCUMENTS AND NOTIFY THE PROJECT ENGINEER & ARCHITECT OF ANY DISCREPANCIES, ERRORS, OR OMISSIONS SHE/HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
3. NOTIFY THE PROJECT ENGINEER OF ANY DESIGN CHANGES PROPOSED BY OWNER OR THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION. SUCH CHANGES AFFECTING ROOM ADDITION DESIGN MAY ALSO AFFECT STRUCTURAL DESIGN.
4. ANY SUBCONTRACTOR WHICH AGREES TO CONSTRUCT THE PROJECT PURSUANT TO THESE PLANS FULLY ASSUMES THE RISK OF ALL ERRORS AND OMISSIONS WHICH SHOULD HAVE BEEN DETECTED BY A CAREFUL REVIEW BY A KNOWLEDGEABLE LICENSED CONTRACTOR, THAT WHICH FOR ANY REASON WERE NOT RESOLVED DURING THE BIDDING OR NEGOTIATION PROCESS. FURTHER, THE CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AS THE WORK PROGRESSES IN ORDER TO IDENTIFY ANY SIGNIFICANT ERRORS AND OMISSIONS AND TO ASCERTAIN ALL NECESSARY INFORMATION BEFORE PROCEEDING WITH THE AFFECTED WORK, AND ASSUMES THE RISK OF ANY AND ALL LOSS, INCLUDING DELAY, WHICH MAY BE CAUSED OR CONTRIBUTED TO BY THE FAILURE TO ASCERTAIN CORRECT OR NECESSARY INFORMATION IN A TIMELY MANNER.
5. ALL TRADES SHALL, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR WORK, AND AT THE COMPLETION OF THE WORK SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE JOBSITE AND ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS, AND SHALL LEAVE THE JOB BROOM CLEAN, INCLUDING REMOVING ALL LABELS, STICKERS, PAINT SMEARS, ETC.., FROM LIGHTING FIXTURES, PLUMBING FIXTURES, GLASS SURFACES, FINISH HARDWARE, CABINETS, COUNTER TOPS, ETC.
6. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED OR SHOWN ON THE PLANS, WORKMANSHIP & MATERIALS SHALL CONFORM, TO THE LATEST EDITION OF THE IBC OR LOCAL CODE.
7. THE PLANS SHALL BE REVIEWED FOR DIMENSIONAL & EXISTING SITE CONFORMANCE WITH THE PLANS BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE ARCHITECT & ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
8. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD IN CONFORMANCE WITH METAL BUILDING FRAMING DIMENSIONS ; AND ALL QUESTIONS AS TO DIMENSIONS AND FIELD CONDITIONS SHALL BE RESOLVED BEFORE THE AFFECTED WORK PROCEEDS. NO DIMENSIONS SHALL BE OBTAINED BY SCALING THESE PLANS.
9. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.
10. THE PRECISE DIMENSIONS AND LOCATIONS OF ALL DOOR, WINDOW AND ROOF OPENINGS SHALL BE DETERMINED FROM DRAWINGS AND OTHER FLOOR, WALL OPENING REQUIRED BY MECHANICAL OR ELECTRICAL SHALL BE VERIFIED FROM SHOP DRAWINGS, EQUIPMENT DATA SHEETS, ETC. AS REQUIRED.
11. ITEMS IDENTIFIED BY TRADE NAMES MAY BE SUBSTITUTED BY APPROVED EQUALS.
12. NOTES & DETAILS ON DRAWINGS SHALL PRECEDE THESE GENERAL NOTES.

FOUNDATION NOTES

GENERAL

1. SOIL BENEATH FOOTINGS AND SLABS SHALL BE COMPACTED TO RELATIVE COMPACTION MINIMUM.
2. CONTINUOUS FOOTINGS AND GRADE BEAMS SHALL BE EXCAVATED TO THE DEPTH SHOWN ON THE DRAWINGS BELOW UNDISTURBED SOIL OR COMPACTED EARTH.
3. SLAB ON GRADE: "THE SLABS SHOULD BE STRUCTURALLY DESIGNED OR THE WEAK AND EXPANSIVE SOILS SHOULD BE REMOVED AND REPLACED WITH AT LEAST 24 INCHES OF NON- EXPANSIVE ENGINEERED FILL".
4. NO TRENCHES OR EXCAVATIONS FIVE FEET IN DEPTH OR GREATER INTO WHICH A PERSON SHALL BE REQUIRED TO DESCEND SHALL BE MADE WITHOUT PROPER PERMIT.
5. THE ANCHOR BOLT DESIGN IS BY THE BUILDING SUPPLIER.
6. PROVIDE 3/4" CAMBERS AT ALL EXPOSED CORNERS.

CONCRETE

1. UNLESS OTHERWISE NOTED ON PLANS, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
2. FINE & COURSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, USE 3000 P.S.I. CONC. @ GRADE BEAMS, CEMENT SHALL CONFORM TO A.S.T.M. C-150 (STANDARD BRAND PORTLAND CEMENT) TYPE II (USE TYPE V CEMENT IF NOTED IN SOILS REPORT)
3. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO STRUCTURAL ENGINEER FOR REVIEW.
5. ADDING CALCIUM CHLORIDE TO CONCRETE OR GROUT IS NOT PERMITTED.
6. CONC. SHALL BE KEPT MOIST FOR 10 DAYS FOR PROPER CURING.
7. FLOOR FINISHES SHALL BE AS DEFINED IN ACI 302.1R.
8. FOR END TO END UNIT DIMENSIONS, REFER TO BUILDING SUPPLIER'S DRAWINGS.

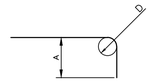
REINFORCING STEEL

1. REINFORCING STEEL, #3 AND #4 GRADE 40, #5 AND LARGER GRADE 60 PER A.S.T.M. A615.
2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS.
3. BARS NOTED AS "CONT" TYPICAL WALL REINFORCING AND VERTICAL COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE OF 50 BAR DIAMETERS LAP IN MASONRY OR 40 BAR DIAMETERS MINIMUM IN CONCRETE.
4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. OTHER SPLICES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4 FEET UNLESS OTHERWISE NOTED.
6. PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE UNLESS OTHERWISE NOTED.
7. ALL REINFORCING, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE OR GROUTING OF MASONRY.
8. THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWING TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO PLACEMENT.
9. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE, PER ACI 318:

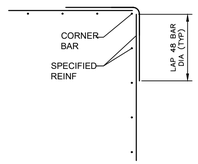
| | |
|---|---|
| BELOW GRADE (UNFORMED) | 3" CLEAR |
| BELOW GRADE (FORMED) | 2" CLEAR |
| WALLS | 1" CLEAR |
| COLUMNS | 1.5" CLEAR |
| BEAMS AND GIRDERS | 1.5" CLEAR |
| STRUCTURAL SLAB (ABOVE GRADE) | 1" CLEAR |

9. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

| BAR SIZE | A (IN) |
|---|---|
| # 3 | 6 |
| # 4 | 8 |
| # 5 | 10 |
| # 6 | 12 |
| # 7 | 14 |
| # 8 | 16 |




D = BEND DIA ON INSIDE OF BAR
d = BAR DIA
A = DISTANCE FROM BAR EXTERIOR TO END OF HOOK




SPECIAL INSPECTION (PER IBC SECTION 1704,1706 & 1707)

1. SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

ITEMS REQUIRE SPECIAL INSPECTION AS MARKED:

| VERIFICATION & INSPECTION | CONTINUOUS | PERIODIC |
|---|---|---|
| | | |
| | | |
| 1. WELDING. | | |
| 1a. STRUCTURAL STEEL OR REINFORCING | | |
| 2. CONCRETE WHERE CONCRETE STRENGTH OF 3000 PSI OR GREATER IS SPECIFIED. | | ☒ |
| 3. COMPACTED FILL | | ☒ |
| 4. FOUNDATION ANCHOR BOLT | | ☒ |

"CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE WIND AND/OR SEISMIC RESISTING SYSTEM THAT IS LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK REQUIRING SPECIAL INSPECTION.

THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:
1) ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS;
2) ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
3) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, AND THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS;
4) IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION."

STRUCTURAL OBSERVATION NOTES:

1. ALL OBSERVATIONS SHALL BE PERFORMED BY THE ENGINEER OF RECORD (EOR) OR A DESIGNATED REGISTERED DESIGN PROFESSIONAL BY THE EOR.
2. OWNER/CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE EOR'S DESIGNEE IN ADVANCE.
3. STRUCTURAL OBSERVATIONS ARE FOR THE GENERAL CONFORMANCE OF THE DRAWINGS. SPECIAL INSPECTION IS STILL REQUIRED.

STRUCTURAL OBSERVATIONS

THE ENGINEER OF RECORD, OR ANOTHER ENGINEER DESIGNATED BY THE ENGINEER OF RECORD SHALL PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, AND CONTRACTOR. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE OWNER A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED. STRUCTURAL OBSERVATIONS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THE SPECIAL INSPECTIONS INDICATED ON THE STRUCTURAL DRAWINGS AND THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE CONTRACTOR. STRUCTURAL OBSERVATIONS WILL BE CONDUCTED AFTER THE ERECTION OF THE STEEL. THE 2015 IBC SECTION 1704.2.1 ALLOWS THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS SPECIAL INSPECTORS FOR THE WORK DESIGNED BY THEM, PROVIDED THEY QUALIFY AS SPECIAL INSPECTORS.

STRUCTURAL DRAWING INDEX





| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 07/31/2023 | SUBMITTAL |

REVISIONS

GENERAL NOTES

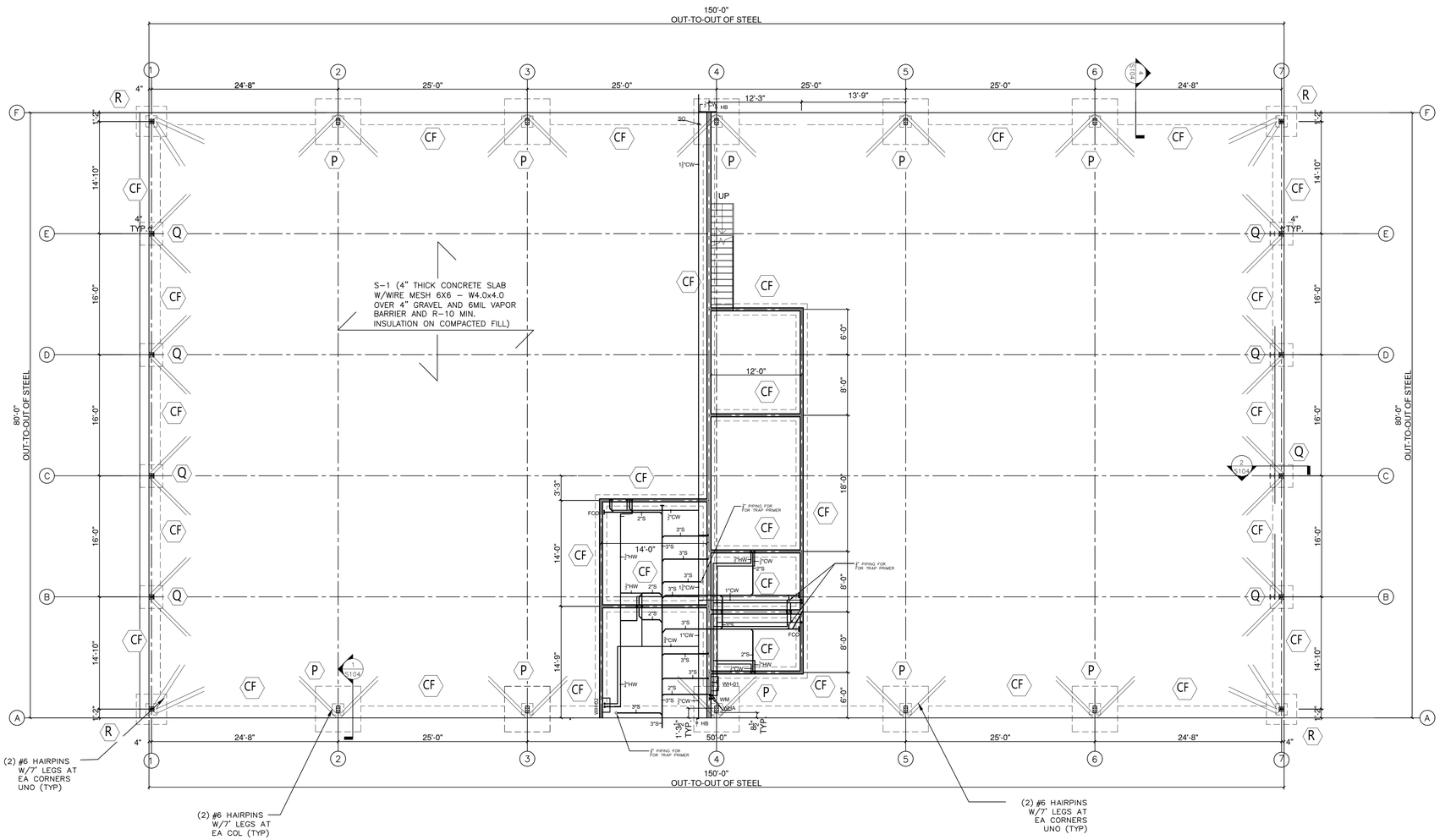
SITE ADDRESS:
2659 Highway 87 S. Cameron, North Carolina 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023


EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
121 EDINBURGH SOUTH DRIVE, SUITE 103
CARY, NC 27511
PHONE:919.444.5442
EMAIL:MOTI.KC@EQUAGEN.COM

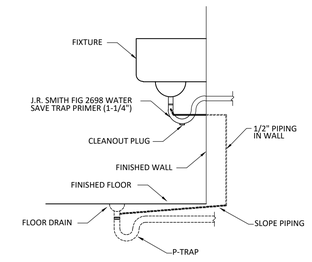

| | |
|---|---|
| DRAWN BY: | SK |
| CHECKED BY: | MKC |
| DATE: | 07/31/2023 |
| SCALE: | AS SHOWN |
| S101 | 22-4006 |




1 FOUNDATION & SLAB PLAN
SCALE: 1/8"=1'-0"

| FOOTING SCHEDULE | | | | |
|---|---|---|---|---|
| TYPE | LENGTH | WIDTH | DEPTH | REBAR |
| P | 6'–0" | 6'–0" | 1'–6" | (8) #5 EW T&B (SEE S103 FOR PIER DET) |
| Q | 3'–0" | 3'–0" | 2'–0" | (4) #5 EW T&B |
| R | 4'–0" | 4'–0" | 1'–6" | (5) #5 EW T&B (SEE S103 FOR PIER DET) |
| CF | CONT. | 1'–6" | 1'–6" | (2) #5 BOT LONGITUDINAL, #5 @ 24" O.C. BOT TRANSV. |

| MAT SCHEDULE | | | |
|---|---|---|---|
| TYPE | THK. | REINFORCEMENT | OTHER |
| S-1 | 0'–4" | WIRE MESH 6X6 – W4.0x4.0 | |




2 TRAP PRIMER DETAIL
NOT TO SCALE

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|---|---|---|
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# FOUNDATION AND SLAB PLAN AND SCHEDULE

SITE ADDRESS:
2659 Highway 87 S. Cameron, North Carolina 28326

PROFESSIONAL SEAL

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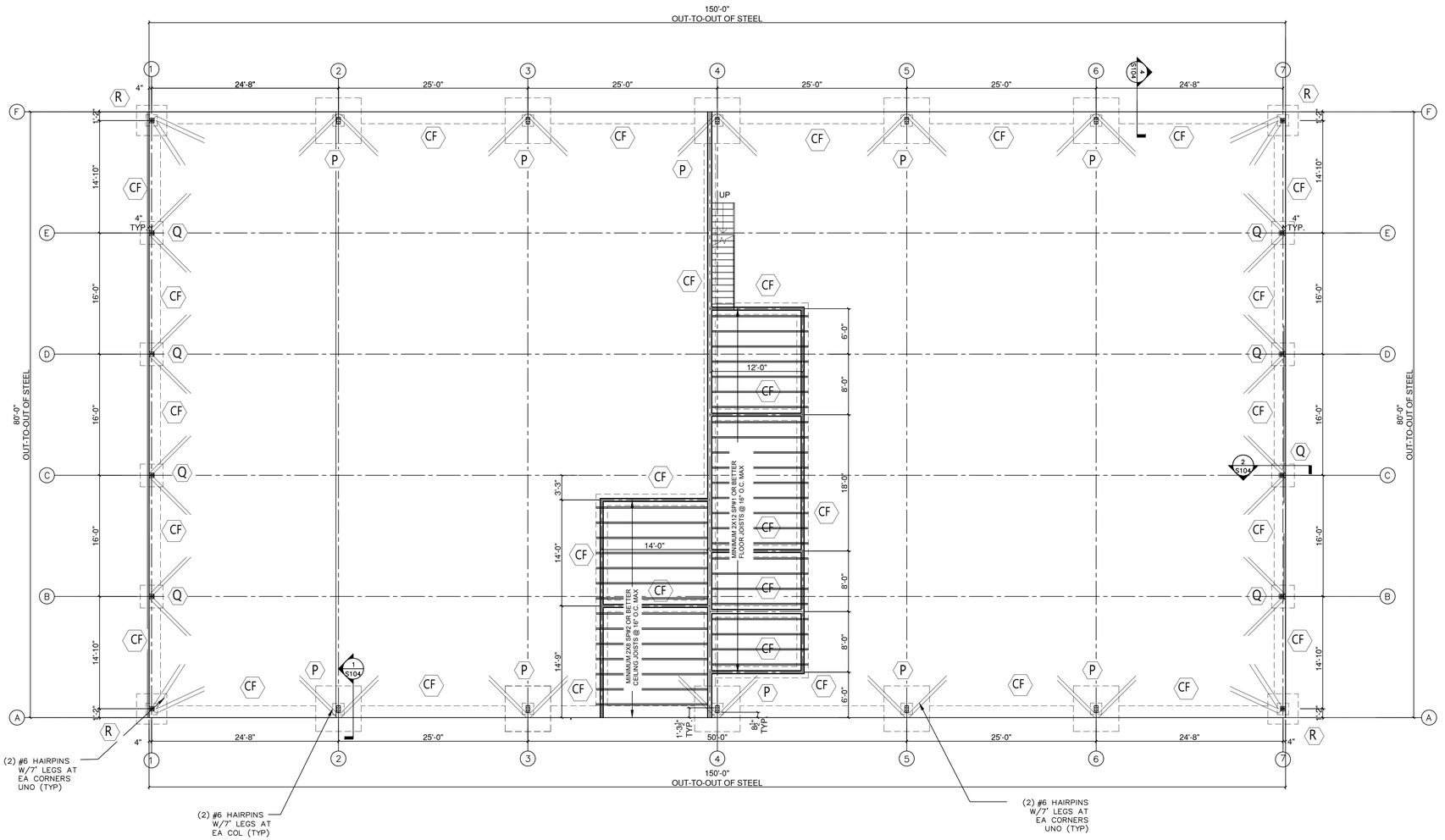
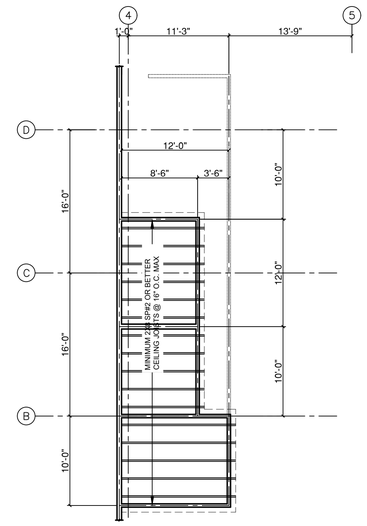
| | |
|---|---|
| DRAWN BY: | SK |
| CHECKED BY: | MKC |
| DATE: | 07/31/2023 |
| SCALE: | AS SHOWN |
| S102 | 22-4006 |




1 SECOND FLOOR FRAMING
SCALE: 1/8"=1'-0"




2 SECOND FLOOR ROOF FRAMING
SCALE: 1/8"=1'-0"

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
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# SECOND FLOOR PLAN

SITE ADDRESS:
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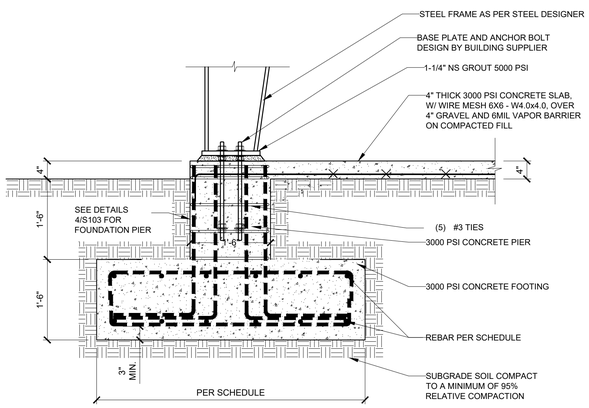
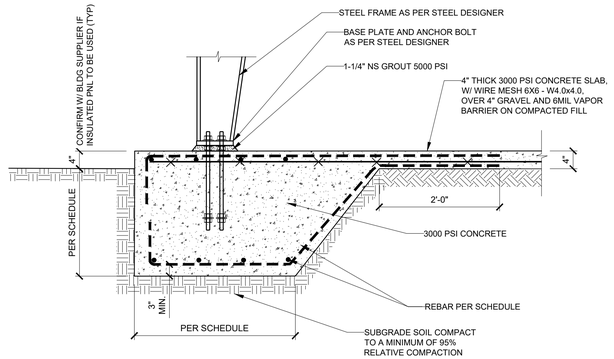
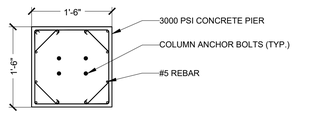
| | |
|---|---|
| DRAWN BY: | SK |
| CHECKED BY: | MKC |
| DATE: | 07/31/2023 |
| SCALE: | AS SHOWN |
| S103 | 22-4006 |



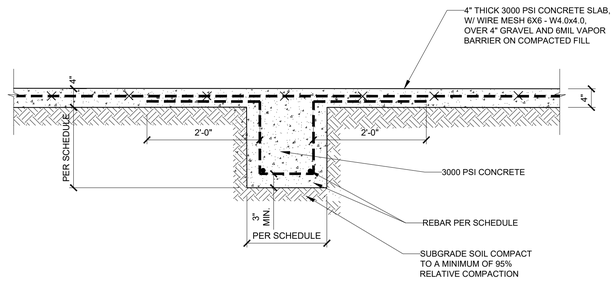

1 SPREAD FOUNDATION TYPE "P" & "R"
SCALE: 3/4"=1'-0"



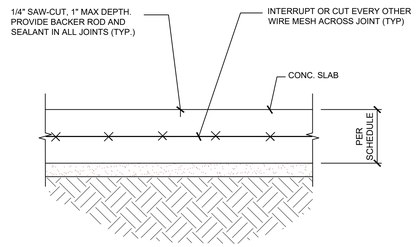

2 THICKENED EDGE FOUNDATION TYPE "Q"
SCALE: 3/4"=1'-0"




3 FOUNDATION TYPE "P" PIER DETAILS
SCALE: 3/4"=1'-0"

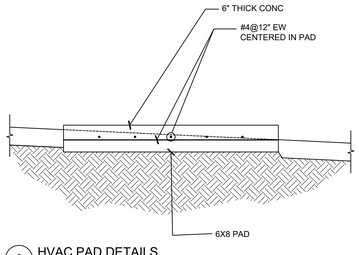



4 CONTINUOUS FOOTING "CF"
SCALE: 3/4"=1'-0"



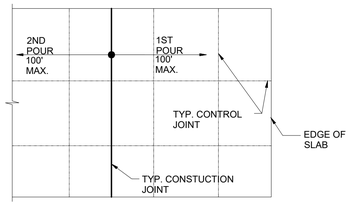

5 CJ DETAILS
SCALE: 3/4"=1'-0"

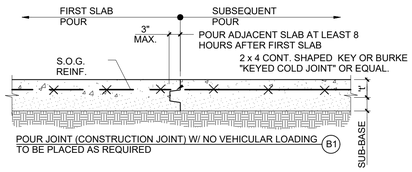
NOTES:
1. CONTRACTOR SHALL DEVELOP A CONTROL JOINT PLAN FOR REVIEW AND APPROVAL OF THE ENGINEER. CONTROL JOINTS SHALL BE SPACED APPROX 10' O.C. EA DIRECTION.
2. JOINTS SHALL BE CUT BETWEEN 6 TO 12 HRS OF CONCRETE PLACEMENT.
3. PROVIDE CLOSED CELL BACKER ROD AND MASTER SEAL NP1 SEALANT TO ALL CONTROL JOINTS. FOLLOW MANUFACTURERS INSTRUCTIONS. ASPECT RATIO OF SEALANT SHALL BE 1:1.
4. JOINTS SHALL NOT BE PROVIDED IN MAT FOUNDATION.



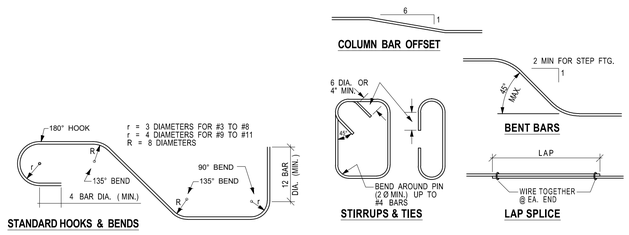

6 HVAC PAD DETAILS
SCALE: 3/4"=1'-0"

NOTES:
1. SLAB JOINTS SHALL BE IN SQUARE OR RECTANGULAR (MAX. 1.5:1 RATIO) PATTERN WITH JOINT SPACING OF 10'-0" MAX. IN EITHER DIRECTION WITH EACH SQUARE OR RECTANGULAR AREA NOT TO EXCEED 100 SQ. FT.
2. WAIT (7) DAYS PRIOR TO OPERATING VEHICLES AND EQUIPMENT ON SLABS. CRANE OUTRIGGERS LOAD SHALL BE WELL-PLANNED TO DISTRIBUTED EVENLY TO AVOID LOCALIZED CRACKING.
3. DO NOT PLACE CONCRETE WHEN THE TEMPERATURE EXCEEDS 90° F OR FALLS BELOW 30° F OR WHEN THE WIND EXCEEDS 18 mph.
4. WHERE CURING COMPOUND IS REQUIRED, APPLY IN TWO COATS IN OPPOSITE DIRECTIONS WITH AN EXTRA APPLICATION ON ALL SAW CUT JOINTS. CURING COMPOUND MUST BE PLACED WITHIN (2) HOURS OF CONCRETE PLACEMENT.
5. WHEN WIND, TEMPERATURE AND HUMIDITY CONDITIONS CAUSE EARLY DISAPPEARANCE OF BLEED WATER, USE A FOG SPRAY. CURING SHALL COMMENCE IMMEDIATELY AFTER FINISHING.




TYP. SLAB ON GRADE JOINTS
NOT TO SCALE




TYPICAL REINFORCING DETAILS
SCALE: 3/4" = 1' - 0"

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
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REVISIONS

# FOUNDATION SECTIONS AND DETAILS

SITE ADDRESS:
2659 Highway 87 S. Cameron, North Carolina 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
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|---|---|
| DRAWN BY: | SK |
| CHECKED BY: | MKC |
| DATE: | 07/31/2023 |
| SCALE: | AS SHOWN |
| S104 | 22-4006 |

# GENERAL NOTES

CONTRACTORS JOB RESPONSIBILITY

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF THE LOCAL CODE ENFORCING AUTHORITIES.
2. PROVIDE A COMPLETE OPERABLE SYSTEM IN A WORKMANLIKE MANNER, OUTLINE DESCRIPTION AND EQUIPMENT. DO NOT LIMIT CONTRACTOR'S LIABILITY FOR THE INSTALLATION OF A COMPLETE OPERABLE SYSTEM.
3. ALL ELECTRICAL EQUIPMENT SHALL BE THE LATEST OF THE CURRENT YEAR IN DESIGN, MATERIAL AND WORKMANSHIP, AND SHALL BE THE TYPE OR MODEL CALLED FOR IN THESE DRAWINGS AND SPECIFICATIONS.
4. CONTRACTOR TO BE RESPONSIBLE FOR REVIEWING THE FULL SET OF BID DOCUMENTS TO BE AWARE OF THE TOTAL SCOPE PRIOR TO SUBMITTING BID ALL WORK SHOWN ON THE DRAWINGS NOT SPECIFICALLY CALLED OUT AS EXISTING SHALL BE CONSIDERED WORK TO BE PERFORMED UNDER THIS CONTRACT.
5. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK.SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR,EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED NO ALLOWANCE WILL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF ANY ERROR DUE TO THE CONTRACTOR'S NEGLECT TO COMPLY WITH THIS REQUIREMENT REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ENGINEER.
6. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE BUILDING DEPARTMENT, FIRE DEPARTMENT AND ALL OTHER GOVERNMENTAL AGENCIES OBTAIN ALL REQUIRED PERMITS, TEST REPORTS, CERTIFICATIONS FOR T.C.O. AND C.O. AND PAY ALL FEES REQUIRED.
7. ALL NOTATIONS OF "SCALE" ARE INTENDED AS APPROXIMATIONS THE CONTRACTOR SHALL BE RESPONSIBLE TO ASCERTAIN THE EXACT DIMENSIONS IN FIELD.
8. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC, SIZES AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON THE DRAWINGS.
9. ELECTRICAL CONTRACTOR SHALL TAKE DELIVERY AND RESPONSIBILITY FOR ALL EQUIPMENT PRE-PURCHASED BY THE OWNER FOR THIS PROJECT. WORK SHALL INCLUDE RECEIVING EQUIPMENT AT STREET-SIDE, MOVING IT TO INTERIM ONSITE, SECURE STORAGE LOCATION, PROTECTING EQUIPMENT FROM DAMAGE, MOVING THE EQUIPMENT FROM STORAGE TO ITS FINAL POSITION, SETTING IN PLACE, AND COMPLETION OF ALL INSTALLATION, TESTING AND COMMISSIONING PROCEDURES REQUIRED FOR APPLICABLE EQUIPMENT.
10. UPON COMPLETION OF ALL ELECTRICAL WORK, ELECTRICAL CONTRACTOR SHALL ADJUST AND TEST ALL CIRCUITS, WIRING DEVICES, LIGHTING FIXTURES, MOTORS, EV AND ANY OTHER ELECTRICAL ITEMS INSTALLED. ANY DEFECTIVE ITEMS SHALL BE IMMEDIATELY REPAIRED OR REPLACED WITH NEW EQUIPMENT OR MATERIALS AND THAT PORTION OF THE SYSTEM SHALL BE RE-TESTED. ALL SUCH REMEDIAL WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
11. UPON COMPLETION OF WORK, ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANEL BOARDS AFFECTED TO WITHIN 10% DEVIATION BETWEEN PHASES.
12. REMOVE ALL DEBRIS RESULTING FROM REMOVAL AND/OR INSTALLATION OF ELECTRICAL WORK FROM THE PREMISES REMOVAL OF DEBRIS SHALL BE COORDINATED WITH BUILDING MANAGEMENT. DISPOSAL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE BUILDING CODE AND WITH ALL STATE AND FEDERAL REGULATIONS.
13. UNLESS OTHERWISE NOTED, ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO PULL BOXES, JUNCTION BOXES, WIRING DEVICES, PANEL BOARDS, LOW VOLTAGE SYSTEMS DEVICES ETC., WHERE INDICATED ON DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION.THE CONTRACTOR SHALL LOCATE THESE ITEMS AS FIELD CONDITIONS DICTATE AND AS APPROVED BY THE ARCHITECT AND/OR ENGINEER.
14. ALL CONDUIT RUNS, WHEN SHOWN ON THE DRAWINGS, ARE SHOWN DIAGRAMMATICALLY TO OUTLINE THE GENERAL ROUTING OF MAJOR FEEDERS AND BRANCH WIRING.IT IS NOT WITHIN THE SCOPE OF THESE DRAWINGS TO SHOW ALL NECESSARY BENDS, OFFSETS, PULL BOXES, JUNCTION BOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THIS WORK TO CONFORM TO THE REQUIREMENTS OF THE ELECTRICAL CODE AND TO PRESERVE HEADROOM.
15. ADDITIONAL PULL BOXES, JUNCTION BOXES AND WIRE TROUGHS NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE REQUIREMENTS OR WHERE CALLED FOR BY FIELD CONDITIONS.PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED SPACES AND FLUSH TYPE IN FINISHED SPACES. PROVIDE COVERS FOR ALL JUNCTION BOXES, PULL BOXES AND WIRE TROUGHS. COVERS SHALL BE ACCESSIBLE.
16. CONDUIT RUNS SHALL CLEAR ALL ARCHITECTURAL FEATURES (DOORS, WINDOWS, ETC ) AND STRUCTURAL MEMBERS. CONDUIT INSTALLATION SHALL ALSO BE MADE TO AVOID INTERFERENCE WITH PIPES, DUCTS OR OTHER EQUIPMENT CORRESPONDING TO OTHER TRADES, INCLUDING BUT NOT LIMITED TO MECHANICAL, PLUMBING AND FIRE PROTECTION. ANY OF THIS ELEMENTS PREVENT THE INSTALLATION OF RACEWAY AS DELINEATED ON THE CONTRACT DOCUMENTS, DEVIATION MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION ANY VARIATION DUE TO FIELD CONDITIONS SHALL NOT REPRESENT AN ADDITIONAL COST TO OWNER.
17. ALL CONDUIT RUNS SHALL BE CONCEALED WITHIN WALLS OR CEILING EXPOSED CONDUITS AND BOXES, WHEN REQUIRED, SHALL BE PAINTED PAINTING SHALL CONSIST OF A PRIME COAT AND A FINISHED COAT COLOR AS SELECTED BY ARCHITECT OR TO MATCH SURROUNDING SURFACES. FACTORY PAINTING WILL BE ACCEPTED AS A PRIME COAT.
18. MINIMUM SIZE OF CONDUITS SHALL BE 3/4" UNLESS OTHERWISE NOTED.
19. INSTALL PULL WIRES IN EMPTY RACEWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB (90-KG) TENSILE STRENGTH. LEAVE AT LEAST 12 INCHES (300 MM) OF SLACK AT EACH END OF PULL WIRE.
20. PROVIDE PIPE SLEEVES WHERE CONDUITS ARE ROUTE THROUGH FOUNDATION WALLS,SLABS AND FIRE RATED PARTITIONS. PIPE SLEEVES SHALL BE GROUTED. SEALANT SHALL BE APPLIED AROUND THE CONDUIT IN THE SLEEVE IN ORDER TO PREVENT INGRESS OF MOISTURE. WALL AND SLAB PENETRATIONS SHALL BE COMPLETELY WATERPROOF AND/OR FIRE PROOFED.
21. ALL OPENINGS BETWEEN FLOORS, THROUGH RATED FIRE AND SMOKE WALLS, CREATED BY THE CONTRACTOR FOR CABLE OR CONDUIT PASS THROUGH SHALL BE SEALED WITH A FIRE STOPPING MATERIAL. FIRE STOPPING MATERIAL AND ITS APPLICATION SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT IS ACCEPTABLE TO THE LOCAL FIRE AND BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS WORK. ANY OPENINGS CREATED BY OR FOR THE CONTRACTOR AND LEFT UNUSED SHALL ALSO BE SEALED AS PART OF THIS WORK. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATING OF WALLS AND SLABS.
22. IN UNFINISHED SPACES OF THE BUILDING SUCH AS FAN ROOMS, PIPE SPACES, ETC., LOCATIONS OF CONDUIT AND OUTLETS ARE APPROXIMATE AND SHALL CLEAR PIPING AND ALL OTHER CONSTRUCTION. ALL THE OUTLETS MUST BE UNOBSTRUCTED AND EXTENDED AS DIRECTED TO CLEAR ANY INTERFERENCE WITH FIXTURES, PIPING EQUIPMENT ETC.
23. SUPPORT ALL THE ELECTRICAL EQUIPMENT AND CONDUIT FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. ALL ELECTRICAL EQUIPMENT AND RACEWAY SHALL BE SUSPENDED FROM SUPPLEMENTAL SLOTTED CHANNEL FRAME. ALL SUCH MOUNTS, DEVICES, FASTENERS SHALL BE OF SUFFICIENT THICKNESS TO CARRY THE LOAD SUSPENDED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY ADDITIONAL SUPPLEMENTAL STEEL REQUIRED TO SUPPORT THE EQUIPMENT OR DEVICES.
24. PROVIDE OUTLET BOXES AND ENCLOSURES APPROPRIATE FOR THE PURPOSE AT ALL LOCATIONS WHERE THE DRAWINGS REQUIRE THE INSTALLATION OF ELECTRICAL DEVICES OR ELECTRICAL EQUIPMENT.
25. ALL EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT AND RACEWAYS SHALL BE GROUNDED FOR FEEDERS AND/OR BRANCH CIRCUITS WHERE GROUNDING CONDUCTOR IS NOT PROVIDED. METAL RACEWAYS AND METAL ENCLOSURES FOR CONDUCTORS SHALL BE TIGHTLY JOINED TO CREATE A CONTINUOUS ELECTRIC CIRCUIT AND SO, ASSURE A PROPERLY GROUNDED SYSTEM FITTINGS FOR JOINTS AND TERMINATIONS SHALL BE LISTED FOR GROUNDING INSTALLATION. PROVIDE BONDING JUMPERS WITH APPROVED FITTINGS OF SIZE REQUIRED FOR EQUIPMENT GROUNDING. THE CONTRACTOR SHALL ENSURE CONTINUITY OF THE GROUNDING CIRCUIT FROM THE SUPPLYING PANEL BOARD GROUNDING BUS TO THE LOAD GROUND TERMINAL.
26. UNLESS OTHERWISE NOTED, CONDUCTORS FOR POWER AND LIGHTING CIRCUITS SHALL BE OF TYPE THHN/THWN AND MINIMUM SIZE SHALL BE #12 AWG. CONDUCTORS #10 AWG AND SMALLER SHALL BE COPPER, SOLID OR STRANDED; #8 AWG AND LARGER SHALL BE COPPER, STRANDED TYPE.
27. ALL CIRCUITS SHALL BE PROVIDED WITH DEDICATED NEUTRALS. IF CONTRACTOR ELECTS TO SHARE NEUTRALS, IT IS HIS RESPONSIBILITY TO PROVIDE A MEANS TO DISCONNECT ALL CIRCUITS SIMULTANEOUSLY. FOR EXISTING PANEL BOARDS THE CONTRACTOR SHALL UPGRADE, PROVIDE NEUTRAL BAR TERMINATION EXTENSION KITS OR REPLACE NEUTRAL TERMINATION BARS AS REQUIRED FOR THE DEDICATED NEUTRALS.
28. LOW VOLTAGE WIRING SHALL NOT BE PERMITTED IN THE SAME RACEWAY AS POWER WIRING.
29. ALL GROUND WIRES SHALL BE INSTALLED IN CONDUIT.
30. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WIRING DEVICES SUCH AS RECEPTACLES, LIGHTING SWITCHES, DIMMERS, DATA/TELEPHONE OUTLETS, ETC.
31. ELECTRICAL DRAWING INDICATE CIRCUIT NUMBERS (#) FOR RECEPTACLES, LIGHTING FIXTURES AND OTHER EQUIPMENT FEEDS. UNLESS OTHERWISE NOTED 3/4" CONDUIT TO 15A OR 20A CIRCUIT BREAKERS IN PROVIDE 2#12, 1#12G IN PANELS INDICATED. CIRCUIT NUMBERS (#) NOTED ON PLANS ARE INTENDED AS A GUIDE. FINAL NUMBERING SYSTEM TO BE NOTED ON AS-BUILD DRAWINGS AND ON TYPED PANEL BOARD DIRECTORY CARD.
32. FURNISH AND INSTALL WIRING FOR EQUIPMENT FURNISHED BY OTHERS, AS SHOWN ON ARCHITECTURAL, HVAC, PLUMBING AND/OR ELECTRICAL DRAWINGS. COORDINATE WITH OTHER TRADES FOR DETAILS OF INSTALLATION AND WIRING REQUIREMENTS. THE TERM "WIRING" AS USED HEREIN SHALL INCLUDE FURNISHING AND INSTALLING CONDUIT, WIRES, JUNCTION/OUTLET BOXES, DISCONNECTS, OVER CURRENT PROTECTION DEVICES AND FINAL CONNECTIONS. COORDINATE FINAL CONDUCTOR SIZES, QUANTITIES, VOLTAGE REQUIREMENTS, AND OVER CURRENT DEVICE AND OUTLET RATINGS WITH ACTUAL EQUIPMENT TO BE FURNISHED TO THE SITE PRIOR TO FINALIZING WIRING INSTALLATION. MINOR ADJUSTMENTS TO WIRING REQUIREMENTS NECESSARY TO ACCOMMODATE ACTUAL FURNISHED EQUIPMENT SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
33. FURNISH AND INSTALL ALL COPPER MATERIALS INCLUDING BUT NOT LIMITED TO LUGS, COPPER BUS DETAILS/LUGS KITS, BUS BAR EXTENSIONS, MULTI-TAPS, ETC REQUIRED FOR OVER SIZED FEEDERS AND/OR REQUIRED TO ACCEPT INCOMING AND OUTGOING CABLES TO COMPLETE CONTRACT WORK. ALSO PROVIDE LABOR AND MATERIAL REQUIRED TO MODIFY EXISTING OR NEW EQUIPMENT INCLUDING ENCLOSURE MODIFICATIONS. CONTRACTOR TO PROVIDE ALL REQUIRED ELECTRICAL FINAL CONNECTIONS.
34. VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL DRAWINGS OR INTERIOR DETAILS IN CENTERING OUTLETS AND LOCATING BOXES OR OUTLETS ALLOW FOR OVERHEAD PIPES, DUCTS, MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILING, ETC , AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
35. VERIFY SWITCHES, DIMMERS, RECEPTACLES AND COVER PLATES FINISHES WITH THE ARCHITECT AND/OR OWNER REPRESENTATIVE BEFORE PURCHASING AND INSTALLATION OF SUCH DEVICES.
36. WHERE MULTIPLE SWITCHES AND RECEPTACLES ARE INDICATED AT THE SAME LOCATION, THEY SHALL BE GANGED TOGETHER AND MOUNTED BEHIND A COMMON FACE PLATE UNLESS POWERED FROM AN EMERGENCY POWER SOURCE. PROVIDE SEPARATE OUTLET BOXES FOR NORMAL AND EMERGENCY CIRCUITS.
37. PROVIDE GROUND FAULT CIRCUIT INTERRUPTER FOR EACH RECEPTACLE LOCATED WITHIN 6'-0" OF WATER OR LIQUIDS AND FOR OUTDOORS RECEPTACLES WHETHER INDICATED ON DRAWINGS OR NOT.
38. MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES SHALL BE COORDINATED WITH ARCHITECT UTILIZE THE FOLLOWING MOUNTING HEIGHTS UNLESS OTHERWISE NOTED (ALL DIMENSIONS TO CENTERLINE OF BOX U.O.N.):
    A. RECEPTACLES (WALL MOUNTED) - 18" AFF
    B. RECEPTACLES (COUNTERTOPS) - NO MORE THAN 20" ABOVE THE COUNTERTOP
    C. VOICE/DATA OUTLETS - 18" AFF
    D. WALL MOUNTED TELEPHONES - 48" AFF
    E. LIGHTING SWITCHES AND CONTROLS - 48" AFF
    F. PANEL BOARDS AND CABINETS - 78" TO TOP OF ENCLOSURE
    G. MANUAL PULL STATIONS - 48" AFF
    H. FIRE ALARM AUDIO/VISUAL AND STROBE UNITS - 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER
39. ALL ELECTRICAL EQUIPMENT AND ACCESSORIES INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY CASKETED. FOR A COMPLETE RAIN TIGHT INSTALLATION ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
40. THE AREA ABOVE THE ELECTRICAL EQUIPMENT SUCH AS DISTRIBUTION BOARDS,PANEL BOARDS, TRANSFORMERS, ETC , SHALL BE DEDICATED FOR ELECTRICAL INSTALLATION AND SHALL BE CLEAR FROM WORK OF OTHER TRADES (PIPING, DUCTS, ETC).
41. FOR ALL RECESSED PANELS A TROUGH SHALL BE PROVIDED IN THE NEAREST ACCESSIBLE CEILING WITH TWO (2) SPARE 2" CONDUITS AND TWO (2) SPARE 1" CONDUITS UNLESS OTHERWISE NOTED TO BE INTERCONNECTED BETWEEN THE TROUGH AND THE RECESSED PANEL FOR FUTURE USE.
42. PROVIDE AND/OR REVISE THE PANEL DIRECTORY OF EACH AND EVERY NEW AND/OR EXISTING PANEL BOARD AFFECTED BY ELECTRICAL WORK.
43. PROVIDE BLANK COVERS PLATES OVER ALL UNUSED OPENINGS IN NEW AND/OR EXISTING PANEL BOARDS.
44. SHORT CIRCUIT RATING OF ELECTRICAL EQUIPMENT (CIRCUIT BREAKERS, FUSES, DISCONNECT SWITCHES, PANEL BOARDS, ETC ) SHALL MEET OR EXCEED THE AVAILABLE FAULT CURRENT AT THEIR POINT OF CONNECTION AS REQUIRED FOR A FULLY RATED SYSTEM.
45. PROVIDE UN-FUSED DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED ON CONSTRUCTION DOCUMENTS.
46. THE MINIMUM RATING OF DISCONNECT SWITCHES SHALL BE EQUAL TO OR GREATER THAN THE RATING OF THE PROTECTIVE DEVICES ON THE SUPPLY SIDE OF THE DISCONNECT SWITCH. MINIMUM DISCONNECT SWITCH SIZE IS 30 AMPERES.
47. ALL EQUIPMENT SHALL HAVE COPPER CURRENT CARRYING PARTS INCLUDING GROUND BUS AND TERMINALS. ALUMINUM SHALL NOT BE PERMITTED.
48. FOR CIRCUITS RATED AT 120V, 20A THAT RUN OVER 100'-0", USE NO. 10 AWG WIRE SIZE. FOR CIRCUITS RATED AT 277V,20A THAT RUN OVER 200'-0", USE NO. 10 AWG WIRE SIZE.
49. BRACH CIRCUIT CONDUCTORS SHALL BE INCREASED IN SIZE TO COMPENSATE FOR VOLTAGE DROP.
50. ARCHITECTURAL FEATURES AS WELL AS OTHER TRADES EQUIPMENT SHOWN ON ELECTRICAL DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. COORDINATE WITH OTHER TRADES TO DETERMINE THE EXACT LOCATION OF FANS, A/C UNITS, MOTORS, PUMPS, EQUIPMENT TERMINAL BOXES, AND OTHER EQUIPMENT TO BE INSTALLED BY OTHER TRADES BEFORE CONDUIT WORK IS STARTED.
51. PROVIDE 4-INCH HIGH CONCRETE HOUSING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR.
52. FOR EXACT LOCATION OF LIGHT FIXTURES, LIGHTING FIXTURE SCHEDULE AND LIGHTING SYMBOLS REFER TO ARCHITECTURAL AND/OR LIGHTING CONSULTANT DRAWINGS. INFORMATION SHOWN IN ELECTRICAL DRAWINGS IS FOR REFERENCE ONLY. FINAL LIGHTING APPROVAL BY ARCHITECT.
53. MOUNTING ACCESSORIES FOR RECESSED LIGHTING FIXTURES SHALL BE APPROPRIATE TO MEET THE REQUIREMENTS OF THE CEILING CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE SCHEDULE.
54. PENDANT MOUNTED FIXTURES IN AREAS WITH NO HUNG CEILING SHOULD BE INSTALLED AFTER DUCTWORK AND PIPING HAVE BEEN INSTALLED. COORDINATE MOUNTING HEIGHT AND LOCATION OF LIGHTING FIXTURES TO CLEAR MECHANICAL, ELECTRICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT AND PIPING.
55. CONTRACTOR TO BE RESPONSIBLE FOR ALL PENETRATIONS, CORE DRILLING SEALING, WATERPROOFING, CUTTING, PATCHING, PAINTING AND RESTORATION FOR THE COMPLETE CONTRACT WORK INDICATED. ALL RESTORATION WORK PERFORMED BY THIS CONTRACTOR SHALL RESTORE DISTURBED SURFACES TO ACCURATELY MATCH ALL SURROUNDING CONSTRUCTION USING THE SAME MATERIAL, WORKMANSHIP AND FINISH AS EXISTING SURFACES.
56. CONTRACTOR TO PROVIDE LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION AND MAINTENANCE OF TEMPORARY LIGHTING AND REQUIRED POWER SOURCES.
57. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED WHERE NECESSARY. EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN ART.S OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH THE AREAS.
58. FOR PROJECTS RATED 1,000 KVA OR LARGER, THE CONTRACTOR SHALL BE RESPONSIBLE TO CREATE AND FILE RELATED ADVISORY BOARD FILING DRAWINGS AND PAY ALL NECESSARY FEES NO CONSTRUCTION SHALL BE STARTED UNTIL AN APPROVAL HAVE BEEN GRANTED.
59. MAINTAIN CONTINUOUS SERVICE ON FEEDERS SERVING THE AREAS AFFECTED DURING ALL THE PERIOD THE AREA IS UNDER CONSTRUCTION. NO OUTAGES WILL BE PERMITTED IN THESE AREAS DUE TO THE CONSTRUCTION PHASE. ALL WORK REQUIRING TEMPORARY SHUTDOWN SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. ANY REQUEST FOR SHUTDOWNS SHOULD BE BROUGHT TO THE ATTENTION OF OWNER'S REPRESENTATIVE AND BUILDING OPERATING PERSONNEL AND IT MUST BE NOTIFIED 72 (SEVENTY-TWO) HOURS IN ADVANCE WORK SHALL NOT BE PERFORMED WITHOUT WRITTEN APPROVAL.
60. ALL WORK REQUIRING ELECTRICAL SHUTDOWN WHICH WILL AFFECT OTHER FLOORS OF THE BUILDING OR EVEN AFFECT THE NORMAL CONTINUATION OF CONSTRUCTION WORK ON THESE & OTHER FLOORS, SHALL BE DONE ON OVERTIME HOURS, AND SHALL NOT DISTURB CONTINUITY OF ELECTRICAL SERVICE TO EXISTING TENANTS ON THE AFFECTED FLOORS AND SHALL BE COORDINATED WITH THE BUILDING ENGINEER.
61. ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY THIS WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF THE ELECTRICAL SYSTEM OF THE BUILDING.
62. ALL PENETRATIONS THROUGH OR CHOPPING OF FLOOR SLAB FOR ELECTRICAL INSTALLATION SHALL BE COORDINATED WITH BUILDING MANAGER. ALL WORK SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS LOCATIONS SHALL BE LAID OUT AND CONFIRMED BY ARCHITECT PRIOR TO START OF PHYSICAL WORK.
63. BRANCH CIRCUITS SERVING DIMMING BALLASTS SHALL HAVE A DEDICATED NEUTRAL; SHARING OF NEUTRALS SHALL NOT BE PERMITTED PROVIDE NEUTRAL BARS WITH SUFFICIENT TERMINALS AS REQUIRED.
64. WHENEVER ELECTRONIC OR ADJUSTABLE CIRCUIT BREAKERS ARE PROVIDED, THE CONTRACTOR SHALL SUBCONTRACT THE SERVICES OF A QUALIFIED SWITCHBOARD MANUFACTURER TO CALCULATE THE REQUIRED TRIP COORDINATION SETTINGS INCLUDING BUT NOT LIMITED TO, THE LONG DELAY, SHORT DELAY, GROUND FAULT, PICKUP, TRIP TIMES AND SHORT CIRCUIT CURRENT, ETC. THE CONTRACTOR SHALL ALSO INCLUDE THE SERVICES OF THE MANUFACTURER'S FIELD SERVICE TECHNICIAN TO INSTALL, PROGRAM AND ADJUST THE CIRCUIT BREAKERS PROVIDE ALL NECESSARY JUMPER CONNECTIONS, CONTROL WIRES AND MODIFICATIONS.
65. WHENEVER EXCAVATION, CORE DRILLING OR CUTTING OF SLABS, CONCRETE OR PAVEMENT ARE PERFORMED, THE CONTRACTOR SHALL HIRE AN EXPERT TO PERFORM SUBSURFACE SCANS TO IDENTIFY AND FLAG UTILITIES, REBAR, ETC SO THEY ARE " NOT DAMAGED. ANY DEVIATIONS FROM THE PENETRATIONS INDICATED ON THE CONTRACT DOCUMENTS MUST BE APPROVED BY THE EOR AND/OR OWNER.
66. CONTRACTOR SHALL PREPARE FIELD ERECTION DRAWINGS AS REQUIRED FOR THE USE OF ITS MECHANICS TO INSURE PROPER INSTALLATION.
67. CONTRACTOR SHALL GUARANTEE ALL WORK FOR WHICH MATERIALS ARE FURNISHED, FABRICATED OR FIELD ERECTED, ALL FACTORY ASSEMBLED EQUIPMENT FOR WHICH NO SPECIFIC MANUFACTURER'S GUARANTEE IS FURNISHED, AND ALL WORK IN CONNECTION WITH INSTALLING MANUFACTURER'S GUARANTEED EQUIPMENT. THIS PERSONAL GUARANTEE SHALL EXIST FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AND SHALL APPLY TO DEFECTS IN MATERIAL AND TO DEFECTIVE WORKMANSHIP OF ANY KIND.
68. CONTRACTOR TO STORE MATERIALS AND EQUIPMENT DURING THE PROGRESS OF THE WORK AT PROPER STORAGE PLACE.
69. BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIAL AND EQUIPMENT EMPLOYED IN THE ELECTRICAL INSTALLATION UNTIL FINAL ACCEPTANCE BY THE OWNER PROTECT SAME FROM ANY CAUSE WHATSOEVER.
70. BE RESPONSIBLE FOR THE REPLACEMENT OF ALL DAMAGED OR DEFECTIVE WORK, MATERIALS OR EQUIPMENT.
71. DO NOT INSTALL SENSITIVE OR DELICATE EQUIPMENT UNTIL MAJOR CONSTRUCTION WORK IS COMPLETED. OBSERVE AND CONFORM TO APPLICABLE SAFETY REGULATIONS, INCLUDING THOSE REQUIRED BY THE OWNER'S REPRESENTATIVE.
72. ERECT AND MAINTAIN SUITABLE BARRIERS, PROTECTIVE DEVICES, LIGHTS AND WARNING SIGNS FOR THE PROTECTION OF OCCUPANTS, TRANSIENTS AND WORKMEN FROM DANGER DUE TO WORK PERFORMED BY THE ELECTRICAL CONTRACTOR.
73. MAKE GOOD ANY DAMAGE TO THE WORK CAUSED BY FLOODS, STORMS, ACCIDENTS, ACTS OF GOD, ACTS OF NEGLIGENCE, STRIKES, VIOLENCE OR THEFT UP TO THE TIME OF FINAL ACCEPTANCE BY THE OWNER BE RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM NEGLECT OR ANY OTHER CAUSES ON THE PART OF THE CONTRACTOR.
74. DO NOT LEAVE ANY ELECTRICAL WORK IN A HAZARDOUS CONDITION, EVEN TEMPORARILY ERECT, MAINTAIN AND FINALLY REMOVE ALL SCAFFOLDS, STAGING, FORMS, PLATFORMS AND LADDERS REQUIRED FOR THE ELECTRICAL INSTALLATION.
75. DO NOT INSTALL WORK FOR WHICH AN EXTRA CHARGE IS TO BE MADE WITHOUT WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE AND THE OWNER. A WRITTEN REQUEST FOR EXTRA WORK SHALL STATE THE NATURE OF THE WORK, BY WHOM REQUESTED, AND THE PRICE TO BE CHARGED.

## DRAWING LIST



| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

GENERAL NOTES

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/11/2023


EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
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| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E001 | 22-4006 |

## WIRING DEVICE NOTES

WIRING DEVICES SHALL BE SPECIFICATION GRADE, IVORY WITH NYLON FACE AS FOLLOWS:

| | HUBBELL | P&S | ARROW HART |
|---|---|---|---|
| 20 AMP DUPLEX | 5352I | 5352I | 5362I |
| GROUND FAULT RECEPTACLE SINGLE RECEPTACLE, 20A, 250V | GF5262I | 1591SIWL | GF8200I |
| SINGLE POLE SWITCH | 1221I | 20AC1I | 1991I |
| THREE WAY SWITCH | 20AC3I | 1223I | 1993I |

COVER PLATES ON WALLS SHALL BE RIGID NON-METALLIC, SMOOTH FINISH, IVORY IN COLOR, AND SHALL BE STANDARD SIZE OVERSIZE PLATES ARE NOT ACCEPTABLE

ENGRAVED PLATES SHALL HAVE 3/16" LETTERS.
PHOTOELECTRIC CONTROL: TORK #2101, FACING NORTH

FLOOR BOXES: HUBBELL B-2436,B-4233, B-4333;STEEL CITY 640 SERIES

## GENERAL ELECTRICAL NOTES

1. INSTALL LIGHT CONTROL ON STRIKE SIDE OF DOOR (UNLESS OTHERWISE NOTED).
2. COMBINE NO MORE THAN 6 CURRENT CARRYING CONDUCTORS IN ANY SINGLE HOME RUN FROM A PANEL.
3. PROVIDE CIRCUIT BREAKER FILLER, BLANK COVER PLATE, FOR ALL THE EMPTY SPACES WITHIN THE PANELBOARD.
4. PROVIDE BLANK COVER PLATE FOR ALL THE UNUSED JUNCTION OR DEVICE BOXES.
5. EACH SINGLE PHASE BRANCH CIRCUIT SHALL BE PROVIDED WITH PHASE, DEDICATED NEUTRAL AND GROUND CONDUCTOR.
6. ALL MOUNTING HEIGHTS INDICATED ARE TO BE CENTERLINE OF THE DEVICE BOX UNLESS OTHERWISE INDICATED.
7. COORDINATE WITH ARCHITECTURAL ELEVATION FOR EXACT MOUNTING HEIGHT.
8. ADJUST CIRCUITING AS NECESSARY TO BALANCE PANELBOARD CONNECTED LOADS WITHIN ± %10.
9. FINAL CONNECTION TO ALL MOTORS OR VIBRATING EQUIPMENT SHALL BE WITH FLEXIBLE CONDUIT.
10. CONSULT LIGHTING FIXTURE TYPE WITH ARCHITECT OR THE INTERIOR DESIGNER BEFORE ANY INSTALLATION.
11. ALL SWITCHING TO BE CONVENTIONAL UNLESS OTHERWISE IS NOTED.
12. ANY EXTERIOR OUTLET LOCATION TO BE CONFIRMED WITH ARCHITECT OR LANDSCAPE CONTRACTOR.
13. DIMENSIONS ARE TAKEN FROM THE CENTER OF THE OUTLET UNLESS OTHERWISE IS NOTED.
14. CONTRACTOR TO PROVIDE INDIVIDUAL METERING FOR EACH DWELLING UNITS PER 2015 IECC ART. 405.7.
15. CONTRACTOR TO COORDINATE WITH ARCHITECT TO PROVIDE CLOSED (LOCKABLE DOOR) UTILITY ROOM FOR ELECTRICAL PANELS PER NEC 2017 ART. 240.24(B). ALSO VERIFY REQUIRED ELECTRICAL CLEARANCE FOR MDP PER NEC 2017 ART. 110.26.
16. PROVIDE ALL DEVICES MOUNTED ABOVE COUNTERS SHALL BE AT 44" A.F.F TO CENTER-LINE OF DEVICE (TYPICAL) OR 42" A.F.F TO CENTER-LINE OF DEVICE (ADA UNITS), U.N.O., ALL WALL MOUNTED DEVICES SHALL BE MAXIMUM OF 48" AND MINIMUM OF 18" A.F.F., U.N.O..
17. PROVIDE FIRE CAULKING AT TOP AND BOTTOM PLATES.
18. DO NOT PENETRATE ANY 2-HOUR PARTITION WALLS BETWEEN BUILDINGS, ARCHITECT T0 PR0VIDE '2' FUR-OUT FOR ELECTRICAL WIRING INSIDE UNITS.
19. WHERE A FIRE ALARM SYSTEM IS INSTALLED, ACTUATION OF THE AUTOMATIC SPRINKLER SYSTEM SHALL ACTUATE THE BUILDING FIRE ALARM SYSTEM.
20. LIGHTING FIXTURE LAYOUTS INDICATED ON PLAN ARE FOR CONVENIENCE ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT THE LIGHTING FIXTURE LAYOUT AND INSTALL ACCORDINGLY.
21. GENERAL CONTRACTOR SHALL COORDINATE CEILING INSTALLATION AS REQUIRED TO ALLOW ELECTRICAL CONTRACTOR TO INSTALL LIGHTING FIXTURES AS INDICATED.
22. ALL DOWN LIGHTS SHALL BE ALIGNED IN CEILING UNLESS OTHERWISE NOTED.
23. EXTEND TO DUAL LEVEL LIGHTING SWITCHES AT SWITCH BANK.
24. PROVIDE BLDG MOUNTED PHOTOCELL TO CONTROL FIXTURE AT ENTRANCE.
25. PROVIDE AFCI BREAKERS ON BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES PER 2017 NEC ART. 210-12.
26. BATHROOMS TO BE CIRCUITED INDEPENDENTLY OF REST OF UNIT PER 2017 NEC ART. 210-11.
27. PROVIDE ARC-FAULT CIRCUIT INTERRUPTING (AFCI) BREAKER TO ALL BRANCH CIRCUIT SERVING ALL OUTLETS AND DEVICES AS PER NEC 2017 ART. 210.52(A).
28. ALL SMOKE DETECTORS ARE HARD WIRED,INTERCONNECTED AND BATTERY BACKED.
29. AT LEAST ONE GFCI/WP RECEPTACLE IS REQUIRED AT THE FRONT AND BACK 1 FEET ABOVE OF THE HOUSE. SUCH RECEPTACLES CANNOT BE MORE THAN $6\frac{1}{2}'$ THE GROUND PER NEC 2017 ART. 210.52E(1).
30. ALL UNITS TO HAVE CONTROL OF OWN MCB.
31. BALCONIES, DECKS AND PORCHES THAT ARE ACCESSIBLE FROM INSIDE SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET INSTALLED PER NEC 2017 ART. 210.52E(3).
32. ALL ELECTRICAL WIRING, BOXES, CONDUITS AND RACEWAYS PENETRATING FIRE-RESISTANCE RATED MEMBRANES MUST BE PROPERLY SEALED TO ASSURE THAT THE REQUIRED FIRE-RESISTANCE RATING IS NOT REDUCED. [2017 DCBC 703.2].
33. ALL LIGHTING THROUGH OUT PROJECT ARE OF HIGH EFFICIENCY LIGHTING TO INCLUDE EXTERIOR LIGHTING.
34. ALL EXTERIOR OUTLETS AND RECEPTACLES ARE WEATHER RESISTANT PER NEC 2017 ART. 406.9(A) & (B). TYPICAL.
35. EACH UNIT SHALL BE EQUIPPED WITH OCCUPANCY SENSOR SWITCH(S) TO MEET DCRA GREEN CODE REGULATIONS (APPLICABLE IN MULTI-FAMILY DWELLING).
36. ALL TELEPHONE LINES ARE TO BE CONCEALED AND OUTLETS RECESSED. ALL TELEPHONE SERVICE TO BE CAPABLE OF CARRYING LINES IN EACH FLOOR AS DETERMINED BY THE ARCHITECT OR OWNER.
37. ALL OUTLETS PLATES ARE TO BE STAINLESS STEEL OR AS DETERMINED BY THE ARCHITECT.
38. ALL SWITCHES DIMMERS ARE TO BE TOGGLE TYPE. ALL OUTLETS ARE TO BE RECESSED. ALL WIRING IS TO BE CONCEALED. ALL SMOKE DETECTORS TO BE NEW HARDWIRED.
39. VERIFY FIXTURE AND OUTLET LOCATIONS WITH OWNER PRIOR TO RUNNING ELECTRICAL FEEDS.
40. ALL EMERGENCY WHITE LIGHTS/BATTERY PACKS ARE TO BE FED BY EMERGENCY PANEL.
41. FLEXIBLE CABLE SHOULD BE USED FOR THE CONNECTION OF POWER CIRCUIT OF ELEVATOR.
42. AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL LIGHTING IN ALL AREAS OF THE BUILDING MEETING ART. C405.2.2.1 OF ADOPTED IECC.
43. EACH AREA ENCLOSED BY WALLS OR FLOOR-TO-CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS OR BE A REMOTE SWITCH THAT IDENTIFIES THE LIGHTS SERVED AND INDICATES THEIR STATUS.
44. AREA WITHIN THE SIDE LIGHTED DAYLIGHT ZONES HAVE DAY LIGHTING CONTROLS.
45. FLUORESCENT LUMINARIES EQUIPPED WITH ONE, THREE OR ODD-NUMBERED LAMP CONFIGURATIONS, THAT ARE RECESS-MOUNTED WITHIN 10 FEET (3048 MM) CENTER-TO-CENTER OF EACH OTHER AND PENDANT- OR SURFACE-MOUNTED WITHIN 1 FOOT (305 MM) EDGE-TO-EDGE OF EACH OTHER SHALL BE TANDEM WIRED.

## GENERAL LIGHTING COORDINATION NOTES:

1. REFER TO SCHEDULES, LEGENDS AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
2. REFER TO LIGHTING PLANS FOR LIGHT FIXTURE AND LIGHT SWITCH LOCATIONS.
3. PAINT EXISTING AND NEW DRYWALL CEILING, UNO.
4. SWITCH HEIGHT TO BE 38" AFF, UNO. WHEN SWITCHES AND DIMMERS ARE ADJACENT, ALIGN THE HORIZONTAL CENTERLINES. PROVIDE 1" BETWEEN EACH DEVICE FACE PLATE.
5. EXISTING LIFE SAFETY DEVICES TO REMAIN DURING CONSTRUCTION.
6. DIMENSIONS ARE INDICATED FROM FACE OF SCHEDULED EXISTING PARTITION TO CENTER OF LIGHT FIXTURE.
7. LIGHTS, FIXTURES, EXIT SIGNS AND OTHER DEVICES SHOWN FOR FIXTURE LOCATION AND TYPE ONLY.
8. GYP BOARD IN THE BATHROOM CEILING TO BE MOISTURE RESISTANT. REPAIR DRYWALL CEILING AS NECESSARY IN LOCATIONS OF LIGHT FIXTURE DEMOLITION AND INSTALLATION.
9. FOR ALL LIGHT FIXTURES, REFER TO MANUFACTURER'S RECOMMENDATION FOR FRAMING AND SUPPORT OF CEILING SYSTEM.
10. LIGHTING FIXTURE LOCATIONS, AS SHOWN ON LIGHTING PLANS, SHALL TAKE PRECEDENCE OVER ALL OTHER SYSTEMS. OBTAIN WRITTEN APPROVAL FROM ARCHITECT PRIOR TO EXECUTING ANY CHANGES IN LOCATION.
11. CONFIRM THAT ALL FIXTURES ARE U.L. OR E.T.L. LISTED AS A SYSTEM AND COMPLY WITH ALL NATIONAL, STATE, AND LOCAL CODES.
12. CONFIRM THE FINAL CEILING MATERIAL AND INSTALLATION IN ALL LOCATIONS AND PROVIDE THE NECESSARY TRIMS, HANGERS AND HARDWARE AS REQUIRED.
13. PROVIDE SELF-FLANGED, OVERLAP TRIMS OF THE SAME MATERIAL AND FINISH AS THE REFLECTOR FOR ALL RECESSED FIXTURES.
14. ASSURE THAT ALL OPEN REFLECTOR AND ALZAK CONE APERTURE TYPE FIXTURES MATCH IN COLOR AND APPEARANCE REGARDLESS OF TYPES AND SOURCE.
15. ASSURE THAT ALL OPEN REFLECTOR AND ALZAK CONE APERTURE TYPE FIXTURES ARE FREE OF SCRATCHES, DENTS, DUST, FINGERPRINTS, ETC., AT CLOSE OF JOB.
16. ALL INTEGRAL BALLAST AND/OR TRANSFORMER TYPE FIXTURES HAVE BEEN SPECIFIED WITH 120-VOLT PRIMARY. CONFIRM ACTUAL VOLTAGE REQUIREMENTS AND SUPPLY.
17. CONFIRM ALL FINISHES NOT SPECIFIED WITH ARCHITECT PRIOR TO ORDERING.
18. CONSTRUCT ALL ARCHITECTURAL COVE TYPE FIXTURES AS DETAILED AND DIMENSIONED. OBTAIN WRITTEN APPROVAL FROM ARCHITECT PRIOR TO UNDERTAKING ANY CHANGES TO DIMENSIONS OR CONFIGURATION.
19. CONFIRM WITH ARCHITECT THE LOCATION, PENDANT LENGTH, AND EXACT FINAL A.F.F. MOUNTING HEIGHT FOR ALL SUSPENDED FIXTURE TYPES.
20. CONFIRM AND SUPPLY THE EXACT TYPE, SIZE AND QUANTITY OF ALL LAMPS REQUIRED FOR EACH FIXTURE AND TYPE.
21. AT CLOSE OF JOB, RE-LAMP ALL FIXTURES WITH NEW LAMPS AND PROVIDE OWNER WITH 2% SPARE (NEW) LAMPS OF ALL LAMP TYPES.
22. PROVIDE 3000 KELVIN LAMPS FOR ALL FLUORESCENT FIXTURES.
23. SIZE ALL TRANSFORMERS PER NATIONAL ELECTRIC CODES.
24. FOR LIGHT SWITCHING AND LIGHT SWITCH LOCATIONS REFER TO ARCHITECTURAL DRAWINGS. COORDINATE ALL SWITCHES WITH MILLWORK/CABINETS.
25. SUBMIT PRODUCT DATA FOR ARCHITECT'S APPROVAL.
26. GANG ALL ADJACENT SWITCHES UNDER ONE COVER PLATE.
27. ALL DEVICE PLATES TO BE WHITE.
28. ALL SWITCHES TO BE DECORATED BY LEVITON.
29. ALL LIGHTING FIXTURES TO BE APPROVED BY THE ARCH./ OWNER PRIOR TO ORDERING AND INSTALLING.
30. ARCHITECT TO SELECT COLOR OF LIGHTING FIXTURES.
31. REFER TO ARCHITECTURAL REFLECTED CEILING AND ELEVATION PLANS FOR EXACT LOCATION AND MONITORING HEIGHTS.
32. A MINIMUM OF 85% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS OR A MINIMUM OF 85% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICIENCY LAMPS.
33. EXTERIOR LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 409.2 FOR THE EXTERIOR LIGHTING ZONES(LZ) APPROPRIATE TO THE BUILDING SITE.
34. STRAIGHT, DOUBLE-ENDED FLUORESCENT LAMPS LESS THAN 6 FEET IN NOMINAL LENGTH AND WITH BI-PIN BASES SHALL CONTAIN NOT MORE THAN 5 MILLIGRAMS OF MERCURY PER LAMP.
35. INTERNALLY ILLUMINATED EXIT SIGNS SHALL NOT EXCEED 5 WATTS PER SIDE.
36. IC-RATED RECESSED LIGHTING FIXTURES SEALED AT HOUSING/INTERIOR FINISH AND LABELED TO INDICATE EQUAL OR LESS THAN 2.0 CFM LEAKAGE AT 75 PA.
37. ALL LIGHTING SHALL BE AUTOMATICALLY SHUT OFF WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE, EXCEPT FOR RESTROOMS, WHICH SHALL BE SET TO A MAXIMUM OF 30 MINUTES FOR COMMERCIAL AREA.

## GENERAL POWER COORDINATION NOTES

1. SEE ARCHITECTURAL DRAWING FOR LOCATION OF POWER AND COMMUNICATION OUTLETS.
2. REFER TO POWER AND COMMUNICATION LEGEND FOR ADDITIONAL INFORMATION.
3. DIMENSIONS AND ALIGNMENT INDICATORS FROM OUTLET LOCATIONS ARE INDICATED FROM FACE OF SCHEDULED/EXISTING PARTITION TO CENTER OF DEVICE OUTLET GROUPING.
4. WHEREVER POSSIBLE, OUTLETS SHALL BE GANGED TO REQUIRE A SINGLE PLATE.
5. VERIFY MILLWORK ELEVATIONS FOR PROPER COORDINATION OF NEW WORK.
6. COORDINATE LOCATIONS OF RECEPTACLES AND SWITCHES MOUNTED ON MILLWORK/BACKSLASH MILLWORK/CABINET SUPPLIER. POSITION JUNCTION BOXES TO FINISH FLUSH WITH MILLWORK/BACKSLASH FACE.
7. MOUNT ALL NEW OUTLETS AT +18" A.F.F. ON CENTER, UNO.
8. OUTLETS ABOVE COUNTERTOPS TO BE MOUNTED HORIZONTALLY, 6" ABOVE COUNTERTOP O.C.
9. OUTLETS LOCATED ADJACENT TO SINKS AND IN BATHROOM TO BE GROUND FAULT INTERRUPT PROTECTED.
10. ITEMS INDICATED AS EXISTING WILL BE TERMED "EXISTING" OR "E", UNO.
11. ALL ELECTRICAL DEVICES SUCH AS OUTLETS & SWITCHES SHALL BE DECORATED BY LEVITON.
12. PROVIDE TAMPER RESISTANCE RECEPTACLE AS PER NEC 2017 ART. 406.12(A) AND ART. 210.52.

## ABBREVIATIONS

| | |
|---|---|
| D/W | DISHWASHER |
| WM | WASHING MACHINE |
| WP | WEATHER PROTECTED |
| GFI | GROUND FAULT INTERRUPTING |
| CONN. | CONNECTION |
| PNL | PANEL |
| AFF | ABOVE FINISHED FLOOR |
| EMT | ELECTRICAL METALLIC TUBING |
| NEC | NATIONAL ELECTRICAL CODE |
| NEMA | NATIONAL ELECTRICAL MFG ASSOC. |
| NTS | NOT TO SCALE |
| C. | CONDUIT |

| | |
|---|---|
| VS | VACANCY SENSOR SWITCH |
| $ | 1 WAY SWITCH |
| $3 | 2 WAY SWITCH |
| $MS | MOTION SENSOR WALL SWITCH |
| $4 | 3 WAY SWITCH |
| | DUPLEX WALL OUTLET |
| | SINGLE RECEPTACLE OUTLET |
| | QUAHDRUPLEX WALL OUTLET |
| | 240V OUTLET |
| | DUAL DATA AND TELEPHONE,TV WALL OUTLET |
| 110V. SD CM | CO AND SMOKE COMBINATION DETECTOR |
| | EXHAUST FAN |
| | ELECTRIC MOTOR |
| | SURFACE TYPE PANEL BOARD |
| M Ⓜ | ELECTRIC METER |
| F | HORN |
| | SPEAKER/HORN WITH STROBE LIGHT |
| | WASTE DISPOSAL OUTLET |
| | TV,DATA,VOICE AND OUTLET |
| GFI | GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE |
| | DISCONNECTING SWITCH |
| | CONTINUITY LINE |
| | SWITCHING LINE |
| | DATA,VOICE AND OUTLET |
| OS | OCCUPANCY SENSOR SWITCH |

FIXTURE SUBSCRIPT LEGEND:
GFI GROUND FAULT
WP WEATHER PROOF

## EQUIPMENT LEGENDS

SCALE: NTS

| SYMBOL | VOLTAGE | LAMP | MOUNTING | REMARKS |
|---|---|---|---|---|
| | 120V | LED | CEILING HANGING | HANGING STRIP LIGHT |
| | 120V | LED | CEILING | EXHAUST FAN AND LIGHT COMBO |
| | 120V | LED | WALL/SURFACE | COSMO WALL SCONCE (PHOTO SENSOR AND ASTRONOMICAL TIME CLOCK TYPE) |
| | 120V | LED | WALL/SURFACE | 2FT VANITY LIGHT FIXTURE/BATHROOM WET ZONE LIGHT |
| EXIT EX1 | 120V/9.6V | LED | CEILING/SURFACE | EMERGENCY EXIT LED LIGHT c/w BATTERY PACK |
| | 120V | LED | CEILING/RECESSED | PANEL LIGHT (2'*2') |
| | 120V | LED | WALL | EMERGENCY LIGHT |

## LIGHTING LEGENDS

SCALE: NTS

**2018 APPENDIX B**
**BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**
**ELECTRICAL DESIGN**
**(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

**ELECTRICAL SUMMARY**

**ELECTRICAL SYSTEM AND EQUIPMENT**

**Method of Compliance:** Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☒ Performance ☐ Prescriptive

**Lighting schedule** (each fixture type)
lamp type required in fixture: STRIP LIGHT
number of lamps in fixture: SINGLE LAMP IN ONE FIXTURE
ballast type used in the fixture: OUTDOOR SCONCE FLOOD WALL LIGHT
number of ballasts in fixture: ONE BALLAST IN ONE FIXTURE
total wattage per fixture: 90 W PER FIXTURE
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

**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

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

ELECTRICAL NOTES AND LEGENDS

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA

08/11/2023

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| | |
|---|---|
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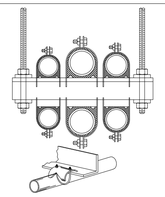
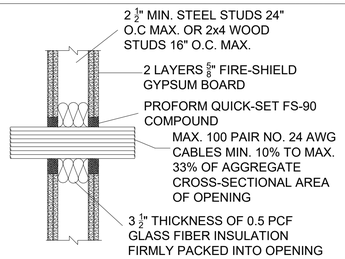
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E002 | 22-4006 |

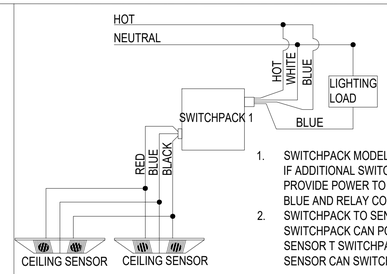


NOTES:
1. USE HEX NUT COMBINATION FOR VERTICAL FIELD ADJUSTMENT, USE CLAMPS FOR HORIZONTAL FIELD ADJUSTMENT
2. PROVIDE SUPPORTS AT A 10' MAXIMUM SEPARATION

1 CONDUIT SUPPORT DETAIL N.T.S

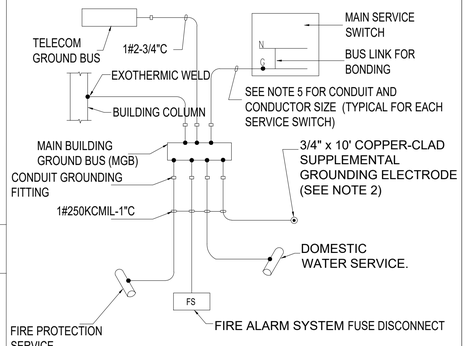



2 CABLE PENETRATION THROUGH WALL N.T.S

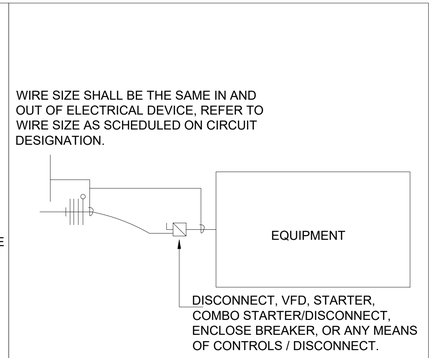



1. SWITCHPACK MODEL IS RATED FOR A 20 AMP LOAD IF ADDITIONAL SWITCHPACKS ARE USED ONLY TO PROVIDE POWER TO SENSORS, CAP OFF THEIR BLUE AND RELAY CONTROL LEADS
2. SWITCHPACK TO SENSOR RATION=1:5 (ONE SWITCHPACK CAN POWER UP TO 5 SENSORS) SENSOR T SWITCHPACK RATION= 1:10 (ONE SENSOR CAN SWITCH UP TO 10 SWITCHPACKS

3 TYPICAL VACANCY SENSOR DETAIL N.T.S

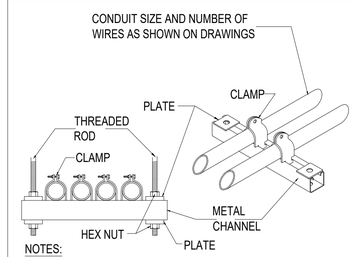



4 ELECTRIC SERVICE GROUNDING SCHEMATIC N.T.S



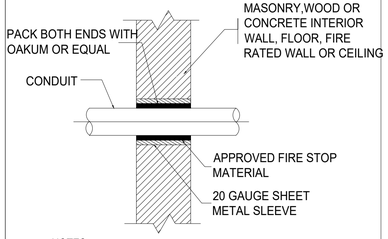

NOTE:
1. FOR MECHANICAL TERMINAL UNITS, REFER TO MECHANICAL EQUIPMENT SCHEDULE

5 EQUIPMENT CIRCUIT DETAIL N.T.S



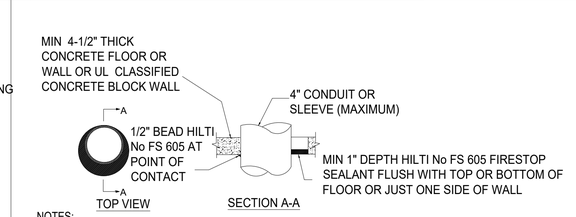

NOTES:
1. USE HEX NUT COMBINATION FOR VERTICAL FIELD ADJUSTMENT, USE CLAMPS FOR HORIZONTAL FIELD ADJUSTMENT
2. PROVIDE SUPPORTS AT A 10' MAXIMUM SEPARATION

6 CONDUIT SUPPORT DETAIL N.T.S



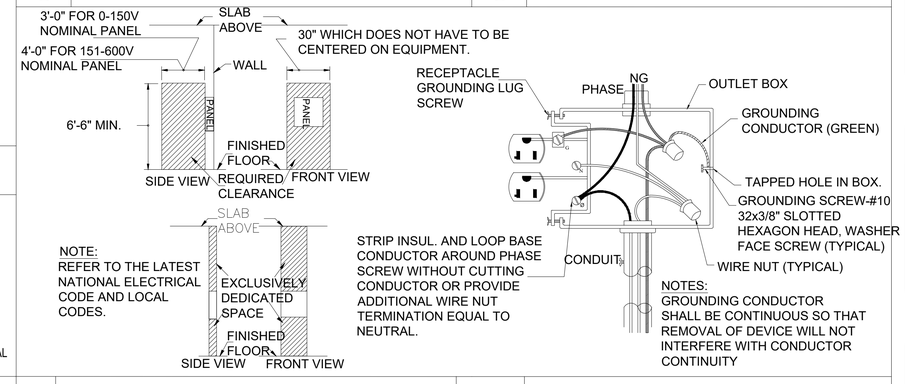

NOTES:
1. WHERE CONDUIT PASS THRU FOUNDATION WALLS, OR FLOOR SLABS USE PIPE SLEEVES

7 CONDUIT PENETRATION THROUGH INTERIOR WALL/FLOOR/CEILING/FIRE RATED WALL N.T.S



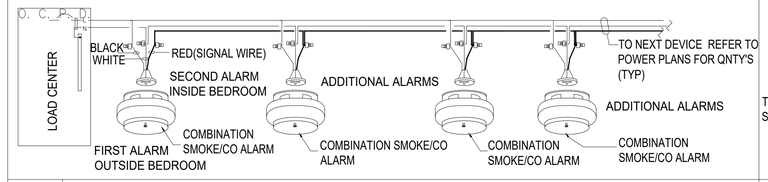

NOTES:
1. CONDUIT MAY BE CENTERED OR OFFSET IN HOLE MAXIMUM DIAMETER OF HOLE OPENING IS 14 INCHES
2. TEMPORARY FORMS MAY BE REQUIRED TO SUPPORT THE FIRE STOP SEALANT WHILE IT CURES
3. FOR CONDUIT SLEEVE INSTALATIONS PROVIDE AROUND CONDUCTORS WITHIN SLEEVE

8 DETAIL OF CONDUIT THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL N.T.S

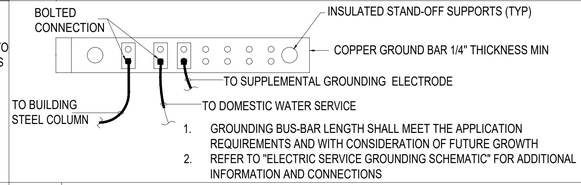



11 TYP. PANEL BOARD REQUIRED CLEARANCE N.T.S

12 TYPICAL RECEPTACLE GROUNDING N.T.S

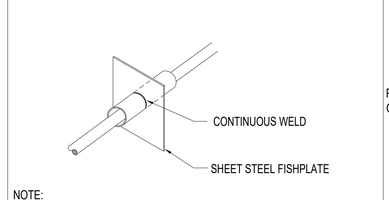



9 DWELLING UNIT COMBINATION SMOKE CARBON MONOXIDE ALARM WIRING DETAIL N.T.S



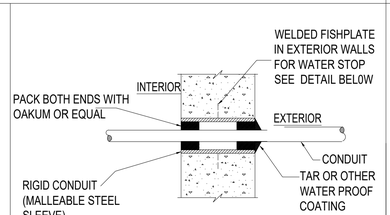

1. GROUNDING BUS-BAR LENGTH SHALL MEET THE APPLICATION REQUIREMENTS AND WITH CONSIDERATION OF FUTURE GROWTH
2. REFER TO "ELECTRIC SERVICE GROUNDING SCHEMATIC" FOR ADDITIONAL INFORMATION AND CONNECTIONS

10 MAIN GROUNDING BUS-BAR DETAIL (MGB) (MAIN ELECTRICAL ROOM) N.T.S



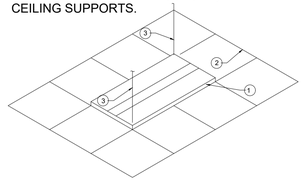

NOTE:
DETAIL IS APPLICABLE TO INTERIOR FLOOR/WALL PENETRATIONS WITHOUT FISHPLATE, HOWEVER APPROVED FIRESTOP COMPOUND IS TO BE UTILIZED IN LIEU OF OAKUM

13 WATER STOP DETAIL N.T.S

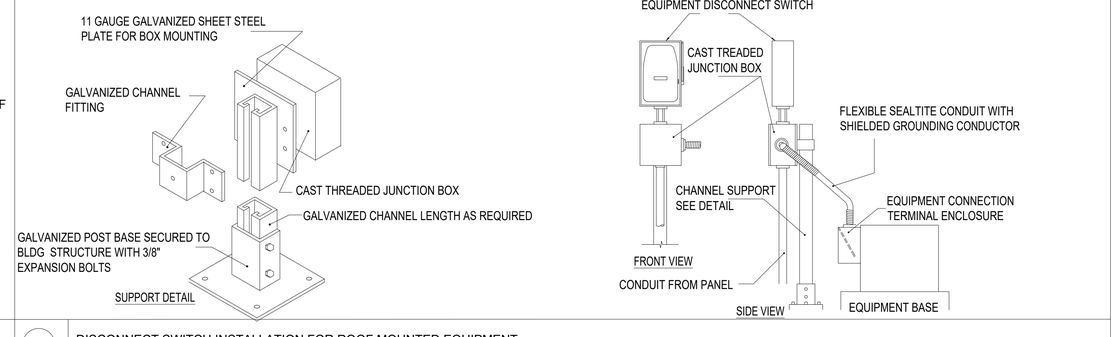



14 CONDUIT PENETRATION THROUGH EXTERIOR FIRE RATED WALL WALL SECTION N.T.S

KEYED NOTES
① 2'x 4' LAY-IN LED/FLUORESCENT FIXTURE
② SUSPENDED CEILING
③ TIE WIRE, CONNECT TO ALL FOUR CORNERS OF FIXTURE TO TOP OF STRUCTURE, INDEPENDENT OF CEILING SUPPORTS.




15 TYPICAL LAY-IN FIXTURE SUPPORT N.T.S




16 DISCONNECT SWITCH INSTALLATION FOR ROOF MOUNTED EQUIPMENT N.T.S

NOTE: ABOVE DETAILS ARE PROVIDED FOR REFERENCE AND USE AS APPLICABLE.

REVISIONS

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 06/02/2023 | FOR REVIEW |

TYPICAL DETAILS

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/11/2023

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| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
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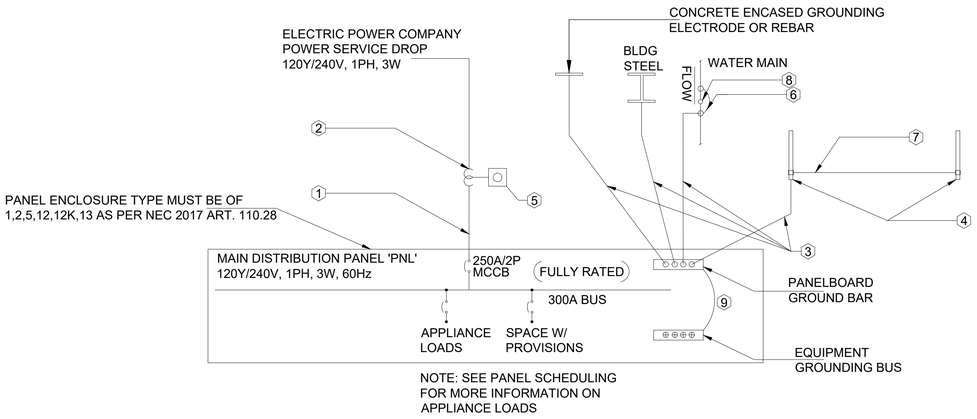
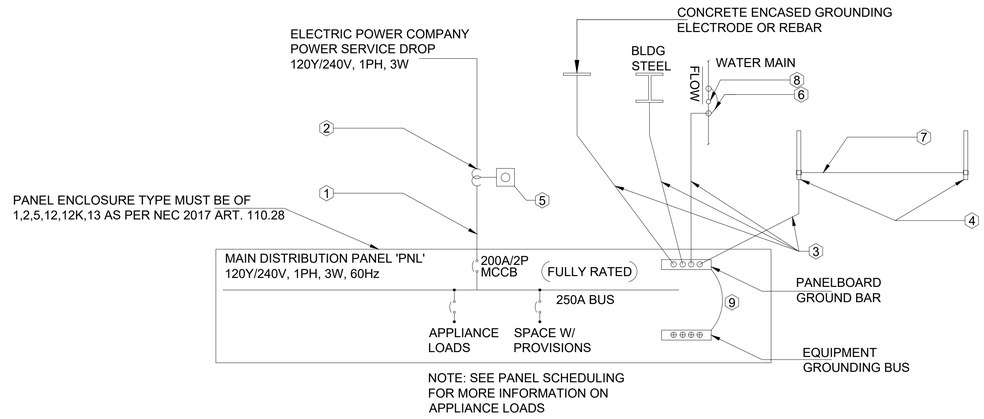



## ELECTRICAL SLD - PANEL A

SCALE: NTS




## ELECTRICAL SLD - PANEL B

SCALE: NTS

### KEY NOTES:

1. (1) RUN 2#4/0 , 1#4/0 (N) & 1#4 CU GROUND IN (1) 2 1/2" PVC-40 CONDUIT UNDERGROUND, AND (1) 2 1/2" RGS CONDUIT (WHERE EXPOSED. ALL CONDUCTORS TO HAVE TYPE (THHN/THWN-2) 90˚ C INSULATION
2. ELECTRIC POWER COMPANY CURRENT TRANSFORMER(S)
3. #4 AWG (CU) GROUNDING ELECTRODE CONDUCTOR
4. GROUND RODS: 3/4" Ø x 10'-0"L COPPER CLAD STEEL w/ HIGH-STRENGTH STEEL CORE & ELECTROLYTIC-FRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE
5. ELECTRIC POWER COMPANY METER
6. #4 AWG JUMPER
7. #4 AWG GROUNDING ELECTRODE CONDUCTOR NO SPLICES FROM PANEL TO LAST ROD
8. WATER METER

### KEY NOTES:

1. (1) RUN 2#3/0 , 1#3/0 (N) & 1#6 CU GROUND IN (1) 2" PVC-40 CONDUIT UNDERGROUND, AND (1) 2" RGS CONDUIT (WHERE EXPOSED. ALL CONDUCTORS TO HAVE TYPE (THHN/THWN-2) 90˚ C INSULATION
2. ELECTRIC POWER COMPANY CURRENT TRANSFORMER(S)
3. #6 AWG (CU) GROUNDING ELECTRODE CONDUCTOR
4. GROUND RODS: 3/4" Ø x 10'-0"L COPPER CLAD STEEL w/ HIGH-STRENGTH STEEL CORE & ELECTROLYTIC-FRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE
5. ELECTRIC POWER COMPANY METER
6. #6 AWG JUMPER
7. #6 AWG GROUNDING ELECTRODE CONDUCTOR NO SPLICES FROM PANEL TO LAST ROD
8. WATER METER

**PANEL SCHEDULE "PANEL A"**

| | | | | 250A PANEL 1 PHASE 3 WIRE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOAD DESCRIPTION | POLES /AMPS | Wire | LOAD, VA | CIRCUIT # | PHASE A | PHASE B | CIRCUIT # | LOAD, VA | Wire | POLES /AMPS | LOAD DESCRIPTION |
| LIGHTS | 1/20 | #12 | 2070 | 1 | 2970 | | 2 | 900 | #12 | 1/20 | OBSERVATION RECEPTACLE |
| GENERAL RECEPTACLE | 1/20 | #12 | 1440 | 3 | | 2160 | 4 | 720 | #12 | 1/20 | STORAGE RECEPTACLE |
| EMERGENCY/EXIT LIGHTS | 1/20 | #12 | 400 | 5 | 1840 | | 6 | 1440 | #12 | 1/20 | OFFICE RECEPTACLE |
| GENERAL RECEPTACLE | 1/20 | #12 | 1260 | 7 | | 2700 | 8 | 1440 | #12 | 1/20 | OFFICE RECEPTACLE |
| WALL MOUNT AC-TYPE 1 | 1/20 | #12 | 1000 | 9 | 6000 | | 10 | 5000 | #8 | 1/35 | WH-01 |
| GENERAL RECEPTACLE | 1/20 | #12 | 1080 | 11 | | 6080 | 12 | 5000 | #8 | 1/35 | WH-01 |
| WALL MOUNT AC-TYPE 2 | 1/20 | #12 | 1500 | 13 | 3500 | | 14 | 2000 | #10 | 1/25 | ODU-1 |
| OUTSIDE RECEPTACLE | 1/20 | #12 | 180 | 15 | | 2180 | 16 | 2000 | #10 | 1/25 | ODU-1 |
| SMOKE DETECTOR | 1/20 | #12 | 800 | 17 | 1100 | | 18 | 300 | #12 | 1/20 | AHU-1 |
| LOBBY RECEPTACLE | 1/20 | #12 | 900 | 19 | | 1200 | 20 | 300 | #12 | 1/20 | AHU-1 |
| LIGHTS | 1/20 | #12 | 500 | 21 | 1100 | | 22 | 600 | #12 | 1/20 | SHUTTER RECEPTACLE |
| LIGHTS | 1/20 | #12 | 300 | 23 | | 900 | 24 | 600 | #12 | 1/20 | SHUTTER RECEPTACLE |
| SPACE | | | | 25 | 600 | | 26 | 600 | #12 | 1/20 | SHUTTER RECEPTACLE |
| OUTSIDE RECEPTACLE | 1/20 | #12 | 180 | 27 | | 1680 | 28 | 1500 | #10 | 1/25 | ODU-3 |
| OPEN OBSERVATION RECEPTACLE | 1/20 | #12 | 900 | 29 | 2400 | | 30 | 1500 | #10 | 1/25 | ODU-3 |
| WALL MOUNT AC-TYPE 3 | 1/20 | #12 | 750 | 31 | | 3250 | 32 | 2500 | #12 | 1/25 | DRYER |
| SPACE | | | | | 2500 | | 34 | 2500 | #12 | 1/25 | DRYER |
| WALL MOUNT AC-TYPE 3 | 1/20 | #12 | 750 | 35 | | 1750 | 36 | 1000 | #12 | 1/20 | WALL MOUNT AC-TYPE 1 |
| SPACE | | | | 37 | 1000 | | 38 | 1000 | #12 | 1/20 | WALL MOUNT AC-TYPE 1 |
| BATHROOM RECEPTACLE | 1/20 | #12 | 360 | 39 | | 1360 | 40 | 1000 | #12 | 1/20 | WALL MOUNT AC-TYPE 1 |
| SPACE | | | | 41 | 0 | | 42 | | | | SPACE |
| TOTALS | | | | | 23010 | 23260 | | | | | |

| PHASE | VA |
|---|---|
| A | 23010 |
| B | 23260 |
| | |
| | |
| TOTAL: | 46270.00 |

| | |
|---|---|
| 46270 | TOTAL LOAD(VA) |
| 240 | SUPPLY VOLTAGE |
| 1 | SUPPLY PHASE |
| 192.79 | |

| | |
|---|---|
| MOUNTED: | SURFACE |
| VOLTS: | 120/240 |
| PHASE/WIRE: | 1/3 |
| MAIN SIZE: | 250 |
| MAIN TYPE: | MAIN BREAKER |

NOTES & REMARKS: 1. ALL HEATING, AIR CONDITIONING, AND REFRIGERATION UNITS SHALL HAVE 'HACR' RATED CIRCUIT BREAKER. 2. PNL SHORT CIRCUIT RATING SHALL MATCH OR EXCEED AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY CO

**PANEL SCHEDULE "PANEL B"**

| | | | | 200A PANEL 1 PHASE 3 WIRE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOAD DESCRIPTION | POLES /AMPS | Wire | LOAD, VA | CIRCUIT # | PHASE A | PHASE B | CIRCUIT # | LOAD, VA | Wire | POLES /AMPS | LOAD DESCRIPTION |
| LIGHTS | 1/20 | #12 | 2320 | 1 | 2320 | | 2 | | | | SPACE |
| SPACE | | | | 3 | | 5000 | 4 | 5000 | #8 | 1/35 | WH-02 |
| SPACE | | | | 5 | 5000 | | 6 | 5000 | #8 | 1/35 | WH-02 |
| GENERAL RECEPTACLE | 1/20 | #12 | 900 | 7 | | 1900 | 8 | 1000 | #10 | 1/25 | ODU-2 |
| SPACE | | | | 9 | 1000 | | 10 | 1000 | #10 | 1/25 | ODU-2 |
| GENERAL RECEPTACLE | 1/20 | #12 | 1080 | 11 | | 1830 | 12 | 750 | #12 | 1/20 | WALL MOUNT AC-TYPE 1 |
| GENERAL RECEPTACLE | 1/20 | #12 | 720 | 13 | 1470 | | 14 | 750 | #12 | 1/20 | WALL MOUNT AC-TYPE 2 |
| OUTSIDE RECEPTACLE | 1/20 | #12 | 180 | 15 | | 180 | 16 | | | | SPACE |
| SMOKE DETECTOR | 1/20 | #12 | 500 | 17 | 500 | | 18 | | | | " |
| GENERAL RECEPTACLE | 1/20 | #12 | 1260 | 19 | | 1260 | 20 | | | | " |
| SPACE | | | | 21 | 0 | | 22 | | | | " |
| EMERGENCY/EXIT LIGHTS | 1/20 | #12 | 150 | 23 | | 150 | 24 | | | | " |
| SPACE | | | | | 0 | | 26 | | | | " |
| OUTSIDE RECEPTACLE | 1/20 | #12 | 180 | 27 | | 180 | 28 | | | | " |
| SPACE | | | | 29 | 0 | | 30 | | | | " |
| BATHROOM RECEPTACLE | 1/20 | #12 | 720 | 31 | | 720 | 32 | | | | " |
| LIGHTS | 1/20 | #12 | 800 | 33 | 800 | | 34 | | | | " |
| SPACE | | | | 35 | | 0 | 36 | | | | " |
| " | | | | 37 | 0 | | 38 | | | | " |
| SHUTTER RECEPTACLE | 1/20 | #12 | 600 | 39 | | 600 | 40 | | | | " |
| SPACE | | | | 41 | 0 | | 42 | | | | " |
| TOTALS | | | | | 11090 | 11820 | | | | | |

| PHASE | VA |
|---|---|
| A | 11090 |
| B | 11820 |
| | |
| | |
| TOTAL: | 22910.00 |

| | |
|---|---|
| 22910 | TOTAL LOAD(VA) |
| 240 | SUPPLY VOLTAGE |
| 1 | SUPPLY PHASE |
| 95.46 | |

| | |
|---|---|
| MOUNTED: | SURFACE |
| VOLTS: | 120/240 |
| PHASE/WIRE: | 1/3 |
| MAIN SIZE: | 200 |
| MAIN TYPE: | MAIN BREAKER |

NOTES & REMARKS: 1. ALL HEATING, AIR CONDITIONING, AND REFRIGERATION UNITS SHALL HAVE 'HACR' RATED CIRCUIT BREAKER.
2. PNL SHORT CIRCUIT RATING SHALL MATCH OR EXCEED AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY CO

### NOTES:

1. ALL PANELBOARDS SUPPLIED BY A FEEDER CONDUCTOR SHALL BE MARKED (LABELED) TO INDICATE WHERE THE POWER SUPPLY FOR THE PANELBOARD ORIGINATES FROM IN ACCORDANCE WITH THE NEC 2017 ART. 408.4(B).
2. POST AVAILABLE FAULT CURRENT RATINGS SHALL BE FIELD MARKED ON THE ELECTRICAL SERVICE EQUIPMENT IN THE FIELD PER NEC 2017 ART 110.24(A).

REVISIONS

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 05/02/2023 | FOR REVIEW |
| 1 | 07/27/2023 | COUNTY COMMENTS RESPONSE |

PANEL SCHEDULING, SLD AND LOAD CALCULATIONS

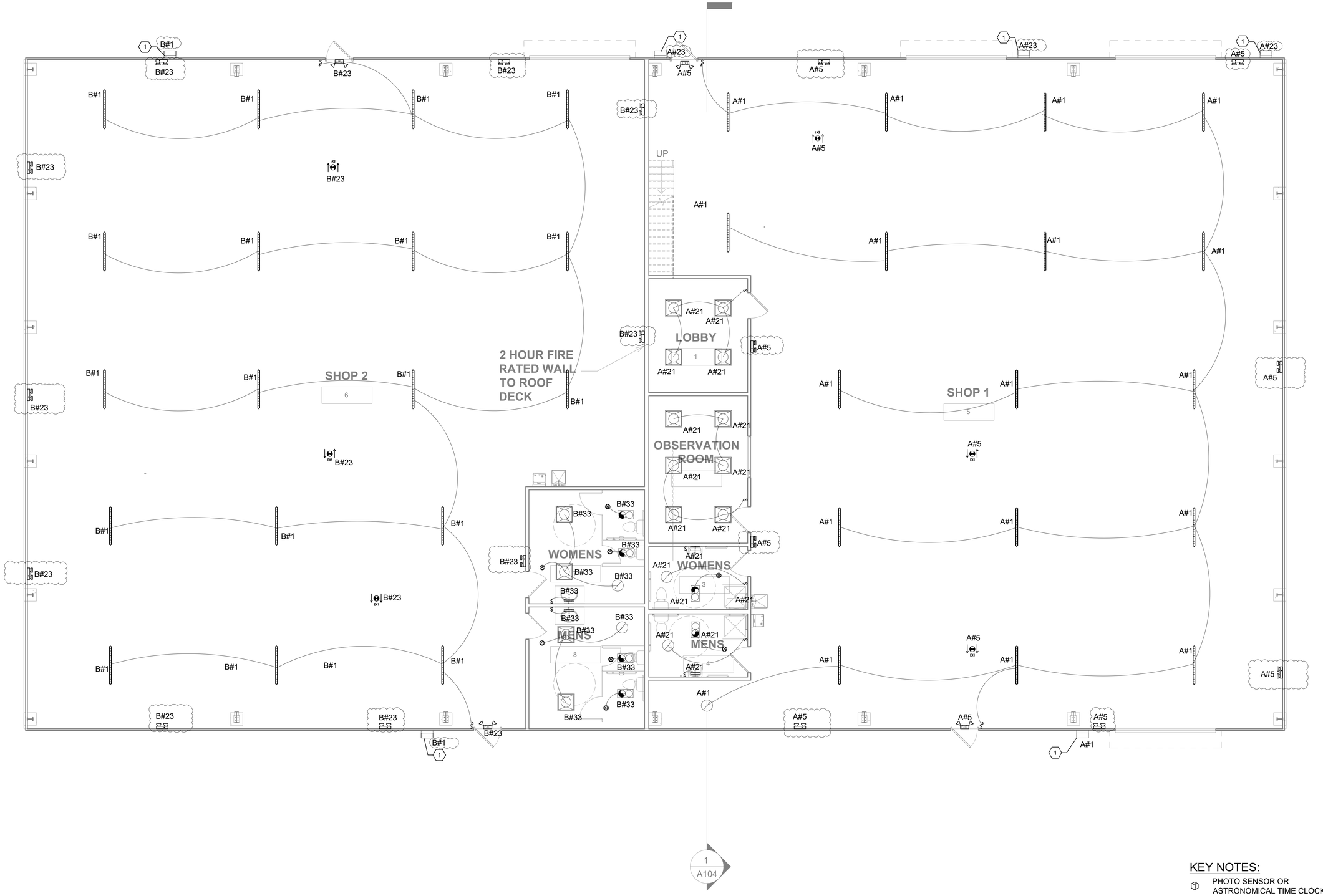
SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/11/2023

EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E004 | 22-4006 |




01 FIRST FLOOR LIGHTING PLAN
SCALE 3/16" = 1'-0"

KEY NOTES:

① PHOTO SENSOR OR ASTRONOMICAL TIME CLOCK

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 1 | 07/27/2023 | COUNTY COMMENTS RESPONSE |
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

LIGHTING PLAN

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/11/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E101 | 22-4006 |


KEY NOTES:

① PHOTO SENSOR OR ASTRONOMICAL TIME CLOCK

02 SECOND FLOOR LIGHTING PLAN

SCALE 3/16" = 1'-0"

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

LIGHTING PLAN

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

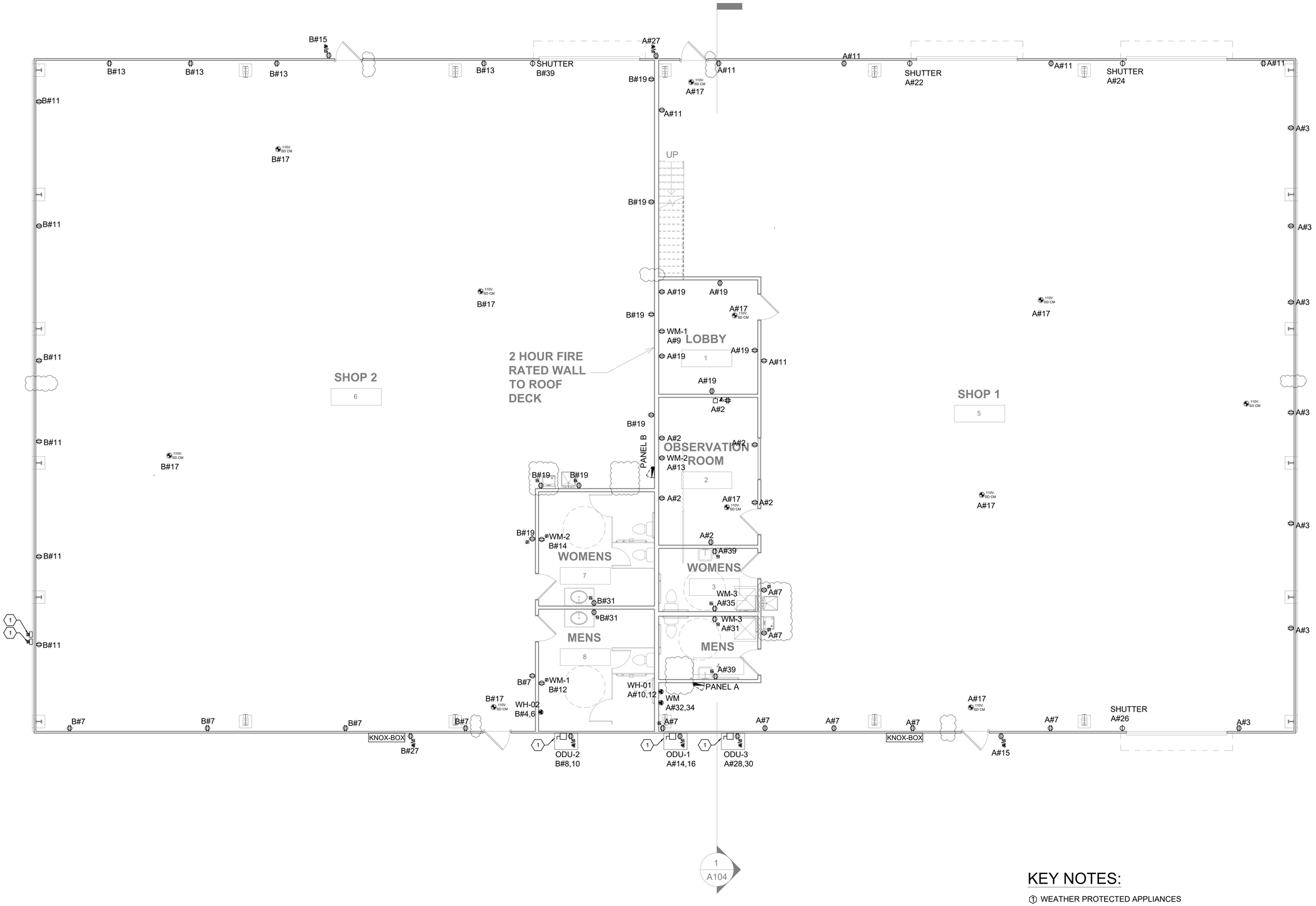
PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA

08/11/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E102 | 22-4006 |




## KEY NOTES:

1. WEATHER PROTECTED APPLIANCES
2. WEATHER PROTECTED COMBO TYPE DISCONNECTING SWITCH WITH RECEPTACLE

# 01 FIRST FLOOR POWER PLAN

SCALE 3/16" = 1'-0"

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 1 | 07/27/2023 | COUNTY COMMENTS RESPONSE |
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

POWER PLAN

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA

08/11/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
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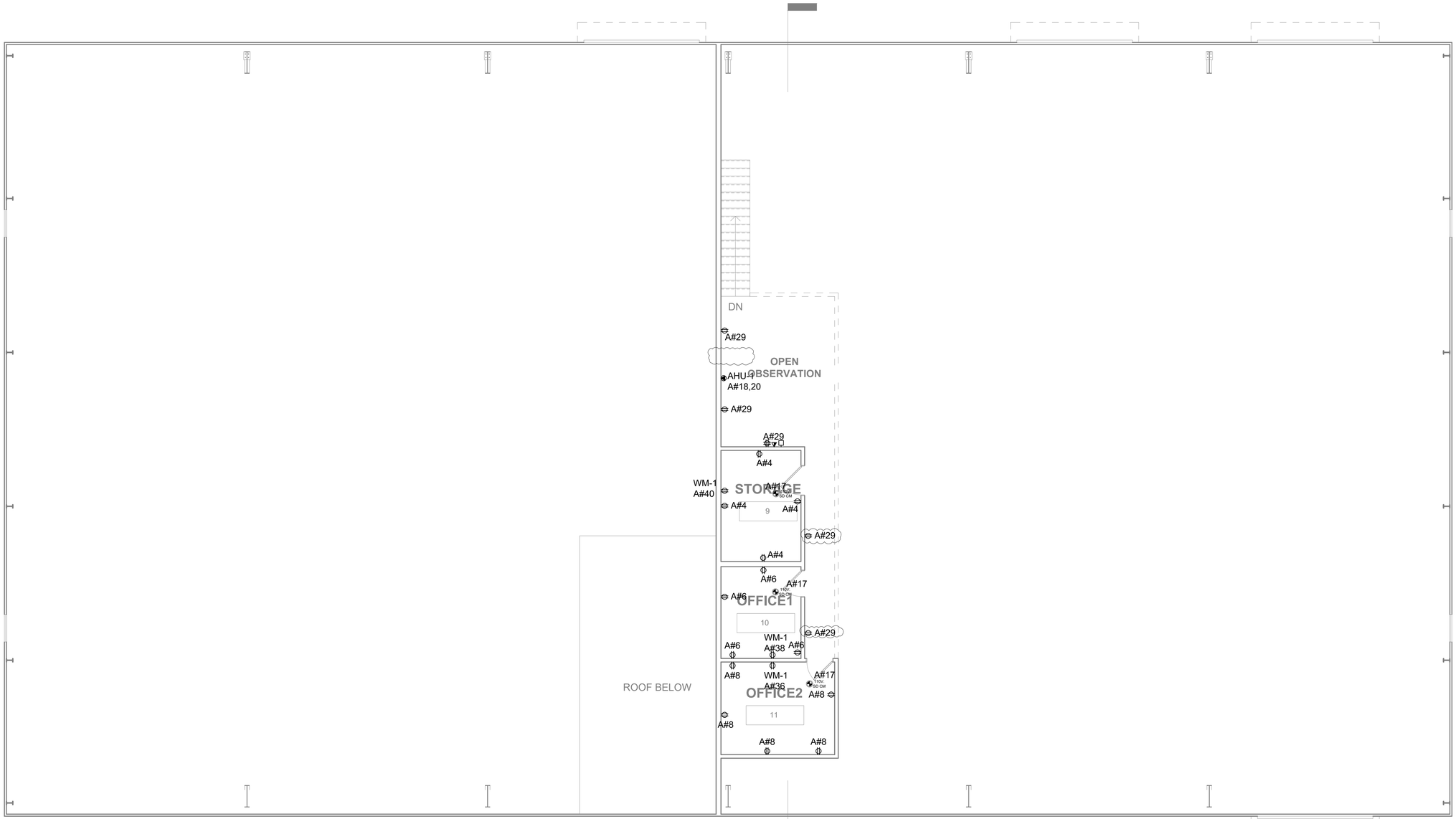
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E201 | 22-4006 |




1
A104

## 02 SECOND FLOOR POWER PLAN

SCALE 3/16" = 1'-0"

## KEY NOTES:

1. WEATHER PROTECTED APPLIANCES
2. WEATHER PROTECTED COMBO TYPE DISCONNECTING SWITCH WITH RECEPTACLE

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 1 | 07/27/2023 | COUNTY COMMENTS RESPONSE |
| 0 | 05/02/2023 | FOR REVIEW |

REVISIONS

POWER PLAN

SITE ADDRESS:
**2659 HWY 87 S.**
CAMERON,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/11/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | SMB |
| CHECKED BY: | MKC |
| DATE: | 07/27/2023 |
| SCALE: | AS SHOWN |
| E202 | 22-4006 |

## GENERAL NOTES :

1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING BUILDING SYSTEMS. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS.
2. ALL MECHANICAL AND PLUMBING WORK SHALL COMPLY WITH IMC 2015 , IPC 2015 AND IRC 2015 PER 2017 DC BUILDING CODE.
3. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO SHOW EQUIPMENT AND SYSTEMS AS ACCURATELY AS THE SCALE WILL PERMIT. ALL CRITICAL LOCATIONS AND DIMENSIONS SHALL BE DETERMINED IN THE FIELD.
4. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, STANDARDS, ORDINANCES, RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENTAL AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), THE NATIONAL ELECTRICAL CODE (NEC), THE AMERICANS WITH DISABILITIES ACT, ASHRAE AS INTERPRETED BY THE GOVERNMENTAL AUTHORITY AND PUBLIC UTILITIES HAVING JURISDICTION OVER ANY OF THE SYSTEMS HEREIN SPECIFIED. DEFINITIONS: "PROVIDE" - FURNISH AND INSTALL "FURNISH" - SUPPLY AND DELIVER TO PROJECT SITE "INSTALL" -ERECT IN PLACE "CONCEALED" - HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS "EXPOSED" - VISIBLE TO VIEW "INDICATED" - SHOWN IN CONTRACT DRAWINGS
5. WHERE SITE CONDITIONS REQUIRE MINOR DEVIATIONS FROM THE CONTRACT DOCUMENTS, MAKE SUCH DEVIATIONS WITHOUT COST TO THE CONTRACT. MAJOR DEVIATIONS SHALL NOT BE MADE WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE OWNER.
6. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE AMONG MECHANICAL, PLUMBING, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS IN PIPING, DUCTWORK, CIRCUITRY AND OTHER ITEMS REQUIRED TO INSTALL THE WORK WITHOUT INTERFERENCES.
7. THE CONTRACTOR SHALL COORDINATE SPRINKLER PIPING AS REQUIRED FOR THE INSTALLATION OF THE MECHANICAL AND ELECTRICAL SYSTEMS, WHILE MAINTAINING THE ARCHITECTURAL INTENT. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), INTERNATIONAL FIRE CODE (IFC), THE INTERNATIONAL BUILDING CODE (IBC).
8. THE CONTRACTOR SHALL KEEP A RECORD OF ALL CHANGES TO THE DRAWINGS AND SHALL SUBMIT AS BUILT DRAWINGS TO THE OWNER AT THE CONCLUSION OF THE PROJECT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THE QUIET OPERATION OF ANY NEW SYSTEM UPON COMPLETION OF INSTALLATION. THE TRANSMISSION OF VIBRATION OR SOUND TO THE STRUCTURE OR OCCUPIED SPACES SHALL NOT BE PERMITTED.
10. ALL EQUIPMENT SHALL BE NEW (UNLESS INDICATED OTHERWISE) AND THE CURRENT MODEL FOR WHICH REPLACEMENT PARTS ARE AVAILABLE. SUBSTITUTIONS SHALL ONLY BE ALLOWED AT THE DISCRETION OF THE OWNER.
11. ALL EQUIPMENT SHALL BE SUITABLE FOR THE PURPOSE INTENDED. ALL MANUFACTURERS SHALL HAVE SIMILAR PRODUCTS IN SERVICE FOR A MINIMUM OF 5 YEARS. ALL NEW EQUIPMENT SHALL BE PROVIDED PER MANUFACTURER'S RECOMMENDATIONS.
12. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. THIS SHALL INCLUDE PROVIDING CLEARANCES AS DEFINED IN THE INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH NEC REQUIREMENTS. NEW EQUIPMENT SHALL ALSO BE COORDINATED AROUND SPRINKLER AND FIRE ALARM SYSTEMS. MODIFY SYSTEMS AS NECESSARY. PROVIDE ALL REQUIRED AUXILIARY ITEMS REQUIRED TO PERFORM FUNCTION INTENDED.
13. THE CONTRACTOR SHALL VERIFY PROPER OPERATION OF ALL EXISTING ITEMS AND EQUIPMENT INDICATED TO BE REUSED. THE CONTRACTOR SHALL REPORT ANY DEFICIENCIES TO THE OWNER DURING THE CONSTRUCTION PHASE OF THE PROJECT. THOROUGHLY CLEAN ALL ITEMS AND EQUIPMENT INDICATED TO BE REUSED. REPLACE ALL FILTERS WITH SIZE AND TYPE TO MATCH EXISTING.
14. PROVIDE ALL SUPPORT STEEL, HANGERS, VIBRATION ISOLATIONS AND ACCESSORIES NECESSARY FOR EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. DO NOT SUPPORT ANY CEILING OR OTHER BUILDING STRUCTURE FROM PIPING OR CONDUITS. DO NOT ALLOW PIPING OR CONDUITS TO COME INTO DIRECT CONTACT WITH BUILDING WALLS OR FLOORS. COORDINATE INSTALLATION AMONG ALL TRADES. PROVIDE ALL NECESSARY TRANSITIONS AND OFFSETS TO INSURE COMPLETE COORDINATED INSTALLATION.
15. PROVIDE APPROVED AIR FILTERS AS PER SECTION 605 DC MECHANICAL CODE. MEDIA-TYPE AND ELECTROSTATIC-TYPE AIR FILTERS SHALL BE LISTED AND LABELED. MEDIA-TYPE AIR FILTERS SHALL COMPLY WITH UL 900. HIGH EFFICIENCY PARTICULATE AIR FILTERS SHALL COMPLY WITH UL 586. ELECTROSTATIC-TYPE AIR FILTERS SHALL COMPLY WITH UL 867. AIR FILTERS UTILIZED WITHIN DWELLING UNITS SHALL BE DESIGNED FOR THE INTENDED APPLICATION AND SHALL NOT BE REQUIRED TO BE LISTED AND LABELED.

## GENERAL NOTES CONTINUED:

1. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING AND CONDUIT. REPAIR ALL WALLS, CEILINGS AND FLOORS, PENETRATED. THE REPAIRS SHALL BE WITH MATERIALS AND FINISHES THAT MATCH EXISTING CONSTRUCTION. ALL PENETRATIONS IN FIRE WALLS SHALL BE SEALED WITH SUITABLE MATERIALS TO PRESERVE FIREWALL INTEGRITY. CORE DRILLING AND OTHER SLAB PENETRATIONS ARE NOT PERMITTED UNLESS SPECIFICALLY NOTED ON PLANS. RESTORE, PATCH AND PAINT ALL DAMAGED BUILDING COMPONENTS TO RESTORE TO SIMILAR OR BETTER CONDITION.
2. THE CONTRACTOR SHALL TEST ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATION.
3. SPRINKLER SYSTEM PLAN IS SHOWN AS SCHEMATIC. IT IS CONTRACTOR'S RESPONSIBILITY TO COORDINATE IT WITH FIRE MARSHALL AND DESIGN PROPER SPRINKLER SYSTEM.
4. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.
5. PRODUCTS CONTAINING ASBESTOS OR PCB'S ARE NOT PERMITTED FOR USE ON THIS PROJECT.
6. ALL NEW DUCTWORK SHALL BE GALVANIZED STEEL G90, 2 IN. W.G. UNLESS NOTED OTHERWISE
7. EVALUATING EXISTING ROOF SYSTEM STRUCTURALLY DUE TO HVAC EQUIPMENT ADDITION IS OUT OF ENGINEER'S RESPONSIBILITY.
8. ADD A NOTE IN MECHANICAL GENERAL NOTES SHEET " ALL APPLIANCES IN THE ROOF SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2012 MECHANICAL CODE, SECTION 306.5"

## COMMISSIONING OF GENERAL NOTES

1. ALL DUCTWORK AND CEILING PENETRATIONS SHALL BE COORDINATED WITH EXISTING STRUCTURAL JOISTS AND BEAMS. PROVIDE OFFSETS IN PIPES AND DUCTS TO AVOID CUTTING OF BEAMS AND JOISTS.
2. CONTRACTOR SHALL SUBMIT DUCTWORK SHOP DRAWING TO ENGINEER FOR APPROVAL INCLUDING DUCTWORK SIZE.
3. ALL DUCTWORK AND FITTINGS SHALL BE CONSTRUCTED TO THE LATEST "SMACNA" STANDARDS. THE DUCT SIZES INDICATED ON THE DRAWINGS ARE IN INCHES AND REPRESENT THE FREE, NET INSIDE DIMENSIONS OF THE DUCT.
4. ALL FLEXIBLE DUCT BRANCH LINES AND BRANCH TAKEOFFS SHALL BE THE SAME SIZE AS THE INLET OF THE DIFFUSER TO WHICH THEY CONNECT. THE MAXIMUM LENGTH OF FLEXIBLE DUCT BETWEEN BRANCH DUCTS AND DIFFUSERS IS FIVE FEET. FLEXIBLE DUCTWORK SHALL BE RUN WITH SMOOTH BENDS SO AS TO NOT RESTRICT AIR FLOW.
5. PROVIDE INSULATION FOR SUPPLY, AND RETURN, EXHAUST, DUCTS LOCATED IN CEILING PLENUMS AND OTHER CONCEALED, NON-CONDITIONED SPACES. THE INSULATION SHALL BE 1 1/2" THICK GLASS FIBER WITH FOIL VAPOR BARRIER.
6. PROVIDE 3M FIRE BARRIER CP 25WB CAULK AROUND ALL PIPE, ENVIRONMENTAL AIR AND DUCT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOOR SLABS.
7. INTAKE AND EXHAUST CONNECTIONS SHALL BE A MINIMUM 10 FEET APART.
8. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL HAVE ALL AIR SYSTEMS BALANCED TO INDICATED FLOW RATES BY A CERTIFIED "AABC" BALANCING CONTRACTOR.

## DUCT LEAKAGE TEST

1. CONTRACTOR SHALL PERFORM THE PRESSURE TEST FOR DUCT TO DETERMINE AIR LEAKAGE BY THE METHODS INDICATED IN R403.3.3 IECC 2015 AND A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL.
2. THE TOTAL DUCT LEAKAGE SHALL BE < 4 CFM/100FT^2 WITH AIR HALDLER INSTALLED, PER 2015 IECC R403.3.4. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL.

## DURING TESTING

1. EXTERIOR WINDOWS AND DOORS, FIREPLACE AND STDVE DOORS SHALL BE CLOSED, BUT NOT SEALED, BEYOND THE INTENDED WEATHER STRIPPING OR OTHER INFILTRATION CONTROL MEASURES.
2. DAMPERS INCLUDING EXHAUST, INTAKE, MAKEUP AIR, BACKDRAFT AND FLUE DAMPERS SHALL BE CLOSED, BUT NOT SEALED BEYOND INTENDED INFILTRATION CONTROL MEASURES;
3. INTERIOR DOORS. IF INSTALLED AT THE TIME OF THE TEST, SHALL BE OPEN;
4. EXTERIOR DOORS FOR CONTINUOUS VENTILATION SYSTEMS AND HEAT RECOVERY VENTILATORS SHALL BE CLOSED AND SEALED;
5. HEATING AND COOLING SYSTEMS, IF INSTALLED AT THE TIME OF THE TEST, SHALL BE TURNED OFF; AND
6. SUPPLY AND RETURN REGISTERS, IF INSTALLED AT THE TIME OF THE TEST, SHALL BE FULLY OPEN.

### DRAWING LIST

| SHEET NO. | SHEET NAME |
|---|---|
| M001 | GENERAL NOTES, LEGENDS & ABBREVIATIONS |
| M002 | EQUIPMENT SCHEDULES & DETAILS |
| M101 | HVAC FLOOR PLANS |
| M102 | HVAC FLOOR PLANS |

### DUCTWORK

| DESCRIPTION | DOUBLE LINE DUCT |
|---|---|
| SUPPLY DUCT UP | |
| SUPPLY DUCT DOWN | |
| ROUND DUCT UP SUPPLY/ RETURN/ EXHAUST | |
| ROUND DUCT DOWN SUPPLY/ RETURN/ EXHAUST | |
| STANDARD RADIUS ELBOW ( R = W ) SUPPLY/ RETURN/ EXHAUST | R, W |
| MITERED ELBOWS W/ VANES | |
| SPLIT TAKE-OFF (TOP AND BOTTOM) | |
| BULLHEAD SPLIT SUPPLY | |
| CEILING DUCT MTD. DIFF/GRILLE | VD |
| TAKEOFF TO DIFF/GRILLE RECTANGULAR TO ROUND OVAL (⌀) TO ROUND | VD, VD |
| HORIZONTAL OFFSET SUPPLY/RETURN /EXHAUST | |
| 45° TAP TAKE-OFF RECTANGULAR / ROUND (Ø) - OVAL (⌀) | |
| 90° TAP TAKE-OFF RECTANGULAR / ROUND (Ø) - OVAL (⌀) | |
| BULLHEAD CONVERGE RETURN/EXHAUST RECTANGULAR / ROUND (Ø) - OVAL (⌀) | |
| SIDEWALL DUCT MTD. REG./GRILLE | |
| OPEN END DUCT W/ 1/4" x 1/4" WMS | |

### EQUIPMENT SYMBOLS AND CALL OUTS

| | |
|---|---|
| | VOLUME DAMPER |
| | AIR HANDLING UNIT (AHU) |
| | SIDE WALL GRILL |
| | SUPPLY AIR DIFFUSER |
| | FLOOR SUPPLY AIR DIFFUSER |
| | RETURN AIR DIFFUSER |
| | RETURN AIR GRILLE |
| | RETURN SIDE WALL GRILLE |
| | SUPPLY SIDE WALL GRILLE |
| | EXHAUST FAN |
| | SUPPLY DUCT |
| | EXHAUST DUCT |
| | RETURN AIR DUCT |
| | OUTDOOR UNIT (ODU) |

### GENERAL ABBREVIATIONS

| | |
|---|---|
| ARCH | ARCHITECT |
| AHU | AIR HANDLING UNIT |
| BD | BACKDRAFT DAMPER |
| CFM | CUBIC FEET PER MINUTE |
| CR | CEILING REGISTER |
| DP | DRAIN PIPE |
| DIA | DIAMETER |
| EF | EXHAUST FAN |
| ELEV | ELEVATION |
| EX | EXHAUST |
| FD | FIRE DAMPER |
| FPM | FEET PER MINUTE |
| FR | FLOOR REGISTER |
| FT | FEET |
| GAL | GALLONS |
| HP | HORSEPOWER |
| HZ | HERTZ |
| IN | INCHES |
| KW | KILOWATT |
| MECH | MECHANICAL |
| MIN | MINIMUM |
| N/A | NOT APPLICABLE |
| NO. | NUMBER |
| NTS | NOT TO SCALE |
| OA | OUTSIDE AIR |
| ODU | OUT DOOR UNIT |
| RA | RETURN AIR |
| RD | RETURN DUCT |
| RG | REFRIGERANT GAS |
| RL | REFRIGERANT LIQUID |
| RPM | REVOLUTIONS PER MINUTE |
| SD | SUPPLY DIFFUSER |
| SQFT | SQUARE FEET |
| T | TEMPERATURE |
| VD | VOLUME DAMPER |
| W | WIDTH |
| WB | WET BULB TEMPERATURE |
| WR | WALL REGISTER |

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REVISIONS

# GENERAL NOTES, LEGENDS & ABBREVIATIONS

SITE ADDRESS:
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PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
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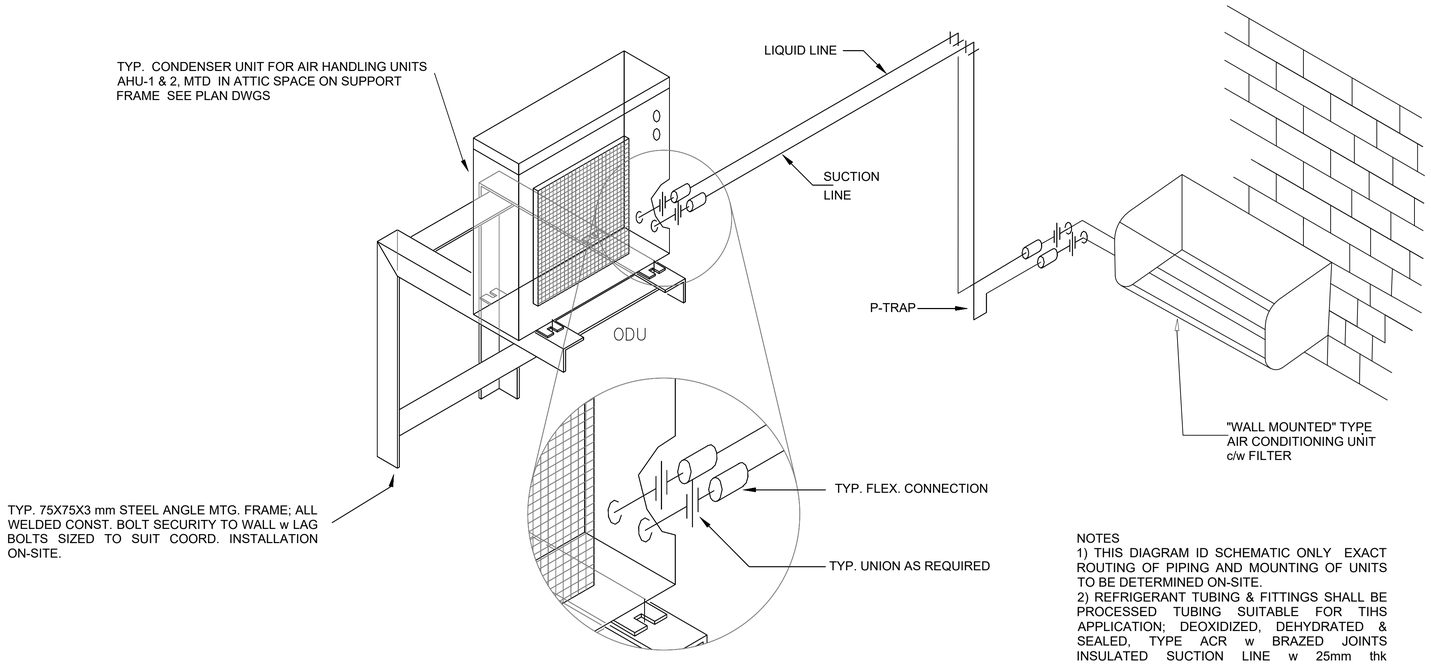
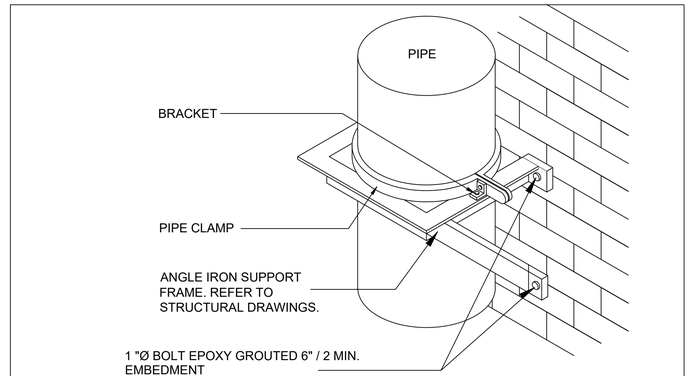
**M001** | 22-4006

THREADED STEEL HANGER RODS & VIBRATION HANGER SUPPORT



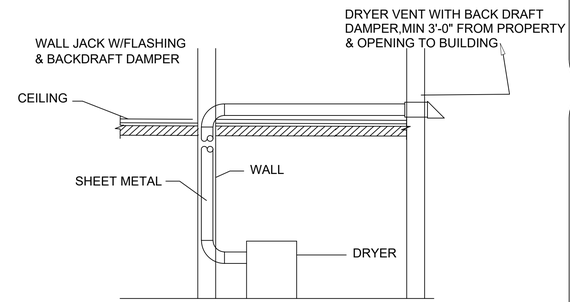

NOTES
1) THIS DIAGRAM ID SCHEMATIC ONLY EXACT ROUTING OF PIPING AND MOUNTING OF UNITS TO BE DETERMINED ON-SITE.
2) REFRIGERANT TUBING & FITTINGS SHALL BE PROCESSED TUBING SUITABLE FOR TIHS APPLICATION; DEOXIDIZED, DEHYDRATED & SEALED, TYPE ACR w BRAZED JOINTS INSULATED SUCTION LINE w 25mm thk ELASTOMER PIPE INSULATION




WALL MOUNTED PIPE SUPPORT DETAIL

NOTES:

1. DOMESTIC CLOTHES DRYER MOISTURE EXHAUST DUCT SHALL BE OF METAL AND SHELL HAVE SMOOTH INTERIOR SURFACES.
2. LISTED CLOTHES DRYER TRANSITION DUCT COULD NOT BE MORE THAN 6 FT IN LENGTH.
3. FLEXIBLE CLOTHES DRYER TRANSITION DUCTS SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.
4. SECONDARY LINT TRAP IS REQUIRED ONLY WHEN DRYER BOOSTER FAN IS INSTALLED LESS THAN 15 FT A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH.
5. WHERE DUCTS JOIN, THE MALE END SHALL BE INSERTED IN THE DIRECTION OF AIRFLOW.
6. DUCTS SHALL NOT BE ASSEMBLED WITH SCREWS OR OTHER FASTENING MEANS THAT EXTEND INTO DUCTS AND ARE CAPABLE OF CATCHING LINT.




DRYER VENT DETAIL

| TAG NAME | QUANTITY | INDOOR UNIT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CFM | DIMENSION H*W*D(INCH) | WEIGHT (Lbs.) | MOTOR PH | MOTOR VOLT | FLA (AMPS) | TOTAL (MBH) | SENSIBLE (MBH) | BASIS OF DESIGN |
| WM-1 | 6 | 400 | 11 5/8 *31 7/16 *9 1/8 | 22 | 1 | 208-230 | 5.8 | 12 | 9.24 | MITSUBISHI MODEL#MSY-GL12NA |
| WM-2 | 1 | 600 | 12 *36 5/16 *9 13/16 | 28 | 1 | 208-230 | 5.8 | 18 | 11.52 | MITSUBISHI MODEL#MSY-GL18NA |
| WM-3 | 2 | 300 | 11 5/8 *31 7/16 *9 1/8 | 22 | 1 | 208-230 | 5.8 | 9 | 7.38 | MITSUBISHI MODEL#MSY-GL09NA |

| OUTDOOR CONDENSING UNIT | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| TAG NAME | VOLT | DIMENSION H*W*D (INCH) | WEIGHT (LB) | SEER | EER | HSPF | BASIS OF DESIGN | |
| ODU-1 | 240 | 52 11/16 *41 11/32 *17 3/4 | 271 | 20 | 12.2 | 11.5 | MITSUBISHI MODEL#MXZ-8C48NA2 | ODU-1 CONNECTED TO TWO WM-3(0.75 TON), WM-2(1.5 TON) AND WM-1(1-TON) |
| ODU-2 | 240 | 34 5/8 *33 1/16 *13 | 119 | 20.5 | 12.5 | 11.5 | MITSUBISHI MODEL#MUY-GL24NA | ODU-2 CONNECTED TO TWO WM-1(1-TON) |
| ODU-3 | 240 | 33 7/16 *33 1/16 *13 | 126 | 15.1 | 8.2 | 11.5 | MITSUBISHI MODEL#MUY-GL18NA | ODU-2 CONNECTED TO THREE WM-1(1-TON) |

| OUTSIDE AIR VENTILATION SCHEDULE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| S.N | DESCRIPTION | AREA (FT2) | PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE (CFM/PERSON) | AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE (CFM/FT2) | OPCCUPANTS | OCCUPANT OUTDOOR AIR (CFM) | AREA OUTDOOR AIR (CFM) | BREATHING ZONE OUTDOOR AIR (CFM) | ZONE AIR DISTRIBUTION EFFECTIVENESS | ZONE OUTDOOR AIRFLOW (CFM) |
| | | | Rp | Ra | Pz | RpPz | RaAz | Vbz=RpPz+RaAz | Ez | Voz=Vbz/Ez |
| 1 | LOBBY | 161 | 7.5 | 0.06 | - | - | 10 | 10 | 0.8 | 13 |
| 2 | OBSERVATION ROOM | 208 | 10 | 0.18 | 3 | 30 | 38 | 68 | 0.8 | 85 |
| 3 | STORAGE | 96 | 7.5 | 0.12 | 2 | 15 | 12 | 27 | 0.8 | 34 |
| 4 | OFFICE | 79 | 5 | 0.06 | 2 | 10 | 5 | 15 | 0.8 | 19 |
| 5 | OFFICE | 114 | 5 | 0.06 | 2 | 10 | 7 | 17 | 0.8 | 21 |

| INTAKE FAN SCHEDULE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TAG NAME | CFM (MAX) | RPM (MAX) | MOTOR POWER (MAX WATT) | QUANTITY | WEIGHT (LBS) | MOUNTING | VOLTS | PHASE | DIMENSION H*W*D (INCH) | BASIS OF DESIGN |
| TT 150 | 244 | 2072 | 55 | 01 | 7 | WALL MOUNTED | 120 | 1 | 9 13/16 *8 3/4 *11 5/8 | VENTS-US TT150 |

| EXHAUST FAN SCHEDULE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TAG NAME | CFM | ESP (IN) | MOTOR POWER (WATT) | QUANTITY | TYPE | MOUNTING | VOLTS | PHASE | BASIS OF DESIGN | REMARKS | WATTAGE |
| EF-01 | 90 | 0.25 | 15 | 06 | DIRECT DRIVE, ECM MOTOR | CEILING MOUNTED | 120 | 1 | PANASONIC WHISPER GREEN SELECT FV-05-11VK1 | CAPABLE OF CONNECTIVITY TO VENTILATION DAMPER, ENERGY STAR RATED | 5.5 Watts |

NOTES:
1. EACH E.A. FAN SHALL BE EQUIPPED WITH MOTORIZED BACK DRAFT DAMPER AT FAN DISCHARGE.
2. EACH E.A. FAN SHALL HAVE RADIATION CEILING DAMPER AS MODEL SPECIFIED IN ABOVE E.A. FAN SCHEDULE.
3. THE KITCHEN EXHAUST FAN TO HAVE TWO SPEED MOTOR CONTROLLED BY SPEED SWITCH.
4. PROVIDE RADIATION DAMPERS ON FANS INSTALLED IN RATED CEILINGS

| GAUGE | THK. | 1" STRAP CAPABILITY | MAXIMUM LOAD |
|---|---|---|---|
| 24 | .028 | 840 | 168 |
| 22 | .034 | 1070 | 216 |
| 20 | .040 | 1298 | 259 |

* ELASTIC LIMIT ASSUMED 30ksi;
RECOMMEND MAX LOAD (20% OF YIELD STRENGTH).

NOTES:
1. FLEX DUCT WITH EXTERNAL INSULATION AND VAPOR BARRIER JACKETING TYPICAL TO "FABRIFLEX"
2. INSPECTOR SERIES" SPIN DOORS
3. PROVIDE HANGER SPACING IAW FBCM AND SMASNA

SUPPORT REQUIREMENT FOR DUCT

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REVISIONS

EQUIPMENT SCHEDULES & DETAILS

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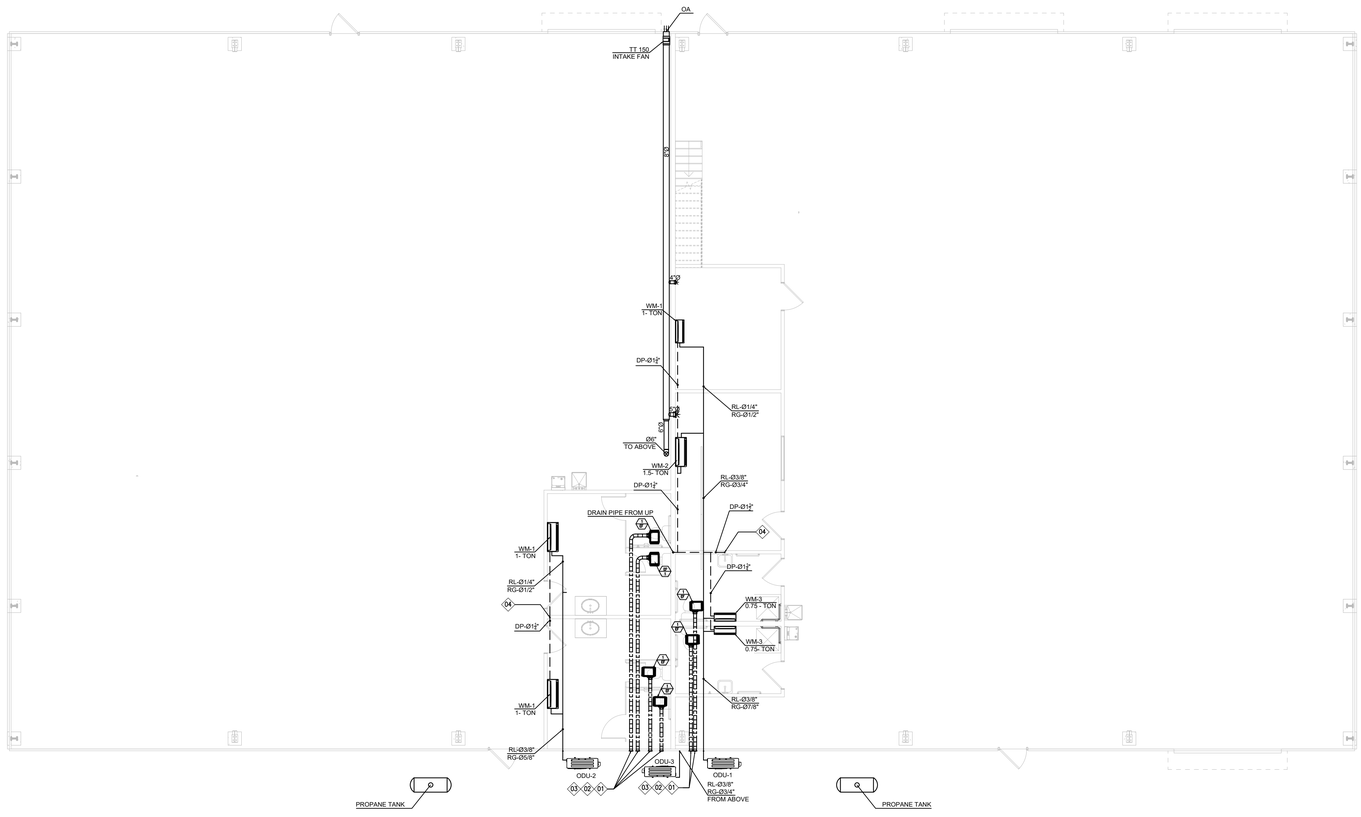
| M002 | 22-4006 |




01 FIRST FLOOR HVAC PLAN
SCALE 1/8" = 1'-0"

NOTE: FOR SHOP-1 & SHOP-2 HEATER, CONTRACTOR TO PROVIDE CALCULATION FOR PROPANE TUBE HEATER AND PROPANE TANK

## DRAWING NOTES

1. TOILET/DRYER EXHAUST TERMINATION POINT SHOULD BE AT LEAST 3 FT AWAY FROM PROPERTY LINE.
2. PROVIDE WALL CAP TO MATCH DUCT SIZE W/ A CORROSION RESISTANT BIRDS SCREEN.(FOR ALL EXHAUST DUCT SEIHO #SFZ OR #SFZC MODEL ALUMINUM VENT ARE USED AS APPLICABLE).
3. PROVIDE MOTORIZED DAMPER FOR OUTDOOR AIR INTAKES AND BACKDRAFT DAMPER FOR BATHROOM EXHAUST FANS.
4. CONDENSATE DRAIN PIPE CONNECTED TO LAVATORY.

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# HVAC FLOOR PLAN

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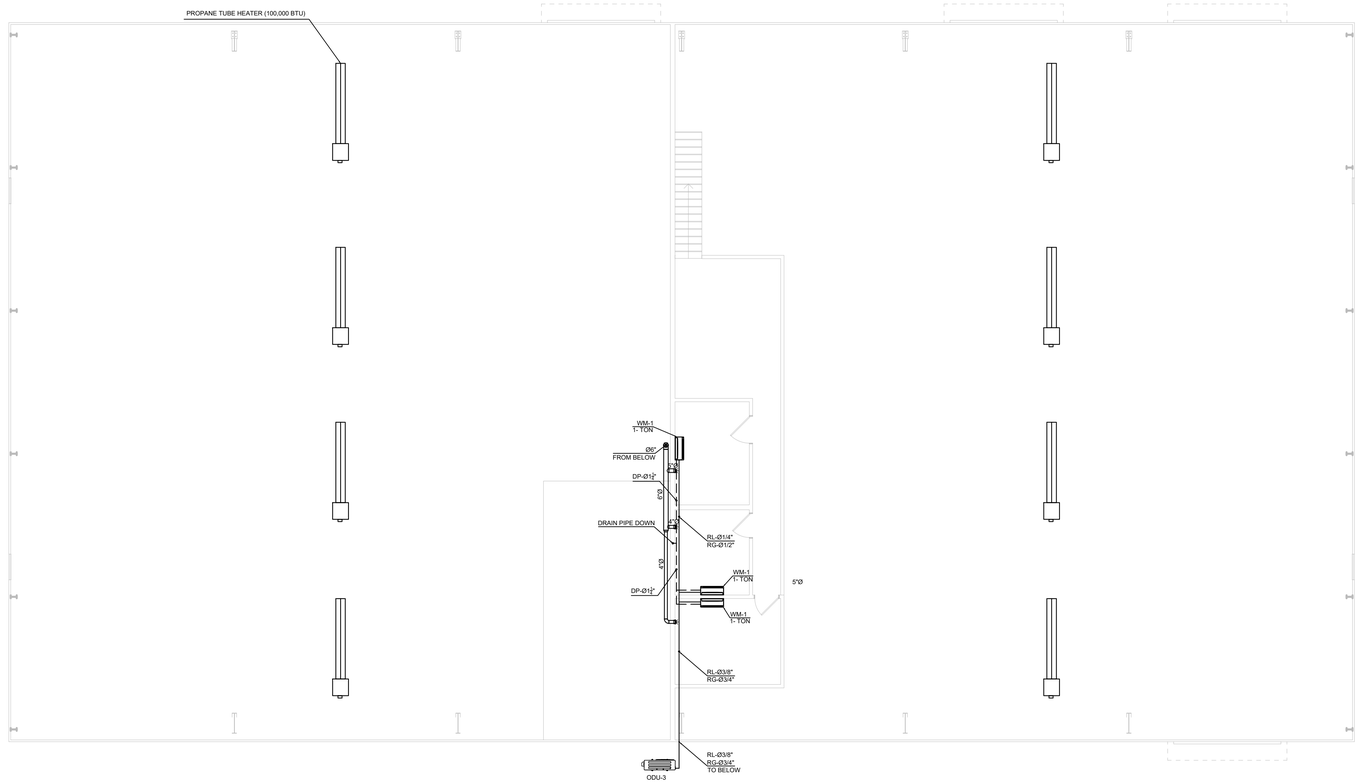
| SCALE: | AS SHOWN |

M101 | 22-4006




02 2ND FLOOR HVAC PLAN
SCALE 1/8" = 1'-0"

NOTE: FOR SHOP-1 & SHOP-2 HEATER, CONTRACTOR TO PROVIDE CALCULATION FOR PROPANE TUBE HEATER AND PROPANE TANK

## DRAWING NOTES

1. TOILET/DRYER EXHAUST TERMINATION POINT SHOULD BE AT LEAST 3 FT AWAY FROM PROPERTY LINE.
2. PROVIDE WALL CAP TO MATCH DUCT SIZE W/ A CORROSION RESISTANT BIRDS SCREEN.(FOR ALL EXHAUST DUCT SEIHO #SFZ OR #SFZC MODEL ALUMINUM VENT ARE USED AS APPLICABLE).
3. PROVIDE MOTORIZED DAMPER FOR OUTDOOR AIR INTAKES AND BACKDRAFT DAMPER FOR BATHROOM EXHAUST FANS.
4. CONDENSATE DRAIN PIPE CONNECTED TO LAVATORY.

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| 0 | 07/19/2023 | FOR SUBMITTAL |

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# HVAC FLOOR PLAN

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| SCALE: | AS SHOWN |

M102 | 22-4006

## PLUMBING GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE GOVERNING CODES AND REGULATIONS. WHERE ANY PORTION OF THE SYSTEM SHOWN IS NOT IN ACCORDANCE WITH ALL APPLICABLE LAWS, ORDINANCES, REGULATIONS OR CODES, THIS CONTRACTOR SHALL MAKE ALL CHANGES REQUIRED BY THE ENFORCING AUTHORITIES IN A MANNER APPROVED BY THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.

2. THIS CONTRACTOR SHALL ORDER AND OBTAIN ALL NECESSARY TESTS, PERMITS AND CERTIFICATES OF APPROVAL AND PAY ANY REQUIRED FEES FOR IT.

3. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS,4, ALL EQUIPMENT, FIXTURES AND MATERIALS SHALL BE NEW AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

4. EQUIPMENT CAPACITIES AND MANUFACTURER'S MODEL NUMBERS ARE INDICATED ON THE DRAWINGS.

5. ALL EQUIPMENT REQUIRING ELECTRIC POWER SHALL BE SUITED FOR USE WITH THE POWER TO BE SUPPLIED, SEE ELECTRICAL DRAWINGS. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.

6. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH THE GENERAL CONTRACTOR FOR THE EXACT LOCATION OF CHASES, FURRING SPACES, DROPPED CEILINGS, STRUCTURE PENETRATIONS, PAINTING, ETC.

7. THIS CONTRACTOR SHALL INSTRUCT THE OWNER IN THE OPERATION AND MAINTENANCE OF ALL COMPONENTS OF THE INSTALLATION. A ONE YEAR SERVICE CONTRACT SHALL BE INCLUDED AS PART OF THIS WORK.

8. CORE DRILLING SHALL NOT BE DONE UNTIL THE AREA TO BE DRILLED IS X-RAYED AND WRITTEN APPROVAL IS OBTAINED FROM THE PROJECT STRUCTURAL ENGINEER AND OWNER.

9. THE CONTRACTOR SHALL PROVIDE THE EVIDENCE THAT SHOWS DISINFECTION OF POTABLE WATER AS REQUIRE PER SECTION 610 OF 2017 VA PLUMBING CODE

10. NO HOT WATER OR COLD WATER IS PERMITTED THROUGH EXTERIOR WALL(S)

11. WHERE THE PUMP DISCHARGE LINE CONNECTS INTO HORIZONTAL DRAINAGE PIPING, THE CONNECTION SHALL BE MADE THROUGH A WYE FITTING INTO THE TOP OF THE DRAINAGE PIPING, AND SUCH WYE FITTING SHALL BE LOCATED NOT LESS THAN 10 PIPE DIAMETERS FROM THE BASE OF ANY SOIL STACK, WASTE STACK OR FIXTURE DRAIN. [2017 VA PLUMBING CODE, SECTION 712.3.5]

BASIC MATERIALS AND METHODS:

1. ALL PIPING CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH GROUND JOINT UNIONS.

2. PIPE HANGER AND SUPPORTS: CLEVIS OR SPILT RING TYPE SPACING AND ROD SIZE AS RECOMMENDED IN MSSSP-69, MECHANICAL CODE AND IN ACCORDANCE WITH INDUSTRY PRACTICE. SELECT TO FIT AROUND BARE PIPE OR AROUND INSULATION WITH INSULATION SADDLE/SHIELD FOR INSULATED PIPING,HANGERS FOR COPPER PIPE SHALL BE COPPER OR COPPER PLATED. BAND IRON HANGERS SHALL NOT BE USED. HANGERS AND ACCESSORIES SHALL BE F&M CORPORATION OR APPROVED EQUAL.

3. PIPE SUPPORTS: SUPPORTS TO BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AND IN ACCORDANCE WITH INDUSTRY PRACTICE. STEEL RISER CLAMPS WITH PLASTIC COATING OR COPPER PLATED OR COOPER PIPES. F & M CORPORATION OR EQUAL.

PIPING

1. INSTALL PIPE TUBE AND FITTINGS IN ACCORDANCE WITH INDUSTRY PRACTICE WHICH WILL ACHIEVE PERMANENTLY LEAKPROOF PIPING SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. TEST PIPING FOR LEAKAGE. REPIAR PIPING SYSTEMS SECTIONS WHICH FAIL TEST BY DISASSEMBLY AND RE-INSTALLATION, USING NEW MATERIALS TO THE EXTENT REQUIRED TO OVERCOME LEAKAGE, UNDER NO CIRCUMSTANCES USE CHEMICALS, STOP-LEAK COMPOUNDS, MASTICS, TAPES OR OTHER TEMPORARY REPAIR METHODS.

2. ALL SANITARY PIPING SHALL BE SLOPED AS NOTED ON PLANS. WHERE NOT NOTED,SLOPE PIPING AT MINIMUM REQUIRED BY CODE.

3. ALL PIPING SHOWN ON THE FLOOR PLANS SHALL BE LOCATED ABOVE THE CEILING OR INSIDE CHASES UNLESS OTHERWISE NOTED.

4. STORM, WASTE AND VENT PIPING SHALL BE SERVICE WEIGHT NO-HUB CAST IRON PIPE AND FITTINGS CISPI 301, HUB & SPIGOT SOIL PIPE AND FITTINGS ASTM A-74, GALVANIZED CAST IRON FITTINGS ANSI/ASTM A-74 OR DWV COPPER WITH WROUGHT COPPER FITTINGS, ASTM B306. OR SCHEDULE 40 PVC

5. DOMESTIC WATER PIPING SHALL BE CROSS-LINKED POLYETHYLENE (PEX) OR TYPE "L" HARD-DRAWN TEMPER, WROUGHT COPPER FITTINGS, NON-LEAD SOLDERED JOINTS WITH NON-CORROSIVE FLUX, ANSI B-88.

INSULATION

1. PROVIDE INSULATION FOR PIPING, AND EQUIPMENT OF TYPES AND THICKNESS SPECIFIED HEREIN, INSULATION SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. INSTALL INSULATION IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A CONTINUOUS VAPOR BARRIER SHALL BE PROVIDE ON ALL COLD WATER PIPING AND COLD AIR DUCTWORK. INSULATION SHALL BE ARMSTRONG, CERTAINTEED, OWENS-CORNING OR JOHNS-MANVILLE. PIPING INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR INSULATION FOR HOT WATER PIPE WITH A MINIMUM THERMAL RESISTANCE (R-VALUE) OF R-3 SHALL BE APPLIED TO THE FOLLOWINGS:

   A. PIPING LARGER THAN 3/4 INCH NOMINAL DIAMETER.
   B. PIPING SERVING MORE THAN ONE DWELLING UNIT.
   C. PIPING FROM WATER HEATER TO KITCHEN OUTLETS.
   D. PIPING LOCATED OUTSIDE THE CONDITIONED SPACE.
   E. PIPING FROM THE WATER TO A DISTRIBUTION MANIFOLD.
   F. PIPING LOCATED UNDER A FLOOR SLAB.
   G. BURIED PIPING.
   H. SUPPLY AND RETURN PIPING IN RECALCULATION SYSTEMS OTHER THAN DEMAND RECALCULATION SYSTEMS.
   I. PIPING WITH RUN LENGTHS GREATER THAN THE MAXIMUM RUN LENGTHS FOR THE NOMINAL PIPE DIAMETER GIVEN IN TABLE R403.4.2. ALL REMAINING PIPING SHALL BE INSULATED TO AT LEAST R-3 OR MEET THE RUN LENGTH REQUIREMENTS OF TABLE R403.4.2.

VALVES

GATE VALVES, 2-INCH AND SMALLER: MSS SP-80; CLASS 125,

1. BODY AND BONNET OF ASTM B 62 CAST BRONZE; WITH THREADED OR SOLDER ENDS, SOLID DISC,COPPER-SILICON ALLOY STEM, BRASS PACKING GLAND, "TEFLON" IMPREGNATED PACKING, AND MALLEABLE IRON HANDWHEEL. PROVIDE CLASS 150 VALVES MEETING THE ABOVE WHERE SYSTEM PRESSURE REQUIRES. DO NOT USE SOLDER END VALVES FOR HOT WATER HEATING OR STEAM PIPING APPLICATIONS.
2. BALL VALVES:2-PIECE, BRONZE BODY, BLOW-OUT PROOF STEM, METAL BALL, TEFLON SEAL RING, SCREWED OR SOLDERED ENDS, 400 LB. WOG. NIBCO OR STOCKHAM.
3. PROVIDE "ANTI- SCALD" VALVES FOR SHOWERS AND SHOWERS/BATH.
4. PROVIDE VALVES FOR THE FOLLOWING SERVICES:
   A. DOMESTIC WATER 1"AND LARGER - GATE VALVE
   B. DOMESTIC WATER SMALLER THAN 1" - BALL VALVE LOCATE VALVES IN ACCESSIBLE LOCATIONS WHEREVER POSSIBLE,ABOVE SUSPENDED CEILINGS OR WALLS, PROVIDE STEEL ACCESS PANELS DIRECTLY IN FRONT OF VALVES. LOCATION MUST BE COORDINATED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION OF PIPING SYSTEM.

CLEANOUTS

1. CLEANOUTS SHALL BE INSTALLED NOT MORE THAN 50 FT. APART IN HORIZONTAL DRAINAGE LINES, A CLEAN OUT SHALL BE PROVIDE AT THE BASE OF EACH VERTICAL WASTE, SOIL STACK, OF THE SANITARY BUILDING DRAINS AND BUILDING SEWERS, AND THE STORM AND BUILDING SEWERS.

2. CLEANOUTS ON CONCEALED PIPING SHALL BE EXTENDED THROUGH AND TERMINATE FLUSH WITH THE FINISHED WALL OR FLOOR WITH ACCESS COVER OF SUFFICIENT SIZE TO PERMIT REMOVAL OF THE CLEANOUT PLUG. CLEANOUTS SHALL NOT BE INSTALLED IN AREAS OF FLOORS TO RECEIVE TERRAZOO, CERAMIC TILE OR STONE FINISH.

3. CLEANOUTS SHALL BE INSTALLED SO THAT THE CLEANOUT OPENS IN THE DIRECTION OF THE DRAINAGE LINE OR AT RIGHT ANGLES THERETO

4. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE UP TO 4" AND NOT LESS THAN ONE NOMINAL PIPE SIZE SMALLER FOR LARGER PIPE.

5. A FIXTURE TRAP OR A FIXTURE WITH INTEGRAL TRAP, READILY REMOVABLE WITHOUT DISTURBING CONCEALED PIPING, MAY BE ACCEPTED AS A CLEANOUT EQUIVALENT.

6. LOCATE CLEANOUTS IN ACCESSIBLE LOCATIONS WHEREVER POSSIBLE, ABOVE SUSPENDED CEILINGS ETC. IF LOCATED ABOVE OR BEHIND DRYWALL CEILINGS, PROVIDE STEEL ACCESS PANELS DIRECTLY IN FRONT OF VALVES. PROVIDE CHROME PLATED BRASS COVER PLATES FOR CLEANOUTS LOCATED WITHIN DRYWALL PARTITIONS, LOCATIONS MUST BE COORDINATED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION OFPIPING SYSTEM

FIXTURES

FIXTURES, FITTINGS, TRIM AND ACCESSORIES SHALL BE SAME

1. MANUFACTURERS TO THE EXTENT POSSIBLE.

2. BARRIER FREE STANDARDS: COMPLY WITH APPLICABLE ANSI STANDARDS PERTAINING TO PLUMBING FIXTURES AND SYSTEMS INCLUDING ANSI A 117.1 STANDARD PERTAINING TO PLUMBING FIXTURES FOR THE HANDICAPPED. COMPLY WITH THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT". FIXTURES DESIGNATED BARRIER FREE ARE INTENDED TO BE "USABLE BY PHYSICALLY HANDICAPPED PEOPLE". FIXTURES FOR USE BY HANDICAPPED PEOPLE SHALL BE INSTALLED IN ACCORDANCE WITH ANSI A 117.1.

3. ENERGY CONSERVATION CODE COMPLIANCE: COMPLY WITH LOCAL AUTHORITY STANDARDS FOR PLUMBING FIXTURE FLOW CONTROLS. WHERE NO CODE OR STANDARD IS IN USE, USE THE CURRENT 2017 IECC. WHEN A SPECIFIED DEVICE IS MORE RESTRICTIVE THAN THE LOCAL STANDARDS, THE SPECIFIED DEVICE SHALL BE INSTALLED EXCEPT WHERE PROHIBITED.

4. ALL THE PLUMBING FIXTURES MUST BE ENERGY STAR CERTIFIED/LABELED.

5. SUBMIT MANUFACTURER'S SPECIFICATIONS FOR PLUMBING FIXTURES AND TRIM, INCLUDING CATALOG LITERATURE AND MANUFACTURER'S NAME OF EACH FIXTURE TYPE AND TRIM ITEM CARRIERS, AND INSTALLATION INSTRUCTIONS. PROPOSED SUBSTITUTIONS SHALL BE INDICATED AND DRAWINGS, CATALOG LITERATURE, OR OTHER DATA SHALL BE FURNISHED FOR COMPARISON.

6. FIXTURES SHALL BE WHITE EXCEPT WHERE INDICATED OTHERWISE OR WHERE FIXTURE IS PROVIDED IN A MANUFACTURED FINISH.

7. EXPOSED METAL FITTINGS, TRIM,AND ACCESSORIES SHALL HAVE POLISHED CHROME PLATED FINISH.

8. SUPPLIES: PROVIDE A STOP ON EACH WATER SUPPLY TO EACI FIXTURE, PROVIDE ACCESS PANELS FOR CONCEALED STOPS.

9. TRAPS: PROVIDE A TRAP ON EACH FIXTURE, EXCEPT WHERE FIXTURE SPILLS OVER A PROPERLY TRAPPED DRAIN OR OTHER RECEPTOR, ALL SINK AND LAVATORY TRAPS SHALL BE CHROME PLATED CAST BRASS SWIVEL PATTERN WITH CLEANOUT. ALL TUBING DRAINS SHALL BE MINIMUM 17 GAUGE THICKNESS CHROME PLATED METAL.

10. ESCUTCHEONS: PROVIDE DEEP PATTERN ESCUTCHEONS FOR SUPPLIES AND TRAPS WHERE ROUGH-IN PIPING WOULD BE VISIBLE USING STANDARD ESCUTCHEONS.

PLUMBING AND SPRINKLER SYSTEM GENERAL NOTES

1. PLUMBING SYSTEM

   A. ALL PLUMBING WORK SHALL BE PERFORMED PER REQUIREMENTS OF LOCAL CODES AND REGULATIONS.
   B. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LIMITS OF WORK AND BUILDING STANDARDS.
   C. COORDINATE WORK WITH ALL OTHER TRADES AND INSPECT EXISTING CONDITIONS PRIOR TO BEGINNING INSTALLATION.
   D. SCHEDULE WITH THE OWNER TEMPORARY SHUT-OFF SERVICES TO PUBLIC/OTHER AREAS.
   E. INSTALL AND CONCEAL ALL WASTE, VENT AND WATER PIPING BETWEEN FLOOR AND CEILING OR WITHIN PARTITIONS AND/OR WALLS.
   F. CONTRACTOR SHALL IDENTIFY THE EXACT LOCATION, AND SIZE OF EXISTING PLUMBING PIPING AND STACKS, BEFORE THE START OF WORK.

PIPING SPECIALTIES

1. PROVIDE FACTORY FABRICATED PIPING SPECIAL TIES OF TYPES RECOMMENDED BY MANUFACTURERS FOR SERVICES INDICATED.

2. PROVIDE ESCUTCHEON PLATES WHEREVER PIPES PASS THROUGH WALLS, FLOORS OR CEILINGS, OUTSIDE DIAMETER TO COVER COMPLETELY PIPE PENETRATION HOLE OR PIPING SLEEVE, NICKEL OR CHROME FINISH FOR EXPOSED AREAS, PRIME PAINT FINISH FOR CONCEALED AREAS.

3. UNIONS: PROVIDE DIELECTRIC UNIONS AT CONNECTIONS BETWEEN FERROUS AND NON-FERROUS PIPING. EPCO, STOCKHAM OR EQUAL.

### GENERAL ABBREVIATIONS

| | | |
|---|---|---|
| ASV | - | AUTOMATIC SHUT-OFF VALVE |
| BFP | - | BACK FLOW PREVENTER |
| CW | - | COLD WATER |
| CWR | - | COLD WATER RISER |
| CSB | - | CURB STOP BOX |
| DFU | - | DRAIN FIXTURE UNITS |
| FCO | - | FLOOR CLEAN OUT |
| FN | - | DRINKING FOUNTAIN |
| FD | - | FLOOR DRAIN |
| GPM | - | GALLON PER MINUTE |
| HW | - | HOT WATER |
| HWFU | - | HOT WATER FIXTURE UNITS |
| LV | - | LAVATORY |
| PRV | - | PRESSURE RELIEF VALVE |
| SO | - | SHUT-OFF |
| SR | - | SANITARY RISER |
| S | - | SANITARY PIPE |
| SH | - | SHOWER HEAD |
| WC | - | WATER CLOSET |
| WM | - | WASHING MACHINE |
| WHA | - | WATER HAMMER ARRESTOR |
| WH | - | WATER HEATER |
| WSFU | - | WATER SUPPLY FIXTURE UNITS |
| US | - | UTILITY SINK |
| VTR | - | VENT THROUGH ROOF |
| V | - | VENT PIPE |

### PLUMBING LEGENDS

| SYMBOL | DESCRIPTION |
|---|---|
| ——— | COLD WATER (CW) |
| - - - - - | HOT WATER (HW) |
| ——— | SANITARY (S) |
| — — — — | VENT (VTR) |
| | WATER METER (WM) |
| | SHUT-OFF (SO) |
| | PRESSURE REGULATING VALVE (PRV) |
| | CURB STOP BOX (CSB) |
| | AUTOMATIC SHUT-OFF VALVE (ASV) |
| | BACK FLOW PREVENTER (BFP) |
| FD | FLOOR DRAIN |
| | BACK WATER VALVE (BWV) |

### PLUMBING FIXTURE SCHEDULE

| FIXTURE NAME | WSFU | CWFU | HWFU | DFU | MIN PIPE SIZE OF CW/HW | MAX FLOW | REMARKS |
|---|---|---|---|---|---|---|---|
| WATER CLOSET | 2.2 | 2.2 | - | 3 | 1/2" | ≤1.28 GALLONS PER FLUSHING CYCLE | WaterSense Certified |
| LAVORATARY | 0.7 | 0.5 | 0.5 | 1 | 1/2" | ≤1 GPM AT <=60 PSI | WaterSense Certified |
| SHOWER HEAD | 1.4 | 1.0 | 1.0 | - | 1/2" | ≤1.5 GPM AT <=60 PSI | WaterSense Certified |
| ATTACHED CLOTHES WASHER | 4 | 4.0 | - | - | 1/2" | 4239 gallons per year | Energy Star Rated |

### ELECTRIC WATER HEATER WITH TANK SPECIFICATION

| TAG NAME | LOCATION | QUANTITY | NOMINAL (gallon) | VOLTAGE | UEF. | DIAMETER | WEIGHT | WATER CONNECTION SIZE (INCH) | BASIS OF DESIGN |
|---|---|---|---|---|---|---|---|---|---|
| WH-(01-02) | AS SHOWN | 2 | 50 | 240 | 0.92 | 20.5" | 120 lbs | 3/4 | AO SMITH #ENT50 |
| NOTES | 1. DRAIN PAN WITH DRAIN LINE TO FLOOR DRAIN WITH EACH WATER HEATER.<br>2. TEMP AND PRESSURE RELIEF VALVE WITH DRAIN LINE TO FLOOR DRAIN WITH EACH WATER HEATER. | | | | | | | | |

### DRAWING LIST

| SHEET NO. | SHEET NAME |
|---|---|
| PLUMBING | |
| P001 | GENERAL NOTES, LEGEND & ABBREVIATIONS |
| P002 | PLUMBING DETAILS & EQUIPMENT SCHEDULES |
| P101 | PLUMBING FLOOR PLAN |
| P102 | PLUMBING FLOOR PLAN |
| P201 | WATER SUPPLY SCHEMATIC - PLUMBING |
| P202 | SANITARY SCHEMATIC - PLUMBING |

| NO. | DATE | REVISIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

GENERAL NOTES, LEGENDS & ABBREVIATIONS

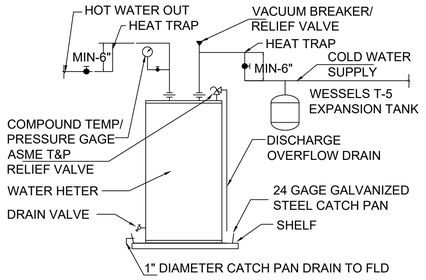
SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

PROFESSIONAL SEAL

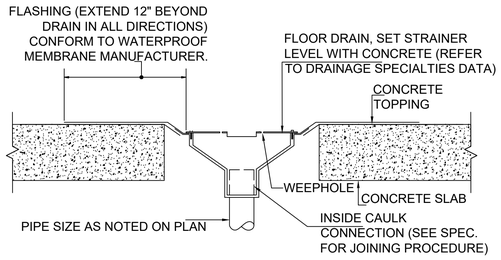
NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

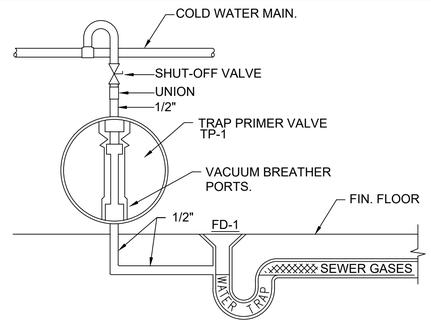
| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P001 | 22-4006 |




## WATER HEATER DETAIL
SCALE: N.T.S

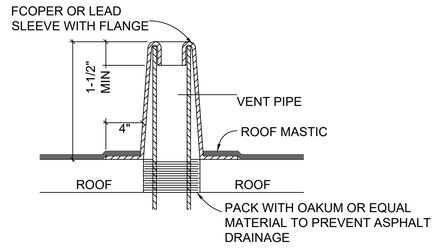



## FLOOR DRAIN IN CONCRETE DETAIL
SCALE: N.T.S



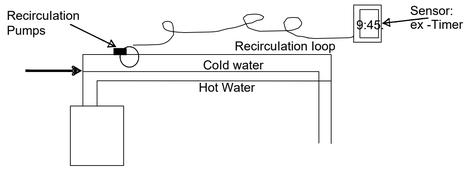

NOTE:
TRAP PRIMER CONNECTED TO ALL
FLOOR DRAINS SHOWN IN PLAN

## TRAP PRIMER DETAIL
SCALE: N.T.S



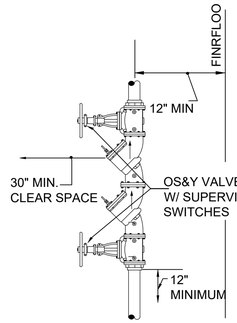

## VENT THRU ROOF DETAIL
SCALE: N.T.S

PER IECC C404.6 AND ASHRAE 90.1-2010 7.4.4.2, AUTOMATIC RECIRCULATION HOT WATER LOOP CONTROL SHOULD TURNED "OFF" DURING EXTENDED PERIODS OF LIMITED HOT WATER DEMAND.




PROVIDE WITH AN OCCUPANCY SENSOR-TO AUTOMATICALLY TURN ON THE CIRCULATOR PUMP WHEN SOME ONE ENTERS THE BATHROOM, INSTALL SENSOR IN THE MOST FURTHER BATHROOM FROM WATER HEATER LOCATION. COORDINATE EXACT LOCATION OF SENSOR WITH ARCHITECT.

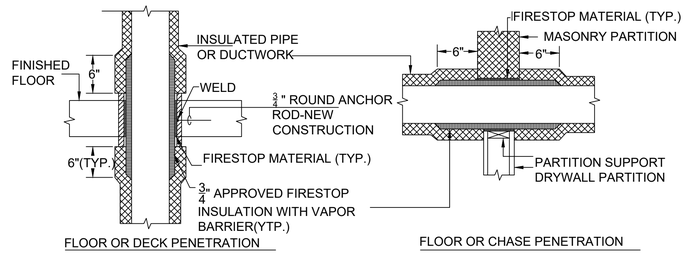
## HOT WATER CONTROLS
SCALE: N.T.S




UNIT MAKE AND MODEL SHALL BE FROM THE DCWASA LIST OF APPROVED DEVICES. UNIT SHALL BE INSTALLED BY A LICENSED PLUMBER PER DCWASA REQUIREMENTS. CONTRACTOR SHALL PROVIDE TESTING BY CERTIFIED BACKFLOW PREVENTION ASSEMBLY TESTER, WHO IS ALSO A LICENSED PLUMBER, UPON INSTALLATION, PER DCWASA REQUIREMENTS.

DOUBLE DETECTOR VALVE ASSEMBLY ON SPRINKLER SERVICE (ASSE1048) DOUBLE CHECK VALVE ASSEMBLY ON DOMESTIC SERVICE WATTS 001 (ASSE 1015)

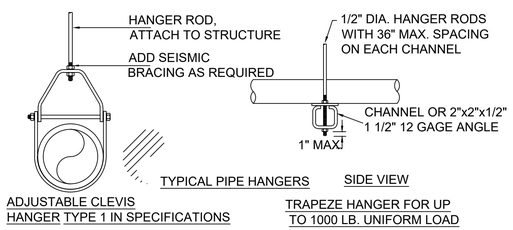
## BACKFLOW PREVENTER INSTALLATION DETAIL
SCALE: N.T.S



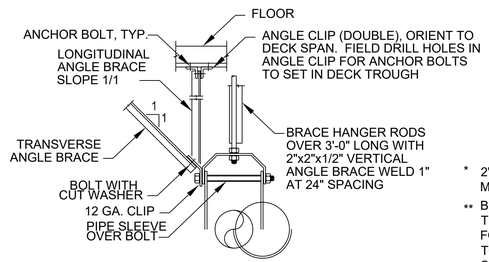

NOTE:
APPLICABLE TO PENETRATIONS ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101. REFER TO SPECIFICATIONS SECTION 07270, FIRE STOPPING SYSTEMS.

## PENETRATION OF FIRE/SMOKE BARRIERS
SCALE: N.T.S

| MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NOM. SIZE | THRU 1" | 1 | 11/4 | 11/2 | 2 | 21/2 | 3 | 4 |
| PIPE | 7 FT | 7 | 7 | 9 | 10 | 11 | 12 | 14 |
| TUBING | 5 FT | 6 | 7 | 8 | 8 | 9 | 10 | 12 |
| NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE. | | | | | | | | |




## PIPE HANGER DETAIL
SCALE: N.T.S



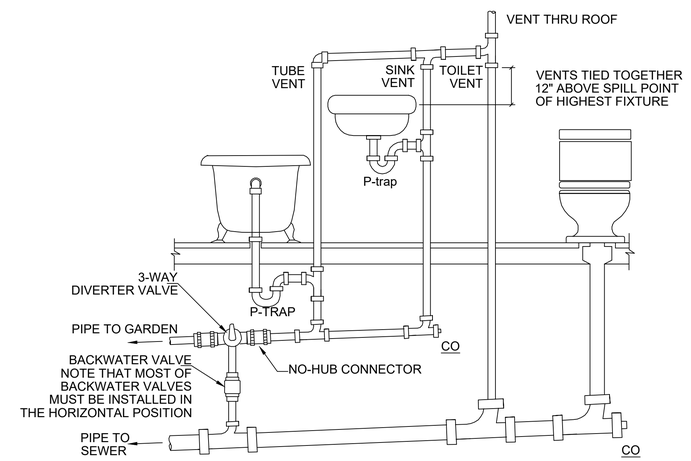

| PIPE SIZE | ANGLE BRACE * | BOLT TO ANGLE | ANGLE CLIP ** | ANCHOR BOLTS OR INSERTS *** |
|---|---|---|---|---|
| 2" | 2"x2" 16 GA. | 1/2" | 3"x3"x1/2"x1'-4" | 1/2 |
| 3, 4 | 2"x2" 16 GA. | 1/2" | 3"x3"x1/2"x1'-4" | 1/2 |
| 5, 6 | 2.5"x2.5" 16 GA. | 1/2" | 5"x3"x1/2"x1'-4" | 1/2 |
| 8 | 3"x3" 12 GA. | 1/2" | 2-5x3x1/2x1'-4" | 2 |
| 10 | 3"x3" 12 GA. | 1" | 2-5x3x1/2"x1'-4" | 2 |

* 2"x 2"x12 GA. CHANNEL MAY BE USED

** BENT PLATE OF EQUAL THICKNESS MAY BE SUBSTITUTED FOR LONGITUDINAL ANGLE CLIP TO FACILITATE ANCHORAGE TO SLAB TROUGHS. PROVIDE EQUAL NUMBER OF ANCHOR BOLTS TO THAT SHOWN.

*** PROVIDE MINIMUM EMBEDMENT OF 1 1/2" ABOVE TOP OF METAL DECK FOR ALL ANCHOR BOLTS.

## PIPE SUPPORT DETAIL
SCALE: N.T.S




## BATHROOM DRAIN CONNECTION
SCALE: N.T.S

REVISIONS

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

PLUMBING EQUIPMENT
SCHEDULES & DETAILS

SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

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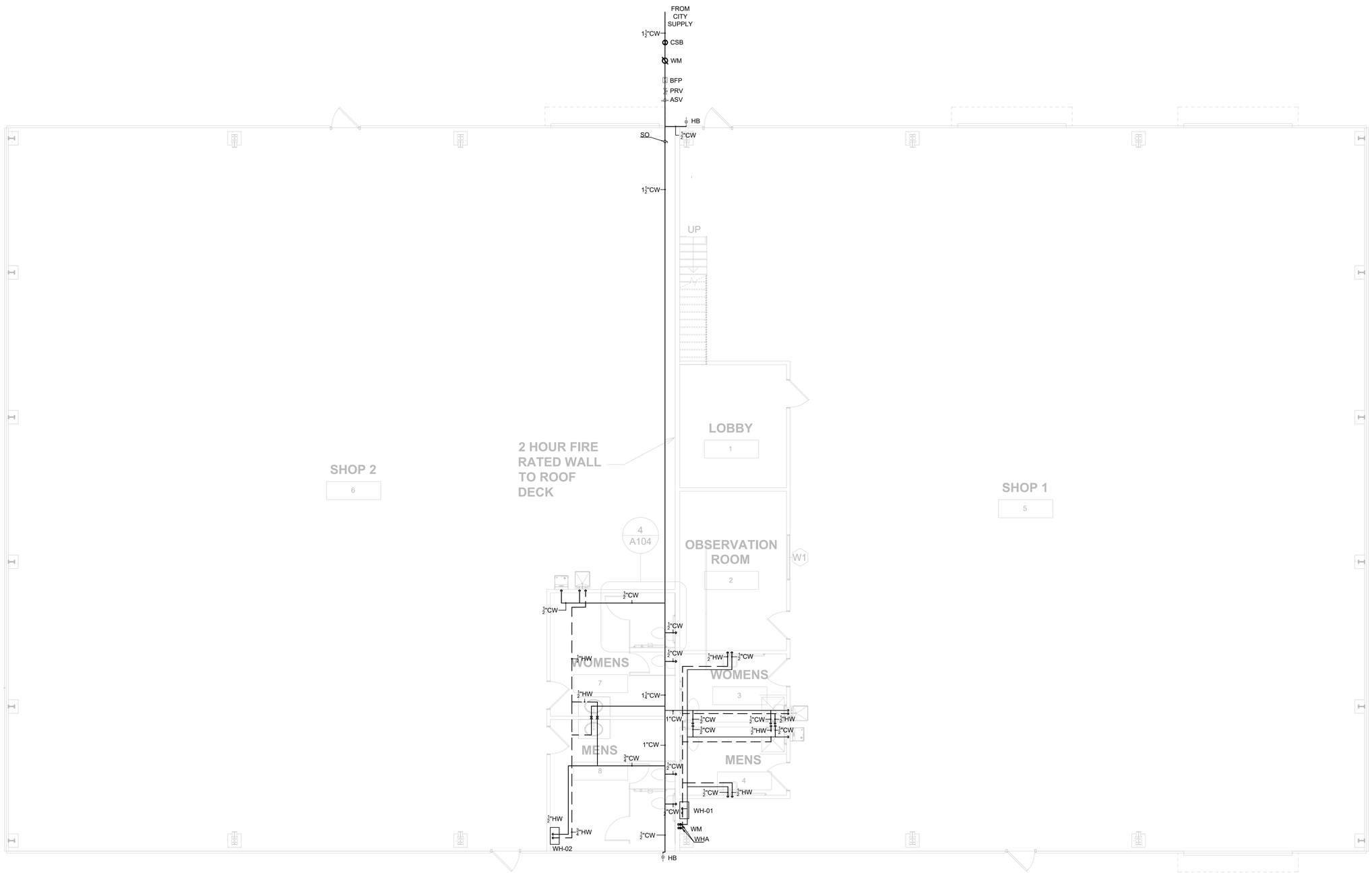
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P002 | 22-4006 |




1ST FLOOR WATER SUPPLY PLAN
SCALE 3/16" = 1'-0"

NOTE:
1. ALL WATER SUPPLY PIPES ARE TO BE RUN UNDERGROUND.

REVISIONS

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

PLUMBING FLOOR PLAN

SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

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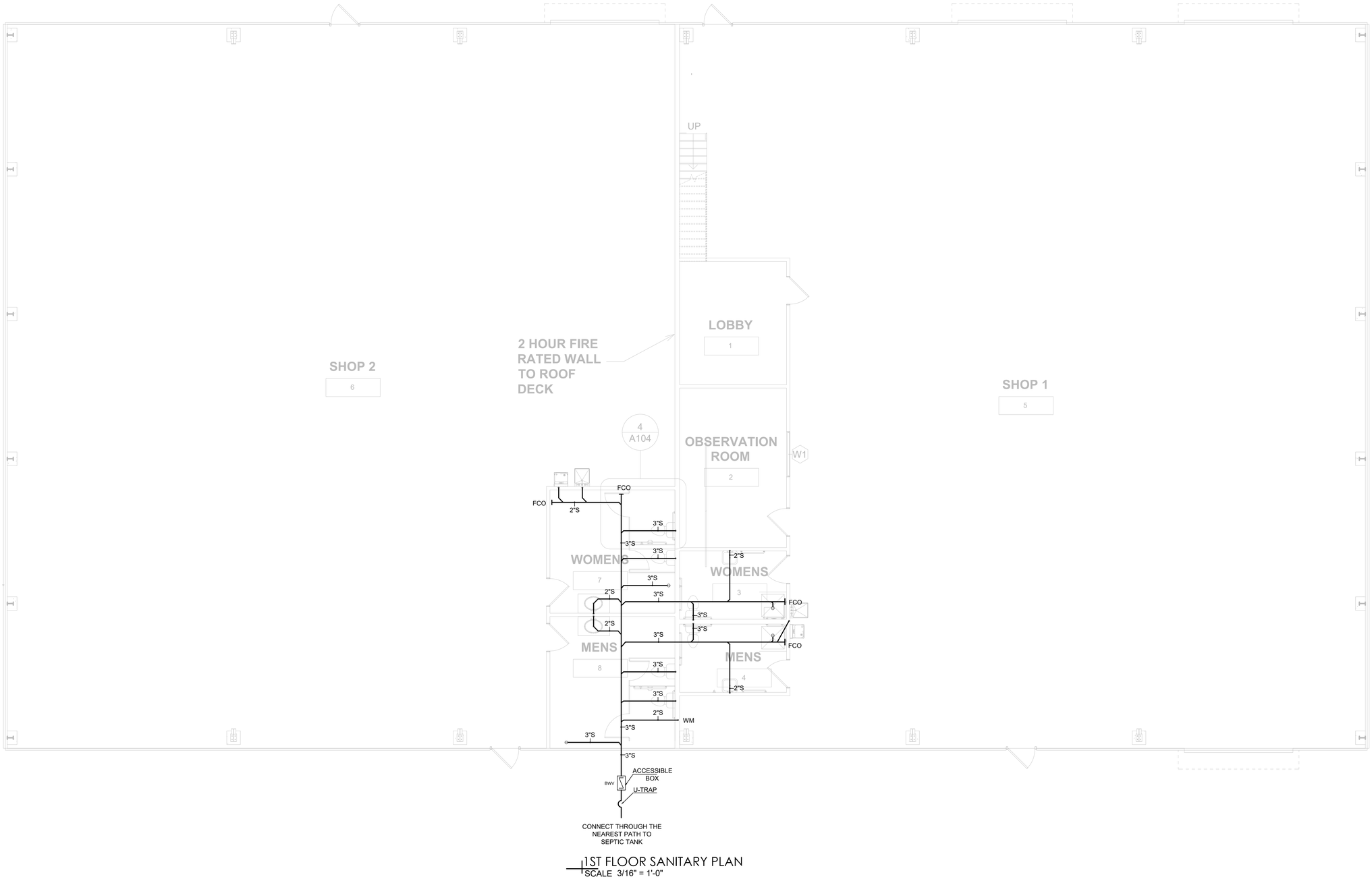
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P101 | 22-4006 |




1ST FLOOR SANITARY PLAN
SCALE 3/16" = 1'-0"

| NO. | DATE | REVISIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

PLUMBING FLOOR PLAN

SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

PROFESSIONAL SEAL

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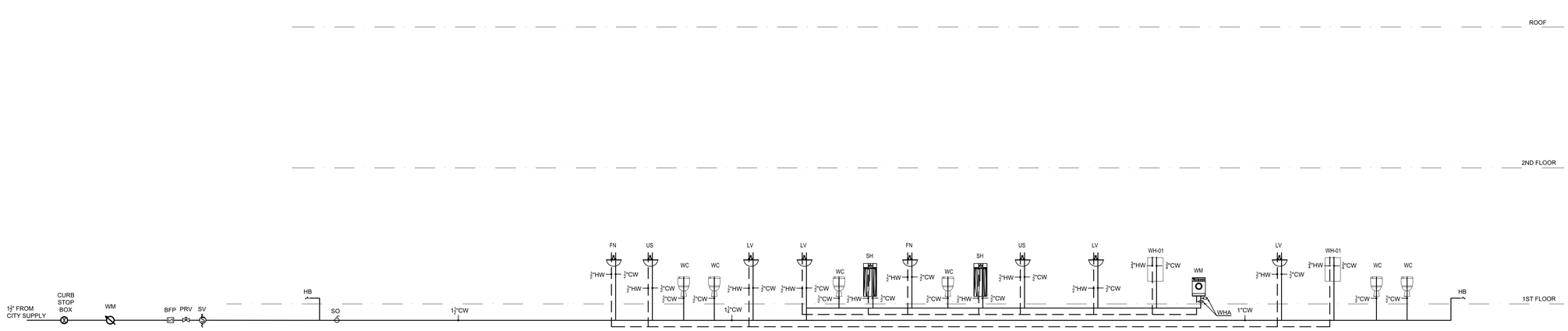
| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P102 | 22-4006 |




NOTE:

1. 1" - 2" METER SETTER REQUIRED A METER VALVE ON EACH SIDE (NOT SHOWN IN DETAIL).
2. IF THE BUILDING OR APPROVED PROJECTION IS AT OR EXTENDS BEYOND THE PROPERTY LINE, THE CURD STOP SHALL BE PLACED 18 INCHES FROM FACE OF BUILDING OR APPROVED PROJECTION.
3. FOR NEW BUILDING CONSTRUCTION ONLY: THE FIRE SERVICE LINE SHALL INCLUDE A SHUT-OFF VALVE INSTALLED INSIDE THE BUILDING.
4. FOR NEW BUILDING CONSTRUCTION ONLY: THE DOMESTIC SERVICE LINE SHALL INCLUDE A PRESSURE REDUCING VALVE AND SHUT-OFF VALVE INSTALLED THE BUILDING.
5. SEE PLUMBING FLOOR PLANS FOR THE PIPE SIZE DETAILS.

WATER SUPPLY SCHEMATIC
SCALE : NTS

# WATER SUPPLY SCHEMATIC

SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

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PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA

08/01/2023

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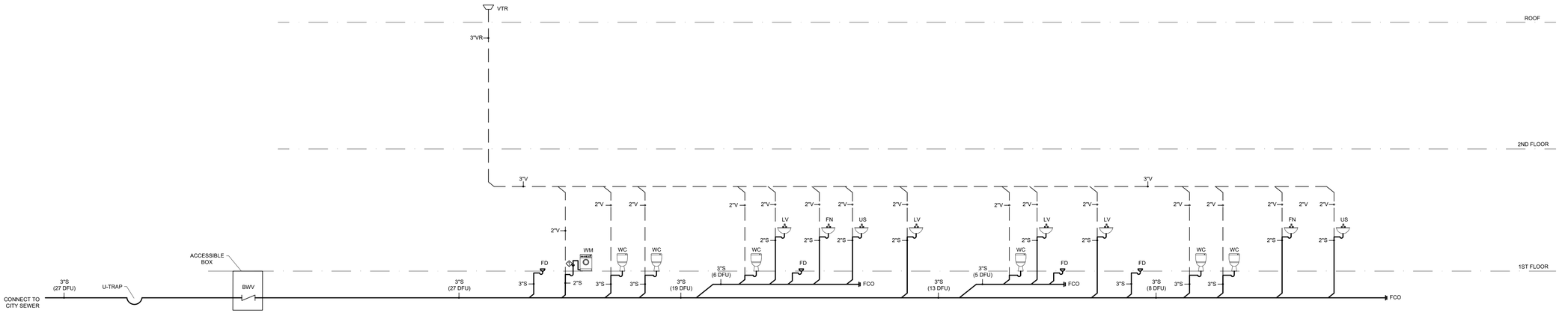
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P201 | 22-4006 |




◇ DRAWING NOTES:

◇1 WASHING MACHINES DISCHARGING THROUGH AN AIR BREAK.

NOTES
1. CLEAN OUTS SHALL BE ACCESSIBLE COORDINATE AT THE FIELD AND COORDINATE WITH ARCHITECTURAL PLANS PROVIDE REQUIRED ACCESS PANELS WHERE APPLICABLE.

SANITARY SCHEMATIC
SCALE : NTS

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 0 | 07/26/2023 | FOR SUBMITTALS |

REVISIONS

# SANITARY SCHEMATIC

SITE ADDRESS:
**2659 Hwy 87 S.**
Cameron,NC 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 055950 ENGINEER RABIN P. OJHA
08/01/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
8045 ARCO CORPORATE DR.,
RALEIGH, NC 27617
PHONE:919.267.3004
EMAIL:INFO@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | ST |
| CHECKED BY: | MKC |
| DATE: | 07/26/2023 |
| SCALE: | AS SHOWN |
| P202 | 22-4006 |

## 2018 APPENDIX B
## BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
**(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: PHALANX CROOSFIT
Address: 2659 HWY 87 S., CAMERON, NC Zip Code: 28326
Owner/Authorized Agent: EQUAGEN PLLC Phone #: ( 919) 267-3004 E-Mail: info@equagen.com

Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☐ City CAMERON ☒ County HARNETT ☐ State NC

CONTACT: _____

| DESIGNER | FIRM | NAME | LICENSE # | TELEPHONE # | E-MAIL |
|---|---|---|---|---|---|
| Architectural | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Civil | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Electrical | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Fire Alarm | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Plumbing | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Mechanical | Equagen PLLC | Moti KC | 042307 | (919)267-3004 | moti.kc@equagen.com |
| Sprinkler-Standpipe | N/A | | | ( ) | |
| Structural | Equagen PLLC | RABIN P.OJHA | 042307 | (919)267-3004 | rabin.ojha@equagen.com |
| Retaining Walls >5' High | N/A | | | ( ) | |
| Other | | | | ( ) | |

**2018 NC BUILDING CODE:** ☒ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

**2018 NC EXISTING BUILDING CODE: EXISTING:** ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use
CONSTRUCTED: (date) N/A CURRENT OCCUPANCY(S) (Ch. 3): N/A
RENOVATED: (date) N/A PROPOSED OCCUPANCY(S) (Ch. 3): A-3; B

**OCCUPANT LOAD CALCULATION:**

| OCCUPANCY | AREA (in sq.ft) | OCCUPANT LOAD FACTOR (per Table 1004.1.2) | OCCUPANT LOAD |
|---|---|---|---|
| A-3 | 6000 | 50 gross (exercise rooms with equipment) | 120 |
| B | 6000 | 100 gross (Business areas) | 60 |
| | | **TOTAL DESIGN OCCUPANT LOAD:** | **180** |

**RISK CATEGORY (Table 1604.5):** **Current:** ☐ I ☒ II ☐ III ☐ IV
**Proposed:** ☐ I ☐ II ☐ III ☐ IV

**BASIC BUILDING DATA**
**Construction Type:** ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☒ III-B ☐ IV ☐ V-A ☐ V-B
**Sprinklers:** ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
**Standpipes:** ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
**Fire District:** ☐ No ☒ Yes **Flood Hazard Area:** ☒ No ☐ Yes
**Special Inspections Required:** ☒ **No** ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

**Gross Building Area Table**

| FLOOR | EXISTING (SQ FT) | NEW (SQ FT) | SUB-TOTAL |
|---|---|---|---|
| 3rd Floor | | - | |
| 2nd Floor | | - | |
| Mezzanine | | 480 | |
| 1st Floor | | 12000 | |
| Basement | | - | |
| TOTAL | | 12000 | |

**ALLOWABLE AREA**

**Primary Occupancy Classification(s):**
Assembly ☐ A-1 ☐ A-2 ☒ A-3 ☐ A-4 ☐ A-5
Business ☒
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

**Accessory Occupancy Classification(s):** N/A
Incidental Uses (Table 509): N/A
**Special Uses (Chapter 4 – List Code Sections):** 411
**Special Provisions: (Chapter 5 – List Code Sections):** N/A
**Mixed Occupancy:** ☐ No ☒ Yes Separation: 2 Hr. Exception: _____

☐ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☒ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B ≤ 1

0.63 + 0.32 + ..... = 0.95 ≤ 1.00

| STORY NO. | DESCRIPTION AND USE | (A) BLDG AREA PER STORY (ACTUAL) | (B) TABLE 506.2 AREA | (C) AREA FOR FRONTAGE INCREASE[1,5] | (D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3] |
|---|---|---|---|---|---|
| 1 | SHOP 1 (GYM) | 6000 | 9500 | | |
| 2 | SHOP 2 (BUSINESS) | 6000 | 19000 | | |

1 Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = ___ (P)
c. Ratio (F/P) = _(F/P)
d. W = Minimum width of public way = _(W)
e. Percent of frontage increase If = 100[F/P – 0.25] x W/30 = _____ (%)
2 Unlimited area applicable under conditions of Section 507.
3 Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).
4 The maximum area of open parking garages must comply with Table 406.5.4.
5 Frontage increase is based on the unsprinklered area value in Table 506.2.

**ALLOWABLE HEIGHT**

| | ALLOWABLE | SHOWN ON PLANS | CODE REFERENCE 1 |
|---|---|---|---|
| Building Height in Feet | 55 | 25 | TABLE 504.3 |
| Building Height in Stories | 2 | 1 | TABLE 504.4 |

1 Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
2 The maximum height of air traffic control towers must comply with Table 412.3.1.
3 The maximum height of open parking garages must comply with Table 406.5.4.

**FIRE PROTECTION REQUIREMENTS**

| BUILDING ELEMENT | FIRE SEPARATION DISTANCE (FEET) | REQ'D | RATING PROVIDED (W/_____* REDUCTION) | DETAIL # AND SHEET # | DESIGN # FOR RATED ASSEMBLY | SHEET # FOR RATED PENETRATION | SHEET # FOR RATED JOINTS |
|---|---|---|---|---|---|---|---|
| Structural Frame, including columns, girders, trusses | 30+ | 0HR | 0HR | | | | |
| Bearing Walls | | | | | | | |
| Exterior | | | | | | | |
| North | 30+ | 0HR | 0HR | | | | |
| East | 30+ | 0HR | 0HR | | | | |
| West | 30+ | 0HR | 0HR | | | | |
| South | 30+ | 0HR | 0HR | | | | |
| Interior | | | | | | | |
| Nonbearing Walls and Partitions | | | | | | | |
| Exterior walls | | | | | | | |
| North | | | | | | | |
| East | | | | | | | |
| West | | | | | | | |
| South | | | | | | | |
| Interior walls and partitions | | | | | | | |
| Floor Construction | | | | | | | |
| Including supporting beams and joists | | | | | | | |
| Floor Ceiling Assembly | | | | | | | |
| Columns Supporting Floors | | | | | | | |
| Roof Construction, including supporting beams and joists | | | | | | | |
| Roof Ceiling Assembly | | | | | | | |
| Columns Supporting Roof | | | | | | | |
| Shaft Enclosures - Exit | | | | | | | |
| Shaft Enclosures - Other | | | | | | | |
| Corridor Separation | | | | | | | |
| Occupancy/Fire Barrier Separation | | 2HR | 2HR | | | | |
| Party/Fire Wall Separation | | | | | | | |
| Smoke Barrier Separation | | | | | | | |
| Smoke Partition | | | | | | | |
| Tenant/Dwelling Unit/ Sleeping Unit Separation | | | | | | | |
| Incidental Use Separation | | | | | | | |

* Indicate section number permitting reduction

**ACCESSIBLE DWELLING UNITS**
(SECTION 1107)

| TOTAL UNITS | ACCESSIBLE UNITS REQUIRED | ACCESSIBLE UNITS PROVIDED | TYPE A UNITS REQUIRED | TYPE A UNITS PROVIDED | TYPE B UNITS REQUIRED | TYPE B UNITS PROVIDED | TOTAL ACCESSIBLE UNITS PROVIDED |
|---|---|---|---|---|---|---|---|
| N/A | | | | | | | |

**ACCESSIBLE PARKING**
(SECTION 1106)

| LOT OR PARKING AREA | TOTAL # OF PARKING SPACES REQUIRED | TOTAL # OF PARKING SPACES PROVIDED | # OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE | VAN SPACES WITH 132" ACCESS AISLE | VAN SPACES WITH 8' ACCESS AISLE | TOTAL # ACCESSIBLE PROVIDED |
|---|---|---|---|---|---|---|
| 2420 SF | 4 | 4 | 3 | - | 1 | 4 |

**PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)**

| USE | | WATERCLOSETS MALE | WATERCLOSETS FEMALE | WATERCLOSETS UNISEX | URINALS | LAVATORIES MALE | LAVATORIES FEMALE | LAVATORIES UNISEX | SHOWERS / TUBS | DRINKING FOUNTAINS REGULAR | DRINKING FOUNTAINS ACCESSIBLE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GYM | EXIST'G | - | - | - | - | - | - | - | - | - | - |
| | NEW | 1 | 1 | - | - | 1 | 1 | 1 | 2 | - | 1 |
| | REQ'D | 1 | 1 | - | - | - | - | 1 | - | | 1 |
| BUSINESS | EXIST'G | - | - | - | - | - | - | - | - | - | - |
| | NEW | 2 | 2 | - | - | 1 | 1 | 1 | - | - | 1 |
| | REQ'D | 2 | 2 | - | - | 1 | 1 | - | - | | 1 |

Based on Section 2902.1.1; the total occupant load of 120 is divided equally for each sex for gym space. Male occupant load=60; Female occupant load=60
Based on Section 2902.1.1; the total occupant load of 60 is divided equally for each sex for business space. Male occupant load=30; Female occupant load=30

**SPECIAL APPROVALS**

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

_____

_____

**PERCENTAGE OF WALL OPENING CALCULATIONS**

| FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES | DEGREE OF OPENINGS PROTECTION (TABLE 705.8) | ALLOWABLE AREA (%) | ACTUAL SHOWN ON PLANS (%) |
|---|---|---|---|

**LIFE SAFETY SYSTEM REQUIREMENTS**

| | | |
|---|---|---|
| Emergency Lighting: | ☐ No | ☒ Yes |
| Exit Signs: | ☐ No | ☒ Yes |
| Fire Alarm: | ☒ No | ☐ Yes |
| Smoke Detection Systems: | ☐ No | ☒ Yes ☐ Partial _____ |
| Carbon Monoxide Detection: | ☐ No | ☒ Yes |

**LIFE SAFETY PLAN REQUIREMENTS**

Life Safety Plan Sheet #:A00

☒ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations (if not on the site plan)
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
☒ Occupant loads for each area
☒ Exit access travel distances (1017)
☐ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
☐ Dead end lengths (1020.4)
☒ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
☒ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1010.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1030)
☐ The square footage of each fire area (202)
☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

## 2018 APPENDIX B
## BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
**MECHANICAL DESIGN**
**(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

**MECHANICAL SUMMARY**

**MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT**

**Thermal Zone**
winter dry bulb: 47 F
summer dry bulb: 80 F

**Interior design conditions**
winter dry bulb: 55 F
summer dry bulb: 54 F
relative humidity: 58 %

**Building heating load:** 308 MBH

**Building cooling load:**

**Mechanical Spacing Conditioning System**
Unitary
description of unit:
heating efficiency: _____
cooling efficiency: _____
size category of unit: ONE 4,3 AND 2 TON MINI-SPLIT UNIT
Boiler
Size category. If oversized, state reason.: _____
Chiller
Size category. If oversized, state reason.: _____

**List equipment efficiencies:**

## 2018 APPENDIX B
## BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
**ELECTRICAL DESIGN**
**(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

**ELECTRICAL SUMMARY**

**ELECTRICAL SYSTEM AND EQUIPMENT**

**Method of Compliance: Energy Code** ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☒ Prescriptive

Lighting schedule (each fixture type) ONE 4,3 AND 2 TON MINI-SPLIT UNIT
lamp type required in fixture: STRIP LED LIGHT
number of lamps in fixture: SINGLE LAMP IN ONE FIXTURE
total wattage per fixture: 40 W PER FIXTURE
total interior wattage specified vs. allowed (whole building or space by space): 2780W SPECIFIED VS 3175W ALLOWED (BUILDING AREA METHOD)
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

**ENERGY SUMMARY**

**ENERGY REQUIREMENTS:**

The following data shall be considered minimum and any special attribute required to meet the 2018 North Carolina State Building Code : Energy Conservation Code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design versus the annual energy cost for the proposed design.

**Existing building envelope complies with code:** ☐ No ☐ Yes (The remainder of this section is not applicable)

**Exempt Building:** ☐ No ☐ Yes (Provide code or statutory reference): _____

**Climate Zone:** ☐ 3A ☒ 4A ☐ 5A

**Method of Compliance: Energy Code** ☐ Performance ☒ Prescriptive

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Standing Seam Metal Roof
U-Value of total assembly: _____
R-Value of insulation: R-30
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: Steel Studs, Girts
U-Value of total assembly: _____
R-Value of insulation: R-19
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

**Walls below grade (each assembly)**
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

**Floors over unconditioned space (each assembly)**
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

**Floors slab on grade**
Description of assembly: Concrete slab on grade
U-Value of total assembly: _____
R-Value of insulation: R-15
Horizontal/vertical requirement: 24"
slab heated: No

## 2018 APPENDIX B
## BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
**STRUCTURAL DESIGN**
**(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

**DESIGN LOADS:**

**Importance Factors:** Snow (IS) 1.00 Seismic (IE) 1.00

**Live Loads:** Roof 20 psf
Mezzanine _____ psf
Floor 100 psf (MAIN FLOOR)

**Ground Snow Load:** 10 psf

**Wind Load:** Ultimate Wind Speed 120 mph (ASCE-7)
Exposure Category C

**SEISMIC DESIGN CATEGORY:** ☐ A ☐ B ☒ C ☐ D
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) ☐ I ☒ II ☐ III ☐ IV
**Spectral Response Acceleration** SS 20.5 %g S1 9.3 %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F
Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data
**Basic structural system** ☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☒ Moment Frame ☐ Inverted Pendulum
**Analysis Procedure:** ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic
**Architectural, Mechanical, Components anchored?** ☐ Yes ☒ No

**LATERAL DESIGN CONTROL:** Earthquake ☐ Wind ☒

**SOIL BEARING CAPACITIES:**
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 1500 psf
Pile size, type, and capacity _____

| NO. | DATE | DESCRIPTIONS |
|---|---|---|
| 3 | 08/01/2023 | REVISION 3 |
| 2 | 06/19/2023 | REVISION 2 |
| 1 | 05/17/2023 | REVISION 1 |
| 0 | 05/02/2023 | SUBMITTAL |

REVISIONS

APPENDIX B

SITE ADDRESS:
2659 Highway 87 S. Cameron,
North Carolina 28326

PROFESSIONAL SEAL

NORTH CAROLINA PROFESSIONAL SEAL 058950 ENGINEER RABIN P. OJHA
08/01/2023

EEI EQUAGEN ENGINEERING & INSPECTIONS
FIRM LIC. # 1869
121 EDINBURGH SOUTH DRIVE, SUITE 103
CARY, NC 27511
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EMAIL:MOTI.KC@EQUAGEN.COM

| | |
|---|---|
| DRAWN BY: | BR |
| CHECKED BY: | RO |
| DATE: | 08/01/2023 |
| SCALE: | AS SHOWN |
| | 22-4006 |