# Union County Senior Center - Addition 95 Senior Center Drive Blairsville, Georgia 30512 95 Ser

# PROJECT TEAM

# OWNER

# ARCHITECT

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STRUCTURAL ENGINEER

EMAIL: rsmith@gsstj.com

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ELECTRICAL ENGINEER

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> CONTACT: BRIAN M. ARMENTA TELEPHONE: 404.394.1147 EMAIL: BRIAN@PROFICIENTENGINEERING.COM

# GENERAL NOTES

# PROJ. NOTES / APP. CODES

INTERNATIONAL BUILDING CODE (IBC): 2018 EDITION WITH GA AMENDMENTS. NATIONAL ELECTRIC CODE (NEC): 2020 EDITION

INTERNATIONAL FUEL GAS CODE (IFGC): 2018 EDITION WITH GA AMENDMENT. INTERNATIONAL MECHANICAL CODE (IMC): 2018 EDITION WITH GA AMENDMENTS INTERNATIONAL PLUMBING CODE (IPC): 2018 EDITION WITH GA AMENDMENTS

INTERNATIONAL ENERGY CONSERVATION CODE (IECC): 2015 EDITION WITH GA SUPPLEMENTS AND AMENDMENTS INTERNATIONAL FIRE CODE (IFC): 2018 EDITION

GEORGIA ACCESSIBILITY CODE - GAC 120-3-20 - 2015 EDITION

NATIONAL FIRE PROTECTION ASSOCIATION 101 LIFE SAFETY CODE (LSC): 2012 EDITION U.S. DEPT. OF JUSTICE A.D.A. STANDARDS FOR ACCESSIBLE DESIGN (ADA): 2010 EDITION CHAPTER 120-3-3 RULES AND REGULATIONS FOR THE STATE MIN. FIRE STANDARDS IN GA

# VICINITY MAP

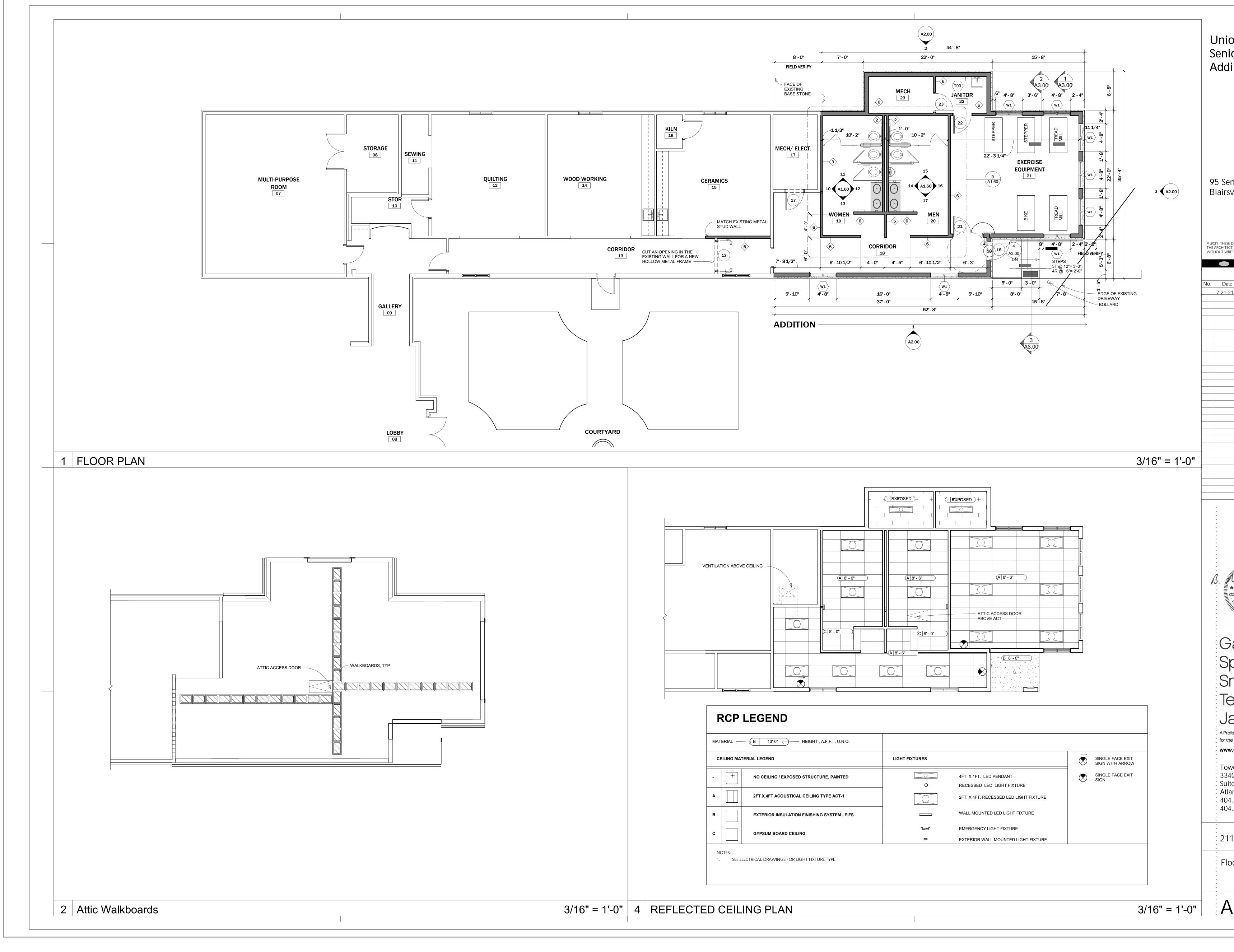


|  | INDEX OF DRAWINGS  | ISS<br>CON  |
|--|--|---|
| DO NOT SCALE DRAWINGS. USE WRITTEN DIMENSIONS ONLY. SUBMIT ANY DISCREPANCIES TO THE ARCHITECT FOR CLARIFICATION PRIOR TO EXECUTION OF THE WORK IN QUESTION.<br>ALL DIMENSIONS ARE TO FACE OF FINISH MATERIAL OR CENTERLINE OF FIXTURE UNLESS CLEARLY SHOWN OR NOTED OTHERWISE.<br>THE LOCATION OF THE EXISTING UTILITIES AND STRUCTURES SHOWN IN THE DOCUMENTS ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE<br>AND ACTUAL LOCATION OF SUCH, WHETHER SHOWN HEREON OR NOT, PRIOR TO ANY EXCAVATION.<br>PROVIDE CONTROL JOINTS IN GYPSUM WALL BOARD AS SHOWN IN THE DRAWINGS. OR IF NOT SHOWN, MAXIMUM ALLOWED PER MANUFACTURERS SPECIFICATION.<br>TIGHTLY SEAL ANY OPENINGS IN FIRE RATED WALLS BY DUCTS, PIPES, CONDUIT, STRUCTURAL MEMBERS, OR ANY OTHER MATERIALS. OPENINGS IN METAL STUD PARTITIONS SHALL BE SEALED<br>WITH FIRE SAFING.<br>ALL GYPSUM WALL BOARD MATERIAL IN FIRE RATED ASSEMBLIES SHALL BE FIRE RESISTIVE UL CLASSIFIED MATERIAL APPLIED IN STRICT COMPLIANCE TO THE APPLICABLE FIRE TEST DESIGN WITH<br>JOINTS ON OPPOSITE WALL FACES STAGGERED. FASTENERS SHALL BE OF APPROVED TYPE AND INSTALLED IN ACCORDANCE WITH APPLICABLE FIRE TEST. ALL WALLBOARD JOINTS IN ALL<br>PARTITION WALLS SHALL BE TAPED AND FINISHED WITH JOINT COMPOUND, INCLUDING THOSE ABOVE THE FINISHED CEILING. PENETRATIONS FOR PIPES, CONDUIT, FRAMING MEMBERS, DUCTS,<br>ETC. SHALL BE FRAMED WITH RUNNER CHANNELS AND TIGHTLY SEALED. SUCH PENETRATIONS SHALL BE TIGHTLY PACKED WITH MINERAL FIBER SAFING INSULATION.<br>IMMEDIATELY NOTIFY ARCHITECT IN WRITING IF ANY DOWISSION, DISCREPANCY, AMBIGUITY OR ERROR IN THE CONTRACT DOCUMENTS BE DISCOVERED OR IF ANY DOUBT AS TO THE MEANING OR<br>INTENT THEREOF SHOULD ARISE. CLARIFICATION WILL BE MADE BY REVISION TO THE CONTRACT DOCUMENTS.  | SHEET NO.     SHEET DESCRIPTION       G0.00     COVER SHEET       CIVIL     CIVIL  | 07/21/2   |
| ALL ATTACHMENTS, SCREWS & BOLTS BETWEEN STRUCTURAL STEEL AND TREATED WOOD, BLOCKING AND NAILERS SHALL BE GALVANIZED.   | CX.XX XXXXXX   | 07/21/2   |
|  | ARCHITECTURAL<br>A1.10 FLOOR PLAN<br>A1.40 ROOF PLAN<br>A1.60 ENLARGED PLAN - TOILETS<br>A2.00 EXTERIOR ELEVATIONS<br>A3.00 WALL SECTIONS<br>A4.00 DOOR & PARTITION SCHEDULE                           | 07/21/2<br>07/21/2<br>07/21/2<br>07/21/2<br>07/21/2 |
|  | A4.00 DOOR & PARTITION SCHEDULE<br>A7.00 FINISH PLAN   | 07/21/2<br>07/21/2                                  |
| NATIONAL FIRE CODE (IFC): 2018 EDITION<br>GIA ACCESSIBILITY CODE - GAC 120-3-20 - 2015 EDITION<br>NAL FIRE PROTECTION ASSOCIATION 101 LIFE SAFETY CODE (LSC): 2012 EDITION<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A  | STRUCTURAL         S0.01       General Notes & Special Inspections         S1.10       Foundation & Roof Plans         S2.10       Foundation Sections & Details         S3.10       Section & Details | 07/21/2<br>07/21/2<br>07/21/2<br>07/21/2            |
| CINITY MAP<br>PROJECT INFORMATION<br>EXISTING BUILDING:<br>OCCUPANCY GROUP: BUSINESS - IBC 2018<br>BUSINESS - NFPA 101 2012  |  |   |
| Weeks Park Disc       95 Senior Center Dr.   | MECHANICAL<br>M0.01 General<br>M1.01 Floor Plan  | 07/21/2<br>07/21/2                                  |
| Building Height       Building Height       Building Height       Building Height (FT.):   | ELECTRICAL<br>E0.01 General<br>E0.02 One Line Schedules & Compliance Report<br>E1.01 Floor Plan  | 07/21/2<br>07/21/2<br>07/21/2                       |
| Pool La<br>Pool La<br>Poo | PLUMBING       P0.01       General Details & Schdules       P1.01       Floor Plans  | 07/21/2   |
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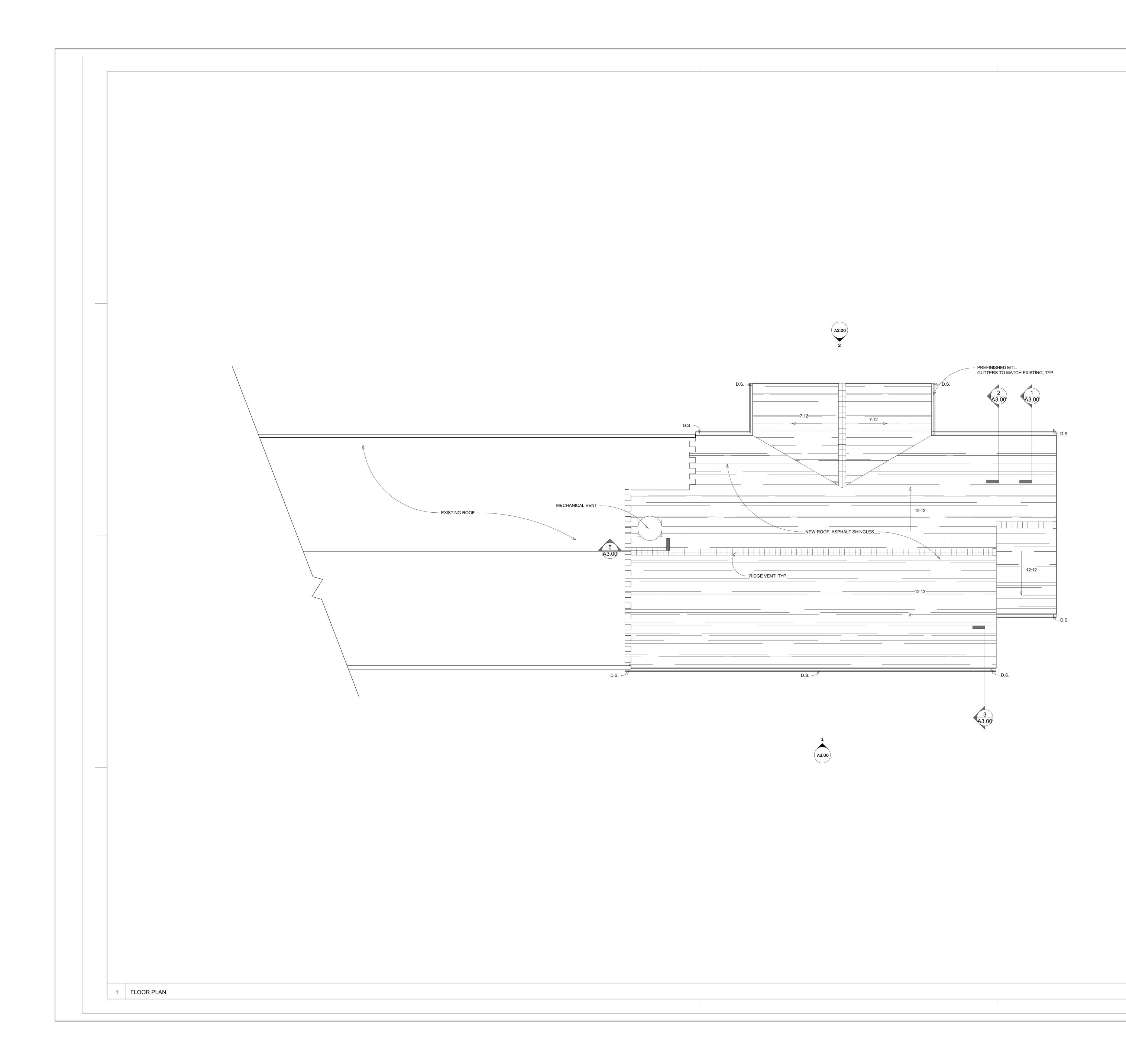
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| wer Place Building,<br>40 Peachtree Road, N.E.<br>te 1800<br>anta, Georgia 30326<br>4.522.8805<br>4.521.2118 (f) |   |  |  |  |  |  |  |
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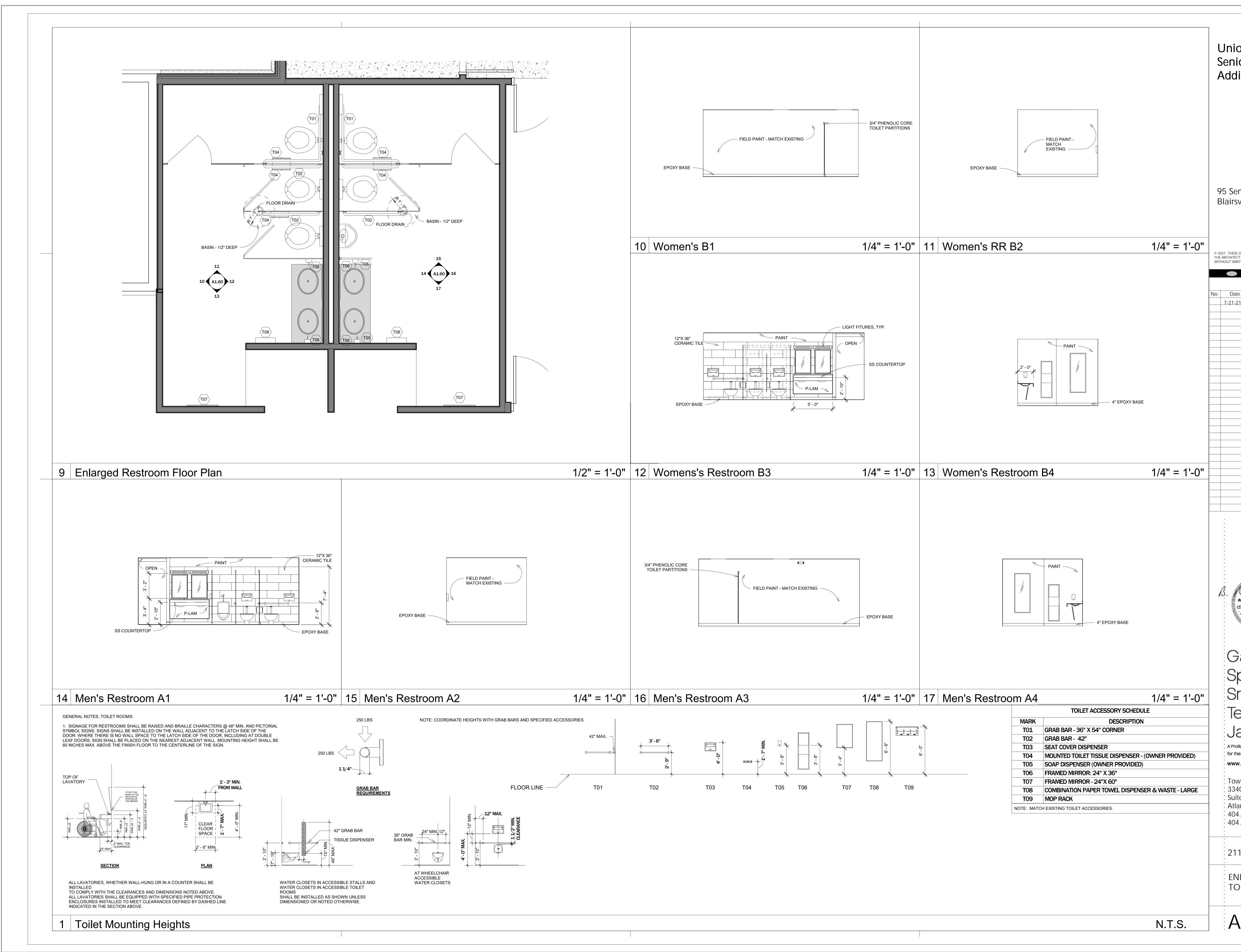
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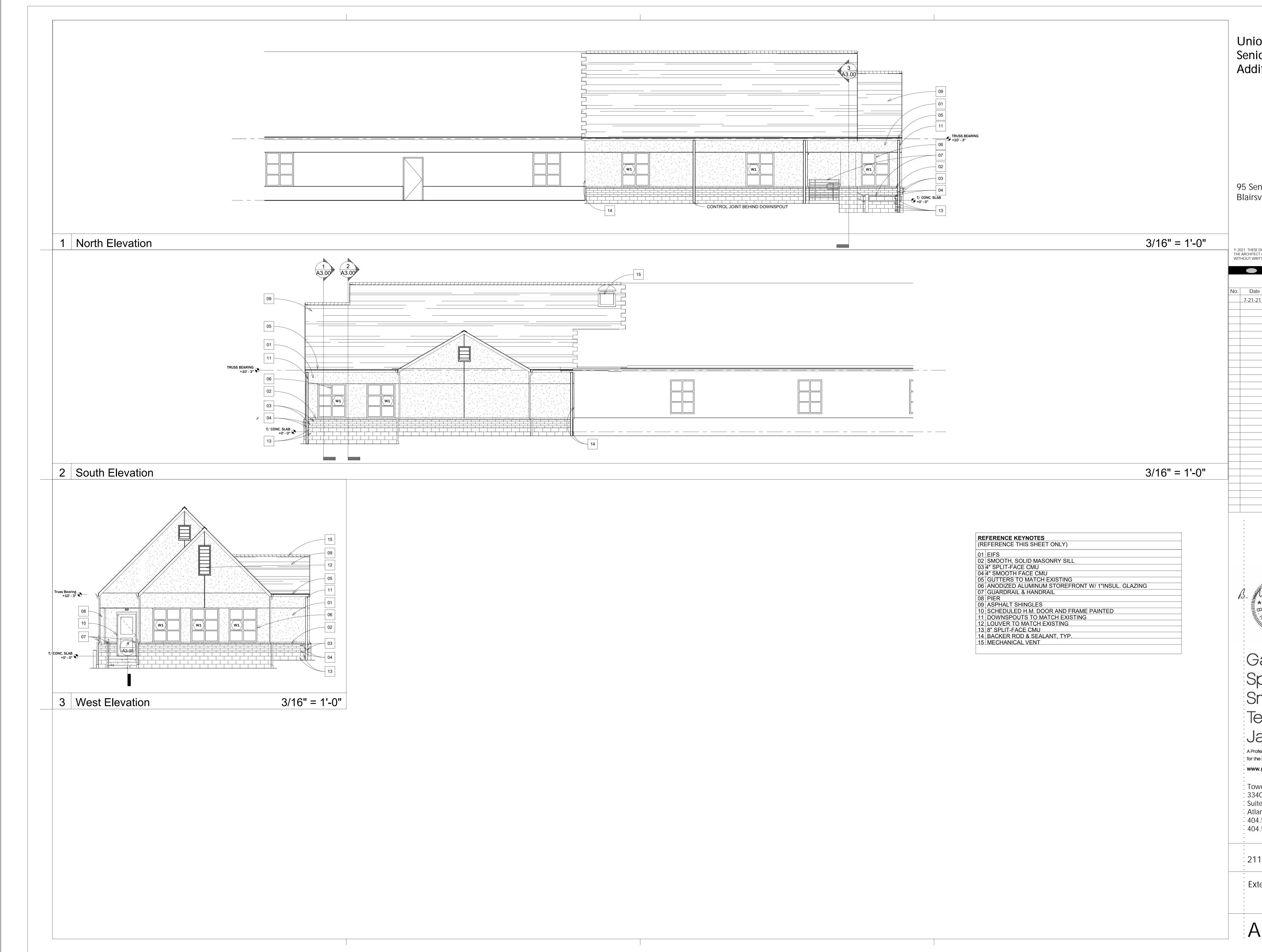
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1/4" = 1'-0"

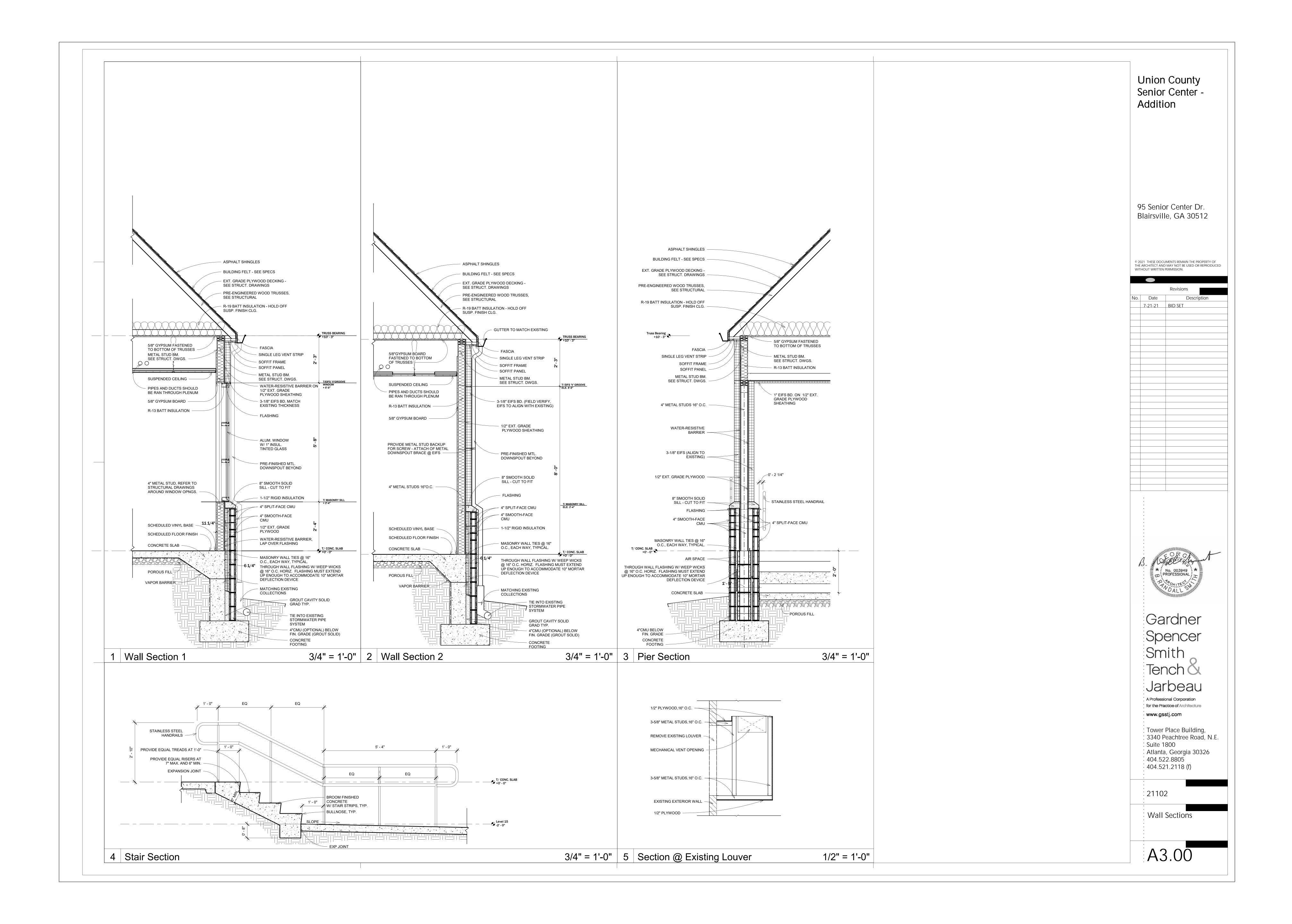
| Union County<br>Senior Center -<br>Addition   |   |                                |  |  |  |  |  |  |
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|   | A Profession<br>for the Pra-<br>www.gss<br>Tower  | Place Building,                |  |  |  |  |  |  |
|   | 3340 Peachtree Road, N.E.<br>Suite 1800<br>Atlanta, Georgia 30326<br>404.522.8805<br>404.521.2118 (f) |                                |  |  |  |  |  |  |
|   | 21102<br>Roof   |                                |  |  |  |  |  |  |
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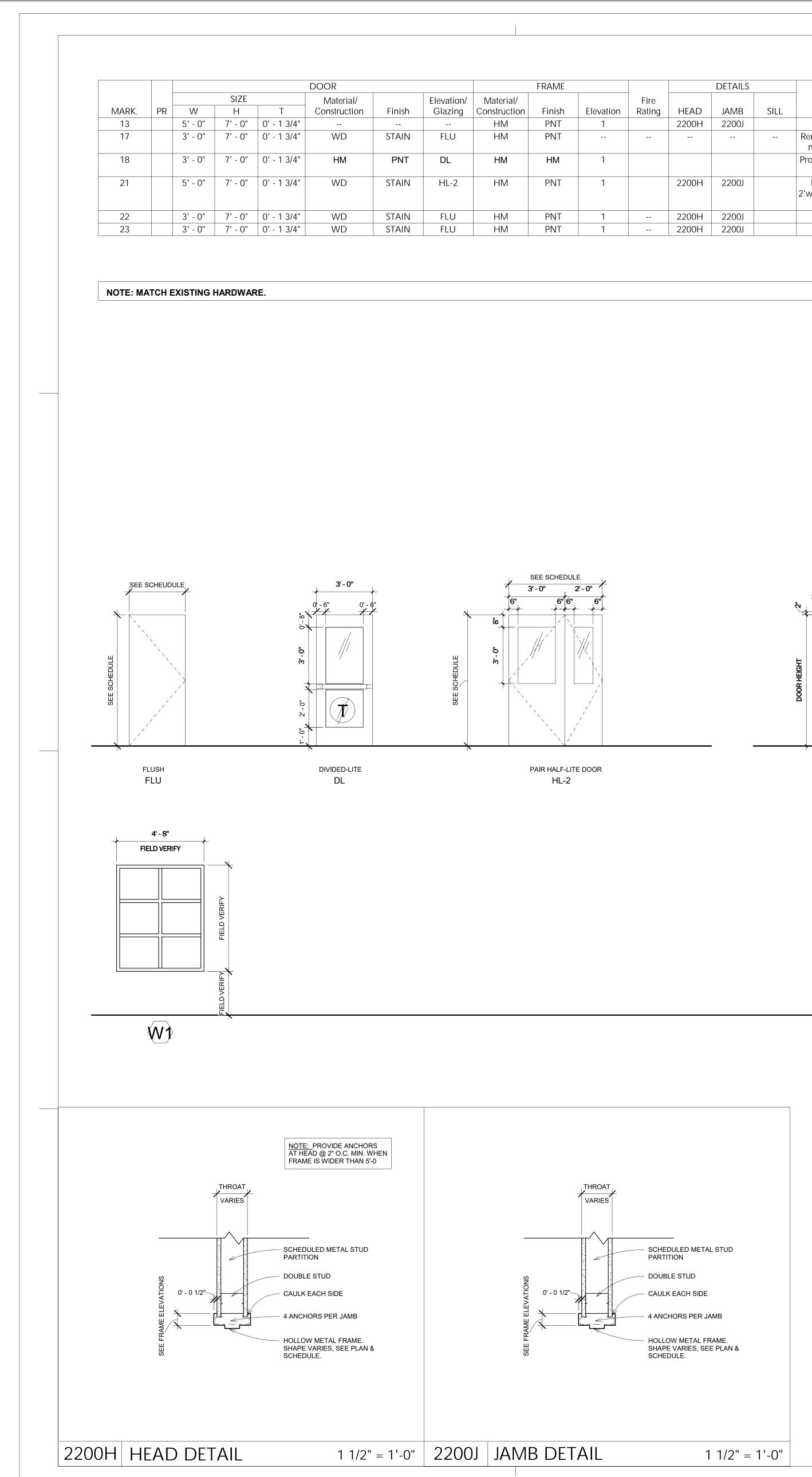


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### ABBREVIATIONS USED IN DOOR SCHEDULES:

- SCWD SOLID CORE FLUSH WOOD DOOR HM - HOLLOW METAL
- SF STOREFRONT OR CURTAIN WALL
- HR HOUR MIN - MINUTE
- PR PAIR ALUM - ALUMINUM
- MANUF MANUFACTURER
- ELEV ELEVATION, SEE DETAILS SHEET SHEET A4.00 VL - VISION LITE
- HL HALF LITE FLT - FULL LITE
- **SL SLIDING DOOR**
- DL DIVIDED LITE OVHD - OVERHEAD COILING DOOR

### **GENERAL DOOR NOTES:**

1. ALL LATCHING DOORS TO HAVE LEVER HANDLED HARDWARE.

2. PROVIDE 12" CLEARANCE ON HE "PUSH" SIDE OF DOOR BETWEEN LEADING EDGE OF DOOR LEAF AND AGJACENT WALL SURFACE IF DOOR HAS BOTH CLOSER AND A LATCH. PROVIDE 18" CLEARANCE ON THE "PULL" SIDE.

3. WEATHER-STRIP ALL EXTERIOR DOORS.

4. PROVIDE RUBBER DOOR SILENCER INSERTS AT ALL HOLLOW METAL DOOR FRAMES.

5. PROVIDE VISIBLE FACTORY-APPLIED LABEL AT ALL RATED DOORS AND FRAMES.

6. PROVIDE FLOOR OR WALL MOUNTED DOOR STOPS AT LOCATIONS WHERE ADJACENT WALLS ARE SUBJECT TO DMAGE WHICH MAY BE CAUSED BY CONTACT WITH DOOR HARDWARE.

7. EXIT DOORS SHALL NOT BE SUBJECT TO THE USE OF A KEY FOR OPERATION FROM THE INSIDE OF THE BUILDING.

8. CONTRACTOR TO COORDINATE AND VERIFY WITH THE OWNERS' RESPRESENTATIVE ANY AND ALL HARDWARE CHOICES AND

9. ALL THRESHOLD AT DOORWAYS SHALL NOT EXCEED 1/2" IN HEIGHT.

10. EACH WINDOW AND DOOR LOCATED IN WALLS WHICH SEPARATE CONDITIONED AND UNCONDITIONED SPACE (INCLUDING BUILDING EXTERIOR) SHALL BE LABELED BY THE MANUFACTURER TO CERTIFY COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL FENESTRATION RATING COUNCIL PER NFRC 100 AND 200 FOR FIELD VERIFICATION BY THE FIELD INSPECTOR.

11. PROVIDE GALVANIZED FRAME.

12. PROVIDE 1/4" MINIMUM LAMINATED GLASS (G2) IN FIRE-RATED DOORS.

13. NOT USED

SPECIFICATIONS.

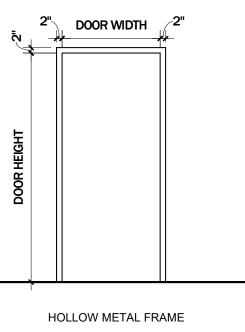
14. PROVIDE ADA OPERATOR

15. PROVIDE SOUND SEALS

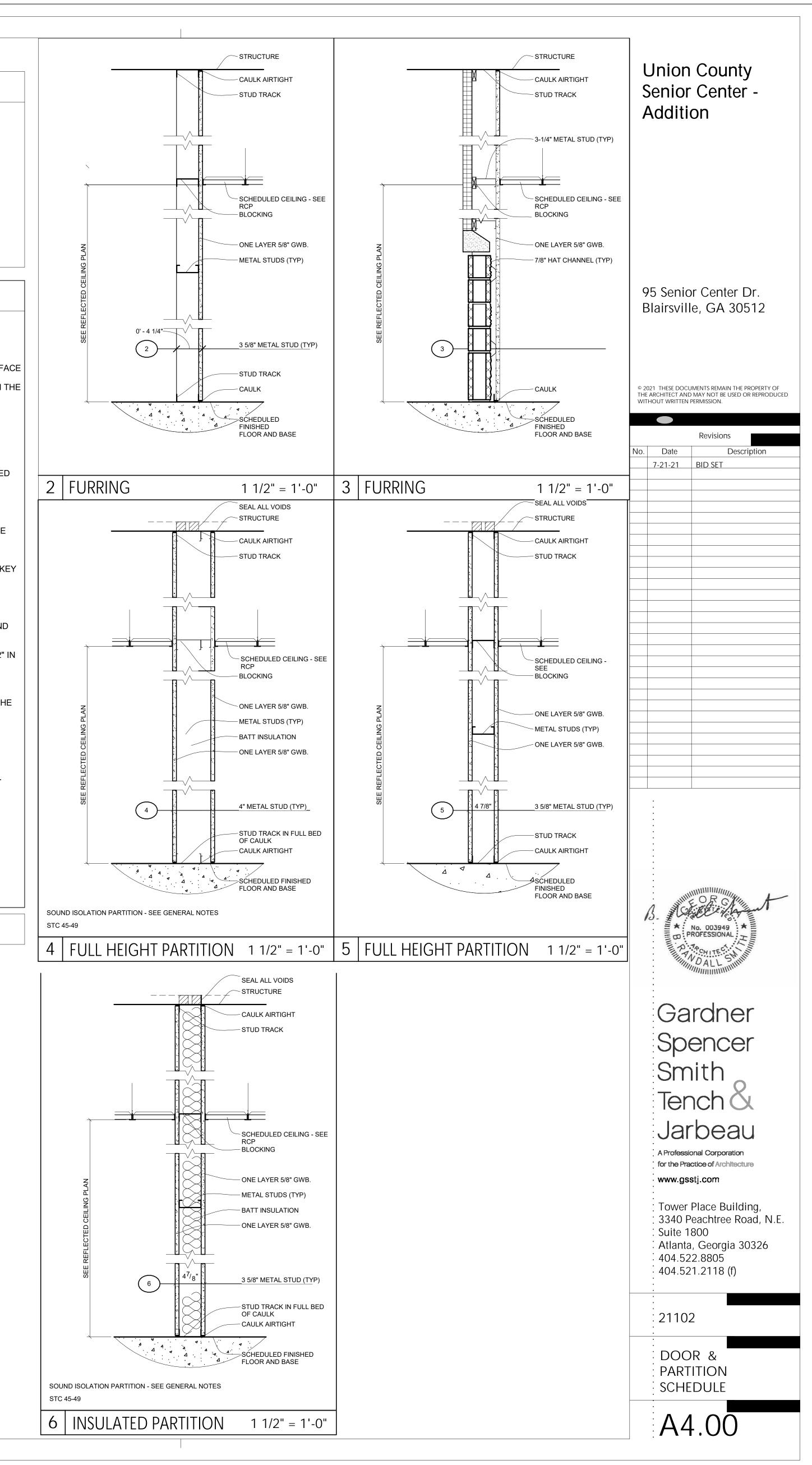
16. PAIR OF DOORS

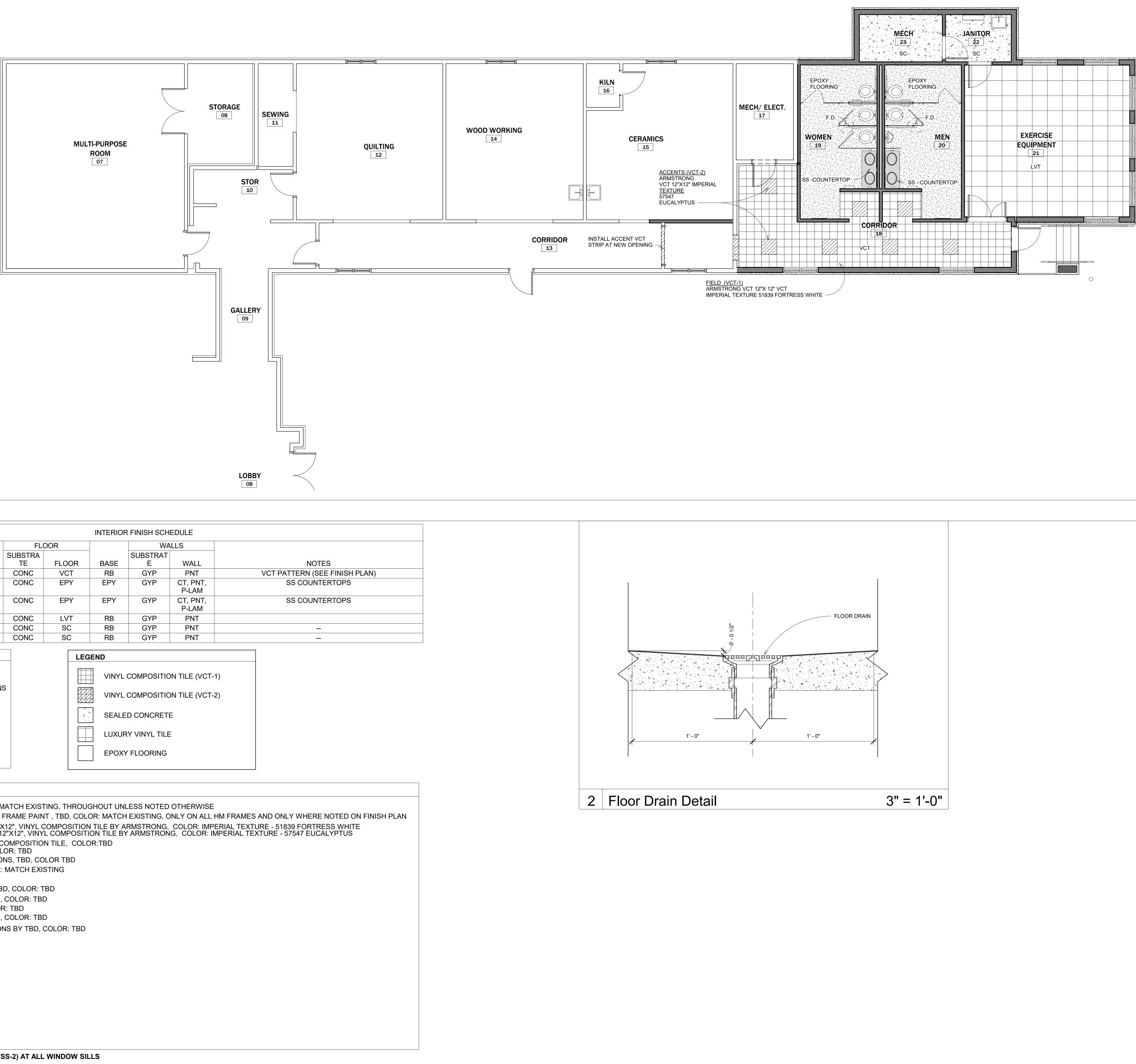
NOTE: ALL DOORS SHALL MEET ADA ACCESSIBILITY REQUIREMENTS.

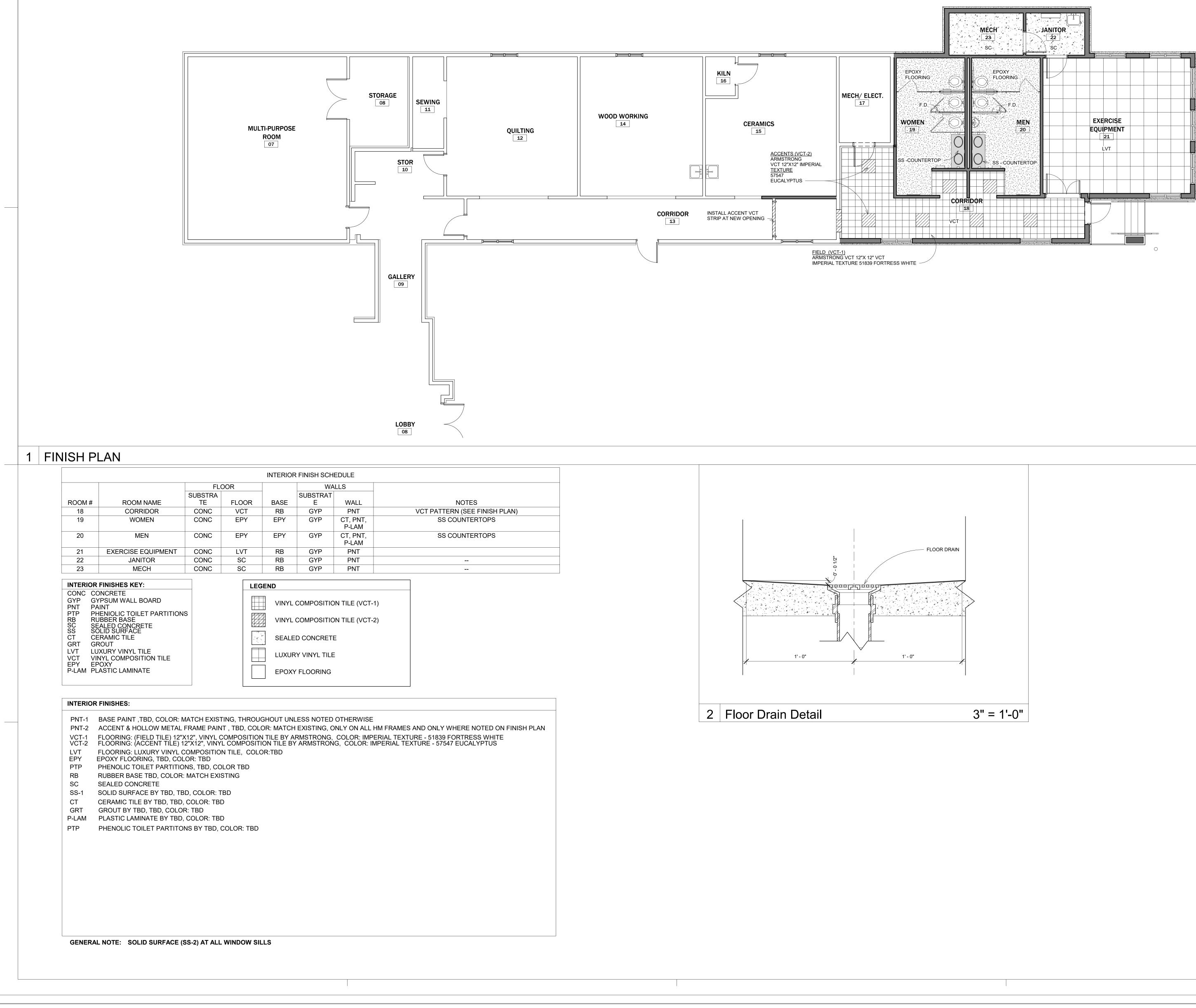
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|     |           | Fire   |       |         |      |   |
| ish | Elevation | Rating | HEAD  | JAMB    | SILL | NOTES   |
| ١T  | 1         |        | 2200H | 2200J   |      |   |
| ١T  |           |        |       |         |      | Remove existing HM door. Provide new hinges, a latch, and a lock.                                       |
| М   | 1         |        |       |         |      | Provide closer, panic hardware, and lock.   |
| NT  | 1         |        | 2200H | 2200J   |      | Provide a top latch bolt on the<br>2'wide leaf. The 3'door should latch<br>to the 2'door. Provide lock. |
| ١T  | 1         |        | 2200H | 2200J   |      | Provide lock.   |
| ΝT  | 1         |        | 2200H | 2200J   |      | Match existing hardware.  |

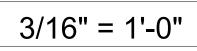












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|                | ABB   | REVIATI     | ONS  | THIS STRUCTURE WAS DESIGNED IN ACCO<br>2018 INTERNATIONAL BUILDING CODE W/<br>AND ASCE 7-10. THE FOLLOWING CRITER |
|----------------|---|-------------|--|---|
|                |   |             |  | LOADS:  |
| AB<br>ALT      | <ul> <li>ANCHOR BOLT</li> <li>ALTERNATE</li> </ul>          | INFO<br>INT | <ul> <li>– INFORMATION</li> <li>– INTERIOR</li> </ul>                      | RISK CATEGORY =   |
| APPROX<br>ARCH | <ul> <li>APPROXIMATELY</li> <li>ARCHITECT</li> </ul>        | JT<br>KJ    | - JOINT<br>- CONSTRUCTION JOINT  | ROOF LIVE LOAD (REDUCED PER CODE  |
| ARCHL<br>B/    | <ul> <li>ARCHITECTURAL</li> <li>BOTTOM OF</li> </ul>        | L           | – ANGLE  | ROOF DEAD LOAD =<br>ROOF DEAD LOAD =  |
| BGPE           | – BOB GOODMAN, PE   | LG          |  | (AVAILABLE TO RESIST UPLIFT)  |
| BLDG           | - BUILDING  | LLH<br>LLV  | <ul> <li>LONG LEG HORIZONTAL</li> <li>LONG LEG VERTICAL</li> </ul>         |   |
| BM<br>BOS      | – BEAM<br>– BOTTOM OF STEEL                                 | LP          | - LOW POINT  | FLOOR LIVE LOAD =   |
| BOTT           | - BOTTOM  |             | - LONG WAY   | GROUND SNOW LOAD, Pg =  |
| BRG            | - BEARING   | MFR<br>MAS  | – MANUFACTURER<br>– MASONRY  |   |
| C/C<br>CH      | <ul> <li>CENTER TO CENTER</li> <li>CHANNEL</li> </ul>       | MO          | - MASONRY OPENING  | SEISMIC IMPORTANCE FACTOR, I =  |
| CIP            | – CAST IN PLACE   | MATL        | - MATERIAL   | MAPPED SPECTRAL ACCELERATIONS:<br>Ss = $0.351$ , S1 = $0.106$   |
| CJ             | - CONTRACTION JOINT   | MAX<br>MEP  | <ul> <li>MAXIMUM</li> <li>MECHANICAL/ELECTRICAL/PLUMBING</li> </ul>        | SITE CLASS (SOIL TYPE):   |
| CL<br>CLR      | - CENTERLINE  | MIN         | - MINIMUM  | SPECTRAL RESPONSE COEFFICIENTS:<br>SDs = 0.356 , SD1 = 0.169  |
| CLR<br>CMU     | <ul> <li>CLEAR</li> <li>CONCRETE MASONRY UNIT</li> </ul>    | MISC        | - MISCELLANEOUS  | SEISMIC DESIGN CATEGORY:  |
| COL            | - COLUMN  | NS<br>NIC   | – NEAR SIDE<br>– NOT IN CONTRACT   | SEISMIC FORCE RESISTING SYSTEM:   |
| CONC           |   | NTS         | – NOT TO SCALE   | COLD-FORMED STEEL WALLS SHE<br>WOOD STRUCTURAL PANELS   |
| CONFIG<br>CONT | <ul> <li>CONFIGURATION</li> <li>CONTINUOUS</li> </ul>       | 0/C         | – ON CENTER  | RESPONSE MODIFICATION FACTOR, R:  |
| CONTR          | - CONTRACTOR  | OH<br>OPNG  | – OPPOSITE HAND<br>– OPENING   | OVERSTRENGTH FACTOR, OMEGA:<br>DEFLECTION AMPLIFICATION FACTOR, Cd  |
| CTR            | - CENTER  | PART        | – PARTITION  | SEISMIC RESPONSE COEFFICIENT, Cs:   |
| DBL            | - DOUBLE  | PL          | – PLATE  | DESIGN BASE SHEAR:<br>ANALYSIS PROCEDURE:   |
| DTL<br>DIA     | – DETAIL<br>– DIAMETER                                      | plf         | - POUNDS PER LINEAR FOOT   | ANALISIS I ROOLDONE.  |
| DIM            | - DIMENSION   | psf<br>psi  | <ul> <li>POUNDS PER SQUARE FOOT</li> <li>POUNDS PER SQUARE INCH</li> </ul> |   |
| DN             | - DOWN  | PT          | – POST TENSIONED/PRESSURE TREATED  | BASIC WIND SPEED (ULTIMATE)   |
| DWG<br>EA      | – DRAWING<br>– EACH   | REINF       | - REINFORCING/REINFORCEMENT  | BASIC WIND SPEED (SERVICE)<br>WIND EXPOSURE CATEGORY:   |
| EE             | – EACH END  | REM<br>REQD | – REMAINDER<br>– REQUIRED  | INTERNAL PRESSURE COEFFICIENT:  |
| EF             | - EACH FACE   | REQD        | – REQUIRED<br>– REVISED/REVISION   | COMPONENTS & CLADDING PRESSURES   |
| EJ<br>EL       | – EXPANSION JOINT<br>– ELEVATION                            | RO          | - ROUGH OPENING  | ZONE 1 2e, 2r 2n, 3r  |
| ELEV           | - ELEVATOR  | SCHED       | - SCHEDULE   |   |
| EOD            | - EDGE OF DECK  | SECT<br>SIM | – SECTION<br>– SIMILAR   | A=10 +16.0 +16.0 +16.0 +<br>-37.0 -37.0 -47.1 -   |
| EOS<br>EQ      | – EDGE OF SLAB<br>– EQUAL                                   | SQ          | - SQUARE   | A=20 +16.0 +16.0 +16.0 +  |
| EW             | – EQUAL<br>– EACH WAY                                       | STD         | - STANDARD   |   |
| EXIST          | – EXISTING  | SW<br>STL   | – SHEARWALL/SHORT WAY<br>– STEEL   | A=50 +16.0 +16.0 +16.0 +<br>-31.1 -31.1 -38.0 -   |
| EXP            | - EXPANSION   | STRUCT      | – STRUCTURAL   | A=100 +16.0 +16.0 +16.0 +<br>-28.6 -28.6 -34.1 -  |
| FIN<br>FLR     | – FINJSH<br>– FLOOR   | TG          | - TRUSS GIRDER   |   |
| FND            | - FOUNDATION  | TO<br>T (   | - THRU OUT   |   |
| FOM            | - FACE OF MASONRY   | T/<br>TOC   | - TOP OF<br>- TOP OF CONCRETE  | (A = EFFECTIVE WIND AREA IN SQ. FT  |
| FS<br>FT       | – FAR SIDE<br>– FOOT  | Т           | – TOP  | (A = EFFECTIVE WIND AREA IN SQ. FT  |
| f i<br>FTG     | – FOOT<br>– FOOTING   | TEMP<br>TOS | - Temperature<br>- Top of Steel  | SEE FIG. 30.4-1, ASCE 7-16 FOR ZC   |
| GA             | – GAUGE   | TRC         | - TRC WORLDWIDE ENGINEERING, INC.  | LAYOUT AND ADD'L INFO.)   |
| GALV           | - GALVANIZED  | TYP         | – TYPICAL  |   |
| GC<br>HC       | <ul> <li>GENERAL CONTRACTOR</li> <li>HOLLOW CORE</li> </ul> | UNO<br>VERT | <ul> <li>UNLESS NOTED OTHERWISE</li> <li>VERTICAL</li> </ul>               | GENERAL:  |
| HG             | - HIP GIRDER  | W/          | – WITH   | 1. GENERAL CONTRACTOR SHALL VERIFY LOCAT  |
| HORIZ          | – HORIZONTAL  | WD          | - WOOD   | EQUIPMENT AND COORDINATE WITH THE ST<br>2. STRUCTURAL DRAWINGS INDICATE TYPICAL A                                 |
| ΗP             | – HIGH POINT  | WWF         | – WELDED WIRE FABRIC   | CONDITIONS ONLY. SHOP DRAWINGS SHALL  |

- ISOLATION JOINT

# WING CRITÉRIA APPLY:

### OR. I = RATIONS: 0.106

# FICIENT: DRESSURE

| Ur | MPONENTS & CLADDING PRESSURES (ULTIMATE): |                |                |                |                |                |                |  |  |
|----|---|----------------|----------------|----------------|----------------|----------------|----------------|--|--|
|    | ZONE                                      | 1              | 2e, 2r         | 2n, 3r         | 3e             | 4              | 5              |  |  |
|    | A=10                                      | +16.0<br>-37.0 | +16.0<br>-37.0 | +16.0<br>-47.1 | +16.0<br>-55.4 | +20.2<br>-22.0 | +20.2<br>-27.1 |  |  |
|    | A=20                                      | +16.0<br>-34.4 | +16.0<br>-34.4 | +16.0<br>-43.2 | +16.0<br>-50.2 | +19.3<br>-21.0 | +19.3<br>-25.3 |  |  |
|    | A=50                                      | +16.0<br>-31.1 | +16.0<br>-31.1 | +16.0<br>-38.0 | +16.0<br>-43.5 | +18.1<br>-19.8 | +18.1<br>-22.9 |  |  |
|    | A=100                                     | +16.0<br>-28.6 | +16.0<br>-28.6 | +16.0<br>-34.1 | +16.0<br>-38.4 | +17.2<br>-18.9 | +17.2<br>-21.0 |  |  |

-16 FOR ZONE

- CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS
- IN ACCORDANCE WITH SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT. 3. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS DURING CONSTRUCTION 4. CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND CONDITIONS
- BEFORE EXECUTING ANY WORK. 5. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF ALL APPLICABLE SPECIALTY ITEMS INCLUDING BUT NOT LIMITED TO ALUMINUM STOREFRONT, PRECAST CONCRETE, CURTAIN WALL GLAZING SYSTEMS AND ORNAMENTAL GUARDRAILS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF

# FOUNDATION:

INSPECTION.

- 1. THE FOUNDATION DESIGN USES MINIMUM ALLOWABLE DESIGN CRITERIA DETERMINED BY 2018 IBC.
- 2. THE FOUNDATION DESIGN IS BASED ON A NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF FOR SHALLOW FOUNDATIONS ON EITHER PROPERLY COMPACED NATIVE SOILS OR STRUCTURAL FILL. SEE GEOTECH REPORT FOR SITE PREPARATION PROCEDURES. 3. A REGISTERED GEOTECHNICAL ENGINEER SHALL VERIFY THE DESIGN
- SOIL BEARING CAPACITY AND SHALL VERIFY THE CONDITION AND/OR ADEQUACY OF ALL SUBGRADE AND FILL PRIOR TO PLACEMENT OF FOOTINGS AND SLABS.

# CONCRETE:

- 28 DAY COMPRESSIVE STRENGTH OF 3,000 psi, AND SHALL BE NORMAL WEIGHT WITH A W/CM = 0.55 MAX. 2. UNLESS NOTED OTHERWISE, SLABS ON GRADE SHALL BE A MINIMUM OF FOUR INCHES THICK, SHALL BE REINFORCED WITH 6x6-W1.4xW1.4
- W.W.F. LOCATED 1½" BELOW THE TOP OF SLAB AND PLACED OVER A 4" GRADED AGGREGATE BASE AND A MINIMUM 12 MIL VAPOR BARRIER. 3. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.45 AND SHALL BE AIR ENTRAINED
- 5% + / 1. 4. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITIONS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

# **REINFORCING:**

- 1. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI
- 315 "DETAILS AND DETAILING OF CONCRETE REINFORCING", AND CRSI MANUAL OF STANDARD PRACTICE. 2. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DEFORMED
- BARS, UNO. LAP SPLICE LENGTH SHALL BE A MINIMUM "CLASS B" TENSION SPLICE, UNO. 3. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A185 AND
- SHALL BE LAPPED A MINIMUM OF 8" ON ALL SIDES AND SPLICES. 4. BRICK AND CMU VENEER TIES SHOULD BE A MINIMUM 9 GAUGE CORROSION-RESISTANT WIRE @ 16" MAX. HORIZONATALLY, AND
- 16" O.C. VERTICALLY, SECURELY ATTACHED TO SUPPORT WALL. 5. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE:
- CONCRETE CAST AGAINST EARTH (NOT FORMED) FORMED CONCRETE EXPOSED TO EARTH OR WEATHER #6 BARS AND LARGER #5 BARS AND SMALLER
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER SLABS AND WALLS
- 5. PROVIDE CONTINUOUS REINFORCING WHEREVER POSSIBLE: SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE CLASS "B" TENSION SPLICE UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCING AND SHALL

### BE LAPPED WITH CLASS "B" TENSION SPLICES. UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS:

| BAR SIZE      | CLASS | 3,000 |      | 4  |
|---------------|-------|-------|------|----|
| #6 OR SMALLER | A     | 44    | DIA. | 38 |
|               | B     | 57    | DIA. | 49 |
| #7 OR LARGER  | A     | 55    | DIA. | 47 |
|               | B     | 71    | DIA. | 62 |
|               |       |       |      |    |

TABLE IS FOR NORMAL WEIGHT CONCRETE. INCREASE THE ABOVE LAP LENGTHS BY A FACTOR OF 1.3 FOR BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM (I.E. TOP BARS). INCREASE LAP LENGTHS BY A FACTOR OF 1.3 FOR WHEN LIGHT WEIGHT CONCRETE IS USED.

# **STRUCTURAL GENERAL NOTES :**

### ED IN ACCORDANCE WITH THE CODE W/ SC AMMENDMENTS

|                |                     | П                                |
|----------------|---------------------|----------------------------------|
| )E)=           | 20<br>20<br>5       | psf<br>psf<br>psf                |
|                | 100                 | psf                              |
|                | 10                  | psf                              |
|                |                     | 1.0                              |
| D              | (ASSUM              | IED)                             |
|                |                     | С                                |
| EATHED \       | NITH                |                                  |
| d:<br>E.L.F. F | 0.<br>3.0<br>PROCED | 3.0<br>3.0<br>118<br>kips<br>URE |

|   | 105 mph<br>82 mph<br>B |
|---|------------------------|
| S | ±0.18<br>(ULTIMATE):   |

A IN SQ. FT. a = 3' - 0''

### VERIFY LOCATIONS OF MECHANICAL WITH THE STRUCTURAL DRAWINGS. TE TYPICAL AND CERTAIN SPECIFIC

1. CONCRETE FOR ALL STRUCTURAL ELEMENTS SHALL HAVE A MINIMUM

5. CONCRETE TEST REPORTS SHALL BE AVAILABLE AT THE JOB SITE.

1-1/2"

1,000 5,000 8 DIA. 34 DIA. 9 DIA. 44 DIA.

# COLD-FORMED STEEL FRAMING:

### 1. LIGHT GAUGE STEEL FRAMING SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRINCIPLES AND GOVERNING CODES. THE DESIGN SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA. SHOP DRAWINGS SHALL BE SUBMITTED WHICH BEAR THE SIGNATURE, DATE, AND SEAL OF THE ENGINEER. SHOP DRAWINGS SHALL CLEARLY INDICATE CONNECTIONS AND MATERIALS USED. SECTIONS AND DETAILS SHOWN ON THE DRAWINGS ARE FOR

- CONCEPT ONLY. 2. LIGHT GAUGE STEEL FRAMING SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION SHOWING WALL SECTIONS COORDINATED WITH DRAWINGS SHOWING FRAMING, ACCESSORIES, ANCHORAGE AND CONNECTION DETAILS.
- 3. MATERIAL SPECIFICATIONS FOR LIGHT-GAUGE STEEL: 16 GA. OR HEAVIER: ASTM A-446, Fy = 50 KSI MIN.
- 18 GA. OR LIGHTER: ASTM A-446, Fy = 33 KSI MIN. 4. GALVANIZING: MINIMUM G-60 COATING
- 5. ALL STUDS AND JOIST MEMBERS SHALL BE STRUCTURAL (14 TO 20 GAUGE), AND HAVE STIFFENED FLANGES.
- 6. CONNECTION MATERIAL GAUGE MATCH STUD GAUGE U.N.O. CLIP ANGLES SHALL BE 14 GA. MINIMUM.
- 7. BUILT-UP MEMBERS FASTEN TOGETHER WITH 1" LONG STITCH WELDS OR #12 SCREWS AT 12" O.C. MAXIMUM, EACH FLANGE, AND EACH TRACK.
- 8. PROVIDE BRIDGING AT 5' MAXIMUM VERTICAL SPACING IN WALLS. 9. TEMPORARY BRACING SHALL BE PROVIDED AND LEFT IN PLACE UNTIL WORK IS PERMANENTLY STABILIZED.
- 10. SPLICING OF MEMBERS SPANNING BETWEEN SUPPORTS SHALL NOT BE PERMITTED.
- 11. PROVIDE DEEP TRACK ASSEMBLY OR SLIDE CONNECTIONS AT TOPS OF ALL NON-LOAD BEARING STUD WALLS TO ALLOW FOR MOVEMENT OF STRUCTURE. ARCHITECT SHALL REVIEW IN PLACE STEEL STUD CONSTRUCTION PRIOR TO THE INSTALLATION OF GYPSUM WALL BOARD OR SHEATHING.
- 12. DESIGN COLD-FORMED STEEL FRAMING SYSTEMS TO WITHSTAND THE DESIGN LOADS WITHOUT EXCEEDING THE FOLLOWING DEFLECTION CRITERIA: MEMBERS SUPPORTING MASONRY - L/600 OR 1/2" MAXIMUM MEMBERS SUPPORTING OTHER MATERIAL - L/360 OR 1" MAXIMUM

WOOD:

- 1. CONNECTORS AND FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETADANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER INCLUDING BUT NOT LIMITED TO ANCHOR RODS, POWDER ACTUATED FASTENERS, NAILS, SCREWS, BOLTS, AND STEEL FRAMING HARDWARE. ZINC COATING WEIGHTS SHALL COMPLY WITH THE REQUIREMENTS INCLUDED IN IBC SECTION 2304.9.5 FOR THE
- APPROPRIATE USE. 2. CONNECTION HARDWARE SPECIFIED SHALL USE THE TYPE, SIZE, AND MAXIMUM NUMBER OF FASTENERS SPECIFIED IN THE MANUFACTURER'S PRODUCT LITERATURE UNLESS NOTED
- OTHERWISE IN THE DETAILS. 3. ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER'S SPECIALTY ENGINEER TO CONFIGURATION AND LOAD CARRYING CAPACITY SHOWN ON DRAWINGS AND SPECIFICATIONS. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR
- COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. ALL HARDWARE (BOLTS, HANGERS, STRAPS, ETC.) REQUIRED FOR CONNECTIONS BETWEEN PRE-ENGINEERED TRUSSES SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS ENGINEER. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING TRUSS SYSTEM COMPONENTS, AS WELL AS PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. BRACE IN
- ACCORDANCE WITH THE TRUSS PLATE INSTITUTE/STRUCTURAL BUILDING COMPONENT ASSOCIATION "BUILDING COMPONENT SAFETY INFORMATION". BCSI-13 GUIDELINES AND RELATED SUMMARY SHEETS. 6. ENGINEERED SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT STATE AS THE SPECIALTY ENGINEER. ALL PRE-ENGINEERED TRUSS SHOP
- DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE DURING TIMES OF INSPECTION AND SHALL BEAR CLEAR INDICATION THAT THEY HAVE BEEN REVIEWED AND APPROVED BY THE PROJECT STRUCTURAL ENGINEER OF RECORD. 7. THE FOLLOWING LOAD DURATION FACTORS SHALL BE USED:
- DEAD LOAD 0.90 DEAD LOAD + FLOOR LIVE LOAD 1.00
- DEAD LOAD + ROOF LIVE LOAD 1.25 DEAD LOAD + WIND LOAD 1.33 8. PLYWOOD FLOOR, WALL AND ROOF SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE BUILDING CODE. UNLESS SHOWN OTHERWISE, SPAN RATED PANELS SHALL BE FASTENED TO NOMINAL 2X SOUTHERN PINE FRAMING SPACED UP TO 24" O/C. IN ACCORDANCE WITH THE FOLLOWING:
- PANELS UP TO 1/2" THICK: 8d NAILS AT 6" O/C. EDGE, 12" O/C. ELSEWHERE. PANELS UP TO 5/8" THICK: 10d NAILS AT 6" O/C. EDGE, 12" O/C. ELSEWHERE.
- PANELS UP TO 3/4" THICK: 12d NAILS AT 6" O/C. EDGE, 12" 0/C. ELSEWHERE. 4. WOOD TRUSS MANUFACTURER SHALL DESIGN FOR THE FOLLOWING SUPERIMPOSED GRAVITY LOADS:
- TOP CHORD DEAD LOAD 15 PSF 10 PSF BOTTOM CHORD DEAD LOAD 20 PSF TOP CHORD LIVE LOAD BOTTOM CHORD LIVE LOAD, U.N.O. 0 PSF 5. DESIGN ROOF TRUSSES TO RESIST WIND UPLIFT PRESSURES IN
- ACCORDANCE WITH THE BUILDING CODE NOTED ABOVE. USE ROOF DEAD LOAD (AVAILABLE TO RESIST UPLIFT) LISTED IN THE DESIGN LOAD SECTION IN DETERMINING NET UPLIFT PRESSURES. 6. IN ADDITION TO THE ABOVE LOADS, WOOD ROOF TRUSSES SHALL BE
- DESIGNED FOR CONCENTRATED LOADS HUNG FROM OR SUPPORTED ON TRUSSES. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS ALONG WITH ROOF FRAMING PLAN FOR LOADING INFORMATION AND LOCATION. LOADING REQUIRED BY OTHER SUBCONTRACTORS, SUCH AS FIRE PROTECTION, SHALL BE COORDINATED BY THE GENERAL CONTRACTOR.
- 7. TRUSSES SHALL BE TOE-NAILED TO DOUBLE TOP PLATE WITH A MINIMUM OF (3) 8d NAILS.

EXISTING CONDITIONS:

- 1. WHERE EXISTING CONDITIONS ARE SHOWN THEY HAVE BEEN DERIVED FROM AVAILABLE DRAWINGS AND REPRESENT THE ENGINEER'S BEST ESTIMATE OF ACTUAL CONDITIONS. DEPICTED EXISTING CONDITIONS MAY NOT, IN ALL CASES, BE CORROBORATED BY FIELD INVESTIGATIONS. 2. ALL DIMENSIONS AND DETAILS OF EXISTING WORK INDICATED ON THE
- DRAWINGS SHALL BE FIELD MEASURED AND VERIFIED BEFORE PROCEDING WITH WORK. ANY DISREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
- 3. NECESSARY PRECAUTIONS SHALL BE TAKEN NOT TO DISTURB OR UNDERMINE ANY EXISTING BUILDING FOUNDATIONS OR STRUCTURE AND SHORING SHALL BE PROVIDED AS REQUIRED.
- 4. CONTRACTOR SHALL NOT MODIFIY ANY EXISTING STRUCTURAL COMPONENTS WITHOUT PRIOR APPROVAL OF THE STRUCTUAL ENGINEER UNLESS SPECIFICALLY NOTED IN THE THESE DRAWINGS.

POST-INSTALLED ANCHORS:

- 1. UNLESS NOTED OTHERWISE, POST-INSTALLED CONCRETE ANCHORS SHALL COMPLY WITH ICC-ES ACCEPTANCE CRITERIA FOR ANCHORS IN CRACKED
- CONCRETE AND SEISMIC APPLICATIONS. 2. PLACE POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR AND EMBEDMENTS.
- 3. PROPER INSTALLATION OF POST-INSTALLED ANCHORS SHALL BE VERIFIED BY A QUALIFIED TECHNICIAL IN ACCORDANCE WITH THE PROJECT REQUIREMENTS AND THE ICC-ES REPORT. THE TECHNICIAN SHALL VERIFY THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR AND PERIODICALLY VERIFY INSTALLATIONS THEREAFTER.
- 3. MECHANICAL SCREW ANCHORS FOR USE IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE MECHANICAL SCREW ANCHORS FOR USE IN CONCRETE INCLUDE THE FOLLOWING: \* HILTI KWIK HUS-EZ (ICC-ES ESR 3027)
- \* DEWALT SCREW-BOLT+ (ICC-ES ESR-3889) \* SIMPSON STRONG-TIE TITEN HD (ICC-ES ESR 2713)
- 4. ADHESIVE ANCHORS, INCLUDING REBAR, FOR USE IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ADHESIVE ANCHORS SHALL BE INSTALLED INTO DRY HOLES DRILLED USING A CARBIDE DRILL BIT INTO CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ACCEPTABLE ADHESIVE ANCHORS FOR USE IN CONCRETE INCLUDE THE FOLLOWING:
- \* HILTI HY-200 (ICC-ES ESR 3187) \* SIMPSON STRONG-TIE AT-XP (IAPMO UES ER-263) \* DEWALT AC200+ (ICC-ES ESR-4027)

### 1. DURING CONSTRUCTION, SPECIAL ST PERFORMED IN ACCORDANCE WITH 1705 OF THE IBC. AN APPROVED SATISFACTORY TO THE BUILDING OI INSPECTIONS. ALL SPECIAL STRUCT PREPARED BY AND BEAR THE SEAL ALL REPORTS SHALL BE SUBMITTED AND TO THE STRUCTURAL ENGINEE 2. SPECIAL INSPECTOR SHALL PREPARE PLANS & SUBMIT PLAN TO BUILDING OFFICIAL, ARCHITECT, AND THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. 3. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR OF RECORD. THE FREQUENCY OF REPORTS SHALL BE AS AGREED UPON STRUCTURAL ENGINEER.

SPECIAL INSPECTIONS NOTES:

- FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND REQUIREMENTS
- IBC 1705.10.

PER IBC 1705.11.

- THEN, IF CORRECTED, THE BUILDING OFFICIAL, ARCHITECT, AND THE
- TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, SHALL SUBMIT
- NOTED IN THE PRIOR REPORTS.
- SECTIONS LISTED ON THIS DRAWING.

| RUCTURAL INSPECTIONS SHALL BE          |
|--|
| THE REQUIREMENTS OF SECTION            |
| SPECIAL INSPECTOR WITH QUALIFICATIONS  |
| FFICIAL SHALL PERFORM SPECIAL          |
| IURAL INSPECTION REPORTS SHALL BE      |
| L OF THE SPECIAL INSPECTOR, AND        |
| D TO THE BUILDING OFFICIAL, ARCHITECT, |
| ER.                                    |
| E THE REQUIRED QUALITY ASSURANCE       |
|  |

CONFORMANCE WITH THE PERMITTED CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL FURNISH PERIODIC INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONALS

BY THE BUILDING OFFICIAL. ALL NONCONFORMING ITEMS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, 4. THE SPECIAL INSPECTOR, UPON COMPLETION OF THE WORK AND PRIOR

A SIGNED & SEALED FINAL REPORT DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES 5. ALL STRUCTURAL ELEMENTS OF THE BUILDING FRAME SHALL BE INSPECTED

OF SECTION 1705 OF THE IBC, INCLUDING, BUT NOT BE LIMITED TO THE 6. A QUALITY ASSURANCE PLAN FOR WIND RESISTANCE IS REQUIRED PER

7. A QUALITY ASSURANCE PLAN FOR SEISMIC RESISTANCE IS REQUIRED

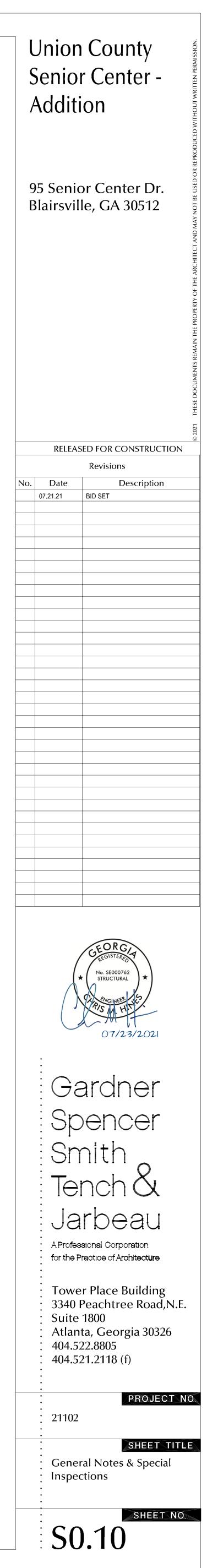
| SCHEDULE OF SPECIAL INSPI  | ECTIONS   |               |   |  |  |
|--|---|---------------|---|--|--|
| MATERIAL / ACTIVITY  | SERVICE   | APPLIC<br>Y/N | CABLE TO THIS PROJECT   |  |  |
| 1705.3 CONCRETE CONSTRUCTION   |   |               |   |  |  |
| INSPECTION AND PLACEMENT VERIFICATION OF<br>REINFORCING STEEL  | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| INSPECTION OF ANCHORS CAST IN CONCRETE.  | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| HARDENED CONCRETE MEMBERS PER RESEARCH<br>REPORTS, OR, IF NO SPECIFIC REQUIREMENTS ARE<br>PROVIDED, REQUIREMENTS SHALL BE PROVIDED BY<br>THE REGISTERED DESIGN PROFESSIONAL AND<br>APPROVED BY THE BUILDING OFFICIAL, INCLUDING<br>VERIFICATION OF ANCHOR TYPE, ANCHOR<br>DIMENSIONS, HOLE DIMENSIONS, HOLE CLEANING<br>PROCEDURES, ANCHOR SPACING, EDGE<br>DISTANCES, CONCRETE MINIMUM THICKNESS,<br>ANCHOR EMBEDMENT AND TIGHTENING TORQUE | FIELD INSPECTION  | Y             | PERIODIC OR AS<br>REQUIRED BY THE<br>RESEARCH REPORT<br>ISSUED BY AN<br>APPROVED SOURCE |  |  |
| 1. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL<br>OR UPWARD-INCLINED ORIENTATION THAT RESIST<br>SUSTAINED TENSION LOADS.  |   | Y             | CONTINUOUS  |  |  |
| 2. MECHANICAL AND ADHESIVE ANCHORS OTHER<br>THAN THOSE DEFINED IN NOTE 1.  |   | Y             | PERIODIC  |  |  |
| VERIFY USE OF APPROVED DESIGN MIX  | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| PRIOR TO PLACEMENT, FRESH CONCRETE<br>SAMPLING, PERFORM SLUMP AND AIR CONTENT<br>TESTS AND DETERMINE TEMPERATURE OF<br>CONCRETE AND PERFORM ANY OTHER TESTS AS<br>SPECIFIED IN CONSTRUCTION DOCUMENTS.   | SHOP* AND FIELD INSPECTION  | Y             | CONTINUOUS  |  |  |
| INSPECTION OF CONCRETE AND SHOTCRETE<br>PLACEMENT FOR PROPER APPLICATION<br>TECHNIQUES   | SHOP* AND FIELD INSPECTION  | Y             | CONTINUOUS  |  |  |
| VERIFY MAINTENANCE OF SPECIFIED CURING<br>TEMPERATURE AND TECHNIQUES   | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| ERECTION OF PRECAST CONCRETE MEMBERS   |   | Y             | PERIODIC  |  |  |
| VERIFICATION OF IN-SITU CONCRETE STRENGTH<br>PRIOR TO REMOVAL OF SHORES AND FORMS FROM<br>BEAMS AND STRUCTURAL SLABS   | FIELD TESTING AND REVIEW OF<br>LABORATORY REPORTS                           | Y             | PERIODIC  |  |  |
| INSPECTION OF FORMWORK FOR SHAPE, LINES,<br>LOCATION AND DIMENSIONS  | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| CONCRETE STRENGTH TESTING AND VERIFICATION<br>OF COMPLIANCE WITH CONSTRUCTION DOCUMENTS  | FIELD TESTING AND REVIEW OF<br>LABORATORY REPORTS                           | Y             | PERIODIC  |  |  |
| 1705.6 SOILS   | Γ   |               |   |  |  |
| VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS<br>ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING<br>CAPACITY.  | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| VERIFY EXCAVATIONS ARE EXTENDED TO PROPER<br>DEPTH AND HAVE REACHED PROPER MATERIAL.   | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.  | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| VERIFY USE OF PROPER MATERIALS, DENSITIES,<br>AND LIFT THICKNESSES DURING PLACEMENT AND<br>COMPACTION OF CONTROLLED FILL   | FIELD INSPECTION  | Y             | CONTINUOUS  |  |  |
| PRIOR TO PLACEMENT OF CONTROLLED FILL,<br>OBSERVE SUBGRADE AND VERIFY THAT SITE HAS<br>BEEN PREPARED PROPERLY  | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| 1705.5 WOOD CONSTRUCTION   |   |               |   |  |  |
| FOR PREFABRICATED WOOD STRUCTURAL<br>ELEMENTS, INSPECTION OF THE FABRICATION<br>PROCESS AND ASSEMBLIES IN ACCORDANCE WITH<br>SECTION 1704.2.5  | IN-PLANT REVIEW*  | Y             | PERIODIC  |  |  |
| FOR HIGH-LOAD DIAPHRAGMS, VERIFY GRADE AND<br>THICKNESS OF STRUCTURAL PANEL SHEATHING<br>AGREE WITH APPROVED BUILDING PLANS.   | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| FOR HIGH-LOAD DIAPHRAGMS, VERIFY NOMINAL<br>SIZE OF FRAMING MEMBERS AT ADJOINING PANEL<br>EDGES, NAIL OR STAPLE DIAMETER AND LENGTH,<br>NUMBER OF FASTENER LINES, AND THAT SPACING<br>BETWEEN FASTENERS IN EACH LINE AND AT EDGE<br>MARGINS AGREE WITH APPROVED BUILDING PLANS   | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| METAL-PLATE-CONNECTED WOOD TRUSSES:  |   |               |   |  |  |
| 1. VERIFICATION THAT PERMANENT INDIVIDUAL<br>TRUSS MEMBER RESTRAINT/BRACING HAS BEEN<br>INSTALLED IN ACCORDANCE WITH THE APPROVED<br>TRUSS SUBMITTAL PACKAGE WHEN THE TRUSS<br>HEIGHT IS GREATER THAN OR EQUAL TO 60".   | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| 2. FOR TRUSSES SPANNING 60 FEET OR GREATER:<br>VERIFY TEMPORARY AND PERMANENT<br>RESTRAINT/BRACING ARE INSTALLED IN<br>ACCORDANCE WITH THE APPROVED TRUSS<br>SUBMITTAL PACKAGE   | FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| 1705.11.1 STRUCTURAL WOOD SPECI  | AL INSPECTIONS FOR WIND RE  | ESISTAI       | NCE   |  |  |
| INSPECTION OF FIELD GLUING OPERATIONS OF<br>ELEMENTS OF THE MAIN WINDFORCE-RESISTING<br>SYSTEM.  | FIELD INSPECTION  | Y             | CONTINUOUS  |  |  |
| INSPECTION OF NAILING, BOLTING, ANCHORING AND<br>OTHER FASTENING OF COMPONENTS WITHIN THE<br>MAIN WINDFORCE-RESISTING SYSTEM, INCLUDING<br>WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG<br>STRUTS, BRACES AND HOLD-DOWNS.   | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| 1705.11.2 COLD-FORMED STEEL FRAM   | ING SPECIAL INSPECTIONS F   |               | D RESISTANCE  |  |  |
| INSPECTION DURING WELDING OPERATIONS OF<br>ELEMENTS OF THE SEISMIC-FORCE-RESISTING<br>SYSTEM.  | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| INSPECTION OF SCREW ATTACHMENT, BOLTING,<br>ANCHORING AND OTHER FASTENING OF<br>COMPONENTS WITHIN THE MAIN<br>WINDFORCE-RESISTING SYSTEM, INCLUDING SHEAR<br>WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG<br>STRUTS) AND HOLD-DOWNS.  | SHOP* AND FIELD INSPECTION  | Y             | PERIODIC  |  |  |
| NOTES:<br>THE INSPECTION AND TESTING AGENT(S) SHALL BE EN<br>CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS<br>DISCLOSED TO THE BUILDING OFFICIAL PRIOR TO COM<br>AND/OR TESTING AGENCIES MAY BE SUBJECT TO THE   | TO BE INSPECTED OR TESTED. ANY CONF<br>IMENCING WORK. THE QUALIFICATIONS OF | LICT OF IN    | TEREST MUST BE<br>CIAL INSPECTOR(S)   |  |  |

DISCLOSED TO THE BUILDING OFFICIAL PRIOR TO COMMENCING WORK. THE QUALIFICATIONS OF THE SPECIAL INSPECTOR(S) AND/OR TESTING AGENCIES MAY BE SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL AND/OR THE DESIGN PROFESSIONAL. (\*) SHOP INSPECTIONS OF FABRICATED ITEMS ARE NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH IBC SECTION 1704.2.5.1 AND LISTED IN ACTIVITY 1709.2. OBSERVE: OBSERVE ON A RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. PERFORM: THESE

TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT, BOLTED CONNECTION, OR STEEL ELEMENT



GOODMAN GIANNAVOLA HINES ENGINEERS 311 14th STREET SUITE 2 ATLANTA, GA 30318 **GHEngineers.com** EXP 06/2022





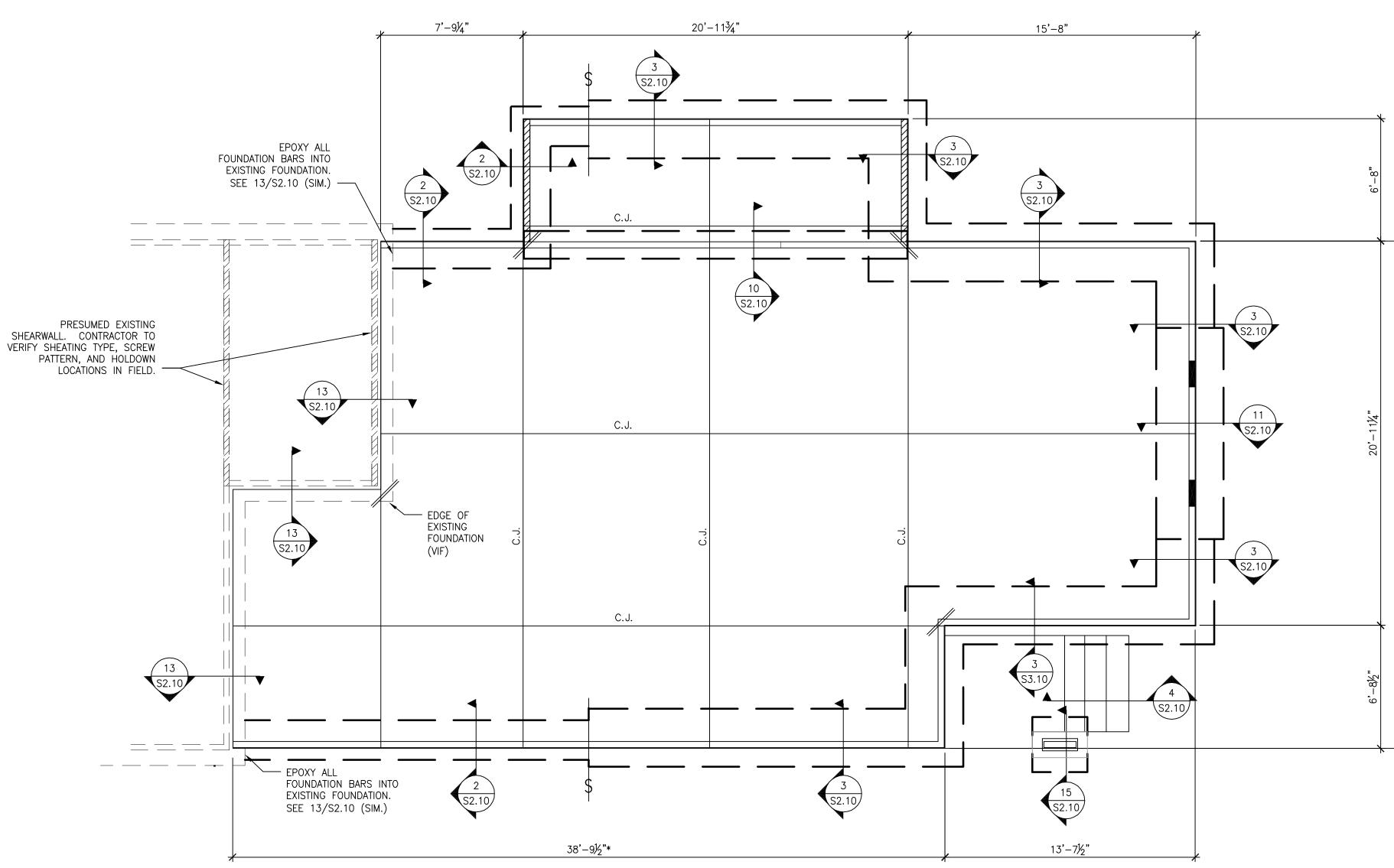
# FOUNDATION PLAN S1.10 SCALE: 1/4"=1'-0"

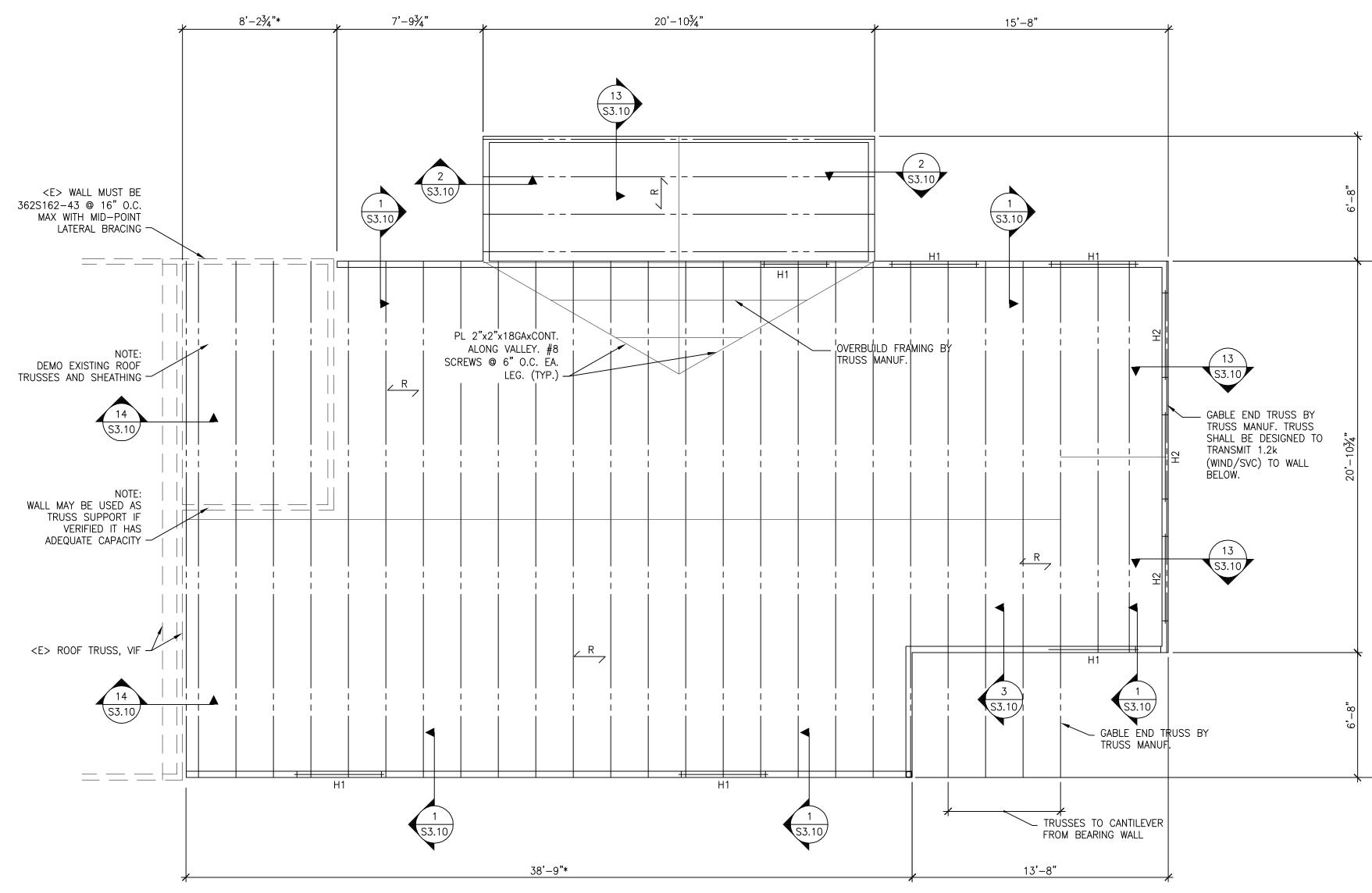
### FOUNDATION PLAN NOTES:

- 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
- 2. TOP OF CONCRETE SLAB ELEVATION = +0'-0". ALL OTHER DIMENSIONS ARE MEASURED FROM THIS DATUM.
- 3. SLAB ON GRADE SHALL BE 4" NORMAL WEIGHT CONCRETE, REINFORCED WITH 6x6 W1.4xW1.4 W.W.F. LOCATED 1½" BELOW THE TOP OF SLAB, UNO.
- 4. C.J. INDICATES CONTROL JOINT, SEE 1/S2.10. 5. SEE ARCHITECTURAL DRAWINGS FOR ANY SLOPES,
- DEPRESSIONS, TRENCHES, ETC. IN SLAB ON GRADE.

- 6. ALL DIMENSIONS SHOWN ON THIS PLAN ARE TO EDGE OF

- SLAB U.N.O.
- 7. INDICATES (2) #4 x 4'-0" AT SLAB MID-DEPTH, 3" APART. PROVIDE AT ALL RE-ENTRANT CORNERS AND INTERSECTIONS, AT ALL DISCONTINUOUS CONTROL JOINTS IN SLAB-ON-GRADE AND AS SHOWN ON PLAN.
- 8. ZZZZ INDICATES PLYWOOD SHEARWALL. SEE ELEVATION 5/S2.10.
- 9. INDICATES SIMPSON STRONG-TIE STEEL STRONG WALL SHEARWALL S/SSW15x10X, H=120"
- GGHE HAS NO INFORMATION ON FINAL GRADE. CONTRACTOR TO ESTABLISH STEP LOCATIONS BASED ON PARAMETERS IN FOUNDATION SECTIONS AND GRADE INFO.





### 2 ROOF FRAMING PLAN S1.10 SCALE: 1/4"=1'-0"

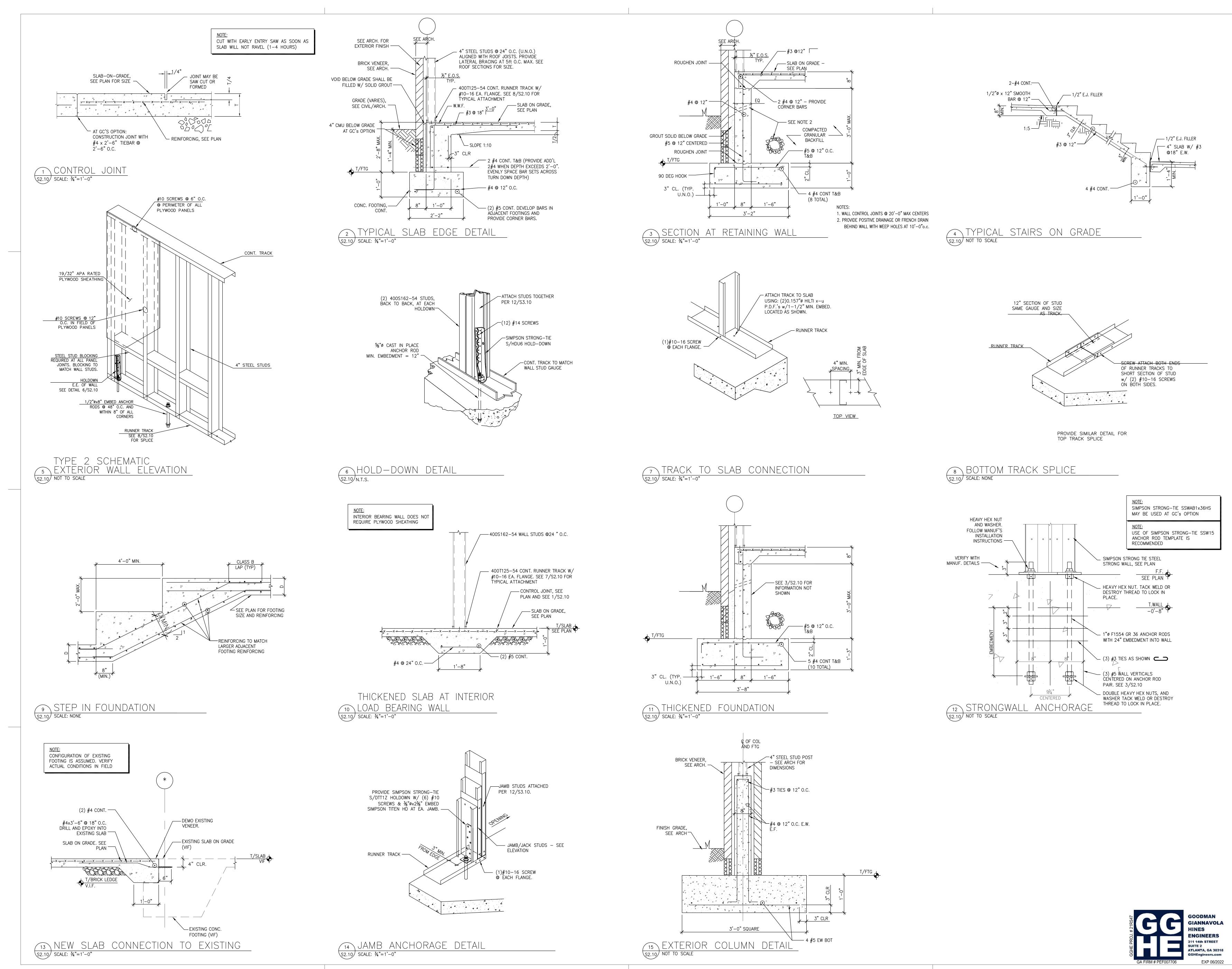
### ROOF FRAMING PLAN NOTES:

- 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
- 2. SEE ARCHITECTURE FOR TOP OF FINISHED ROOF ELEVATIONS, ROOF SLOPES AND ROOF DRAIN LOCATIONS.
- 3. COORDINATE SIZE AND LOCATION OF ALL OPENINGS IN ROOF WITH
- ARCH, MECH, AND PLUMBING DRAWINGS. \* – VERIFY DIMENSION TO EXISTING BUILDING IN FIELD PRIOR TO CONSTRUCTION OR FABRICATION.
- 5. TYPICAL ROOF TRUSSES ARE WOOD TRUSSES TO BE SPACED AT 24" O.C. AND ALIGNED WITH WALL STUDS. TRUSS PROFILE IS TO MATCH EXISTING PROFINLE WITH TOP CHORD LOCATED AT B/SHEATHING ELEVATION. VERIFY ELEVATION AND SLOPE IN FIELD.
- 6. TRUSS MANUF. SHALL DETAIL ALL TRUSS-TO-TRUSS CONNECTIONS.
- 7. ZR INDICATES SPAN OF 3/4" NOMINAL RATED WOOD STRUCTURAL PANELS
- 8. 'Hx' INDICATES STEEL STUD HEADER. H1 SEE 7/S3.01 H2 SEE 8/S3.01

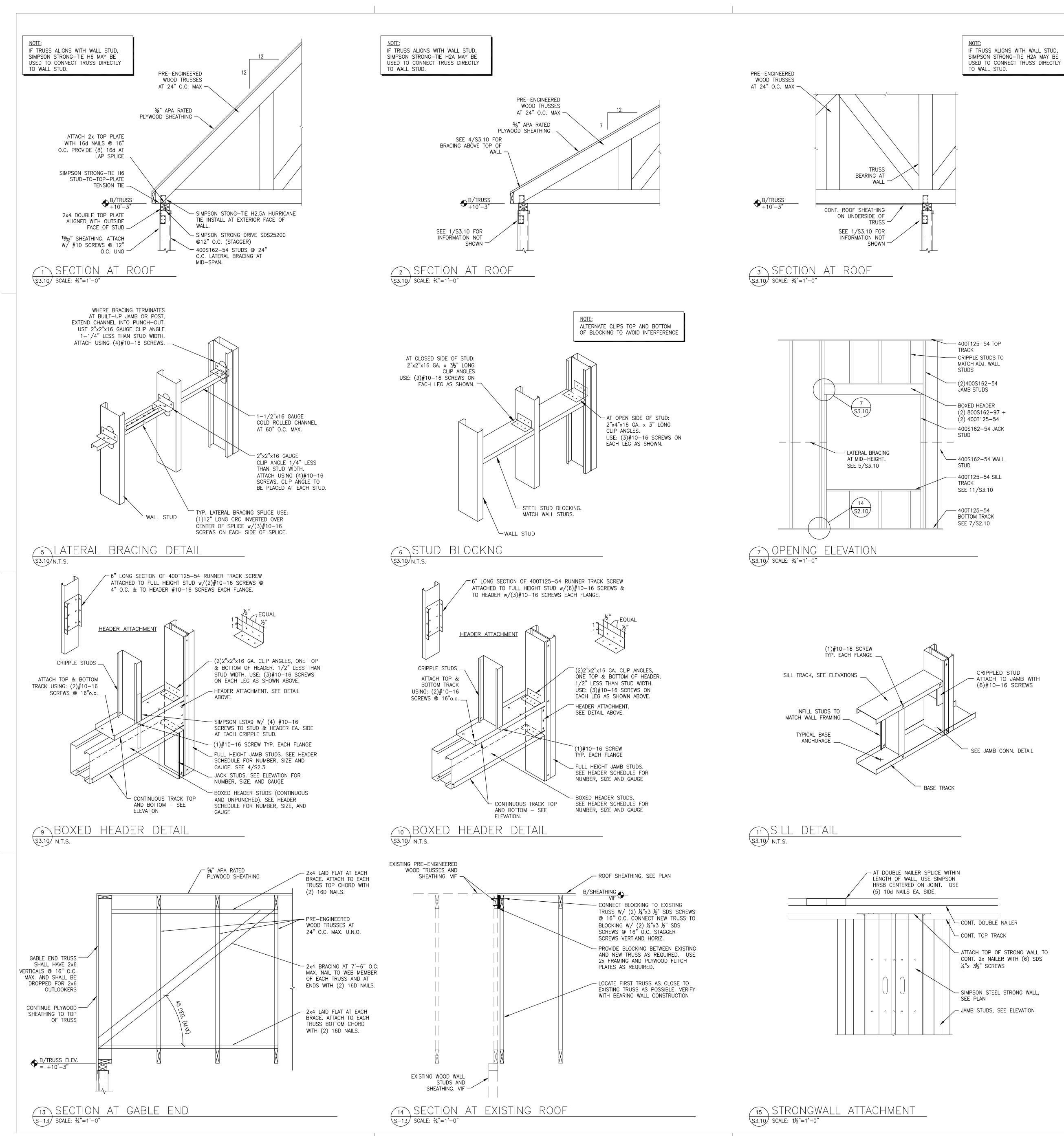


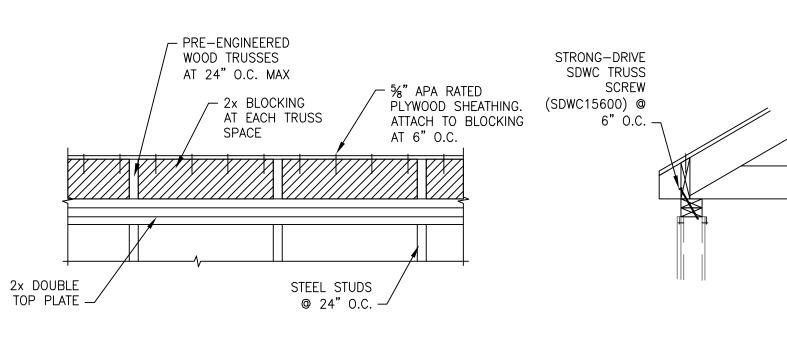
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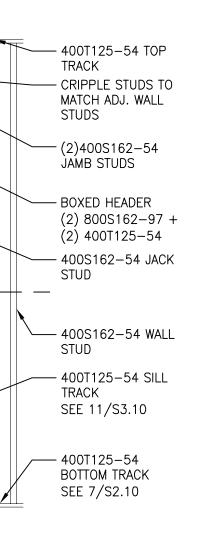


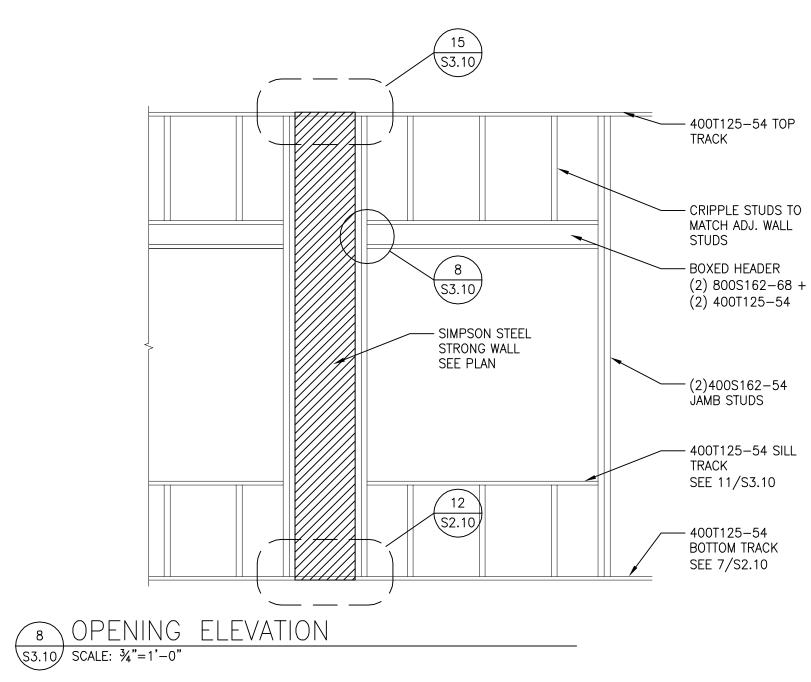


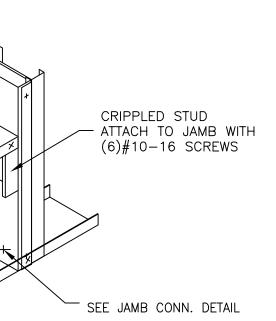


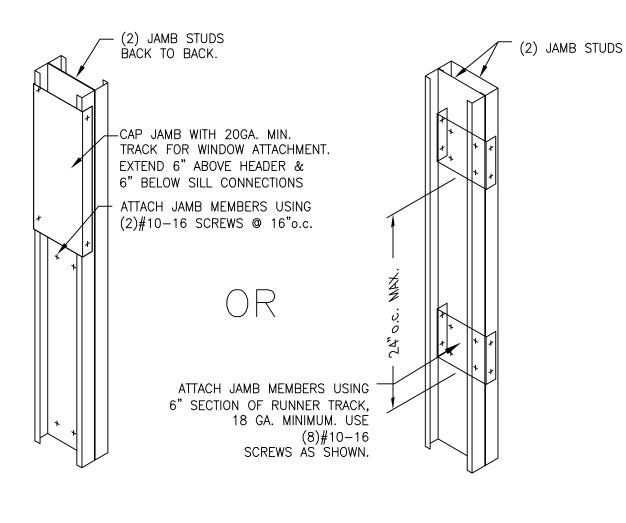


### TRUSS BLOCKING S3.10 SCALE: 3/4"=1'-0"







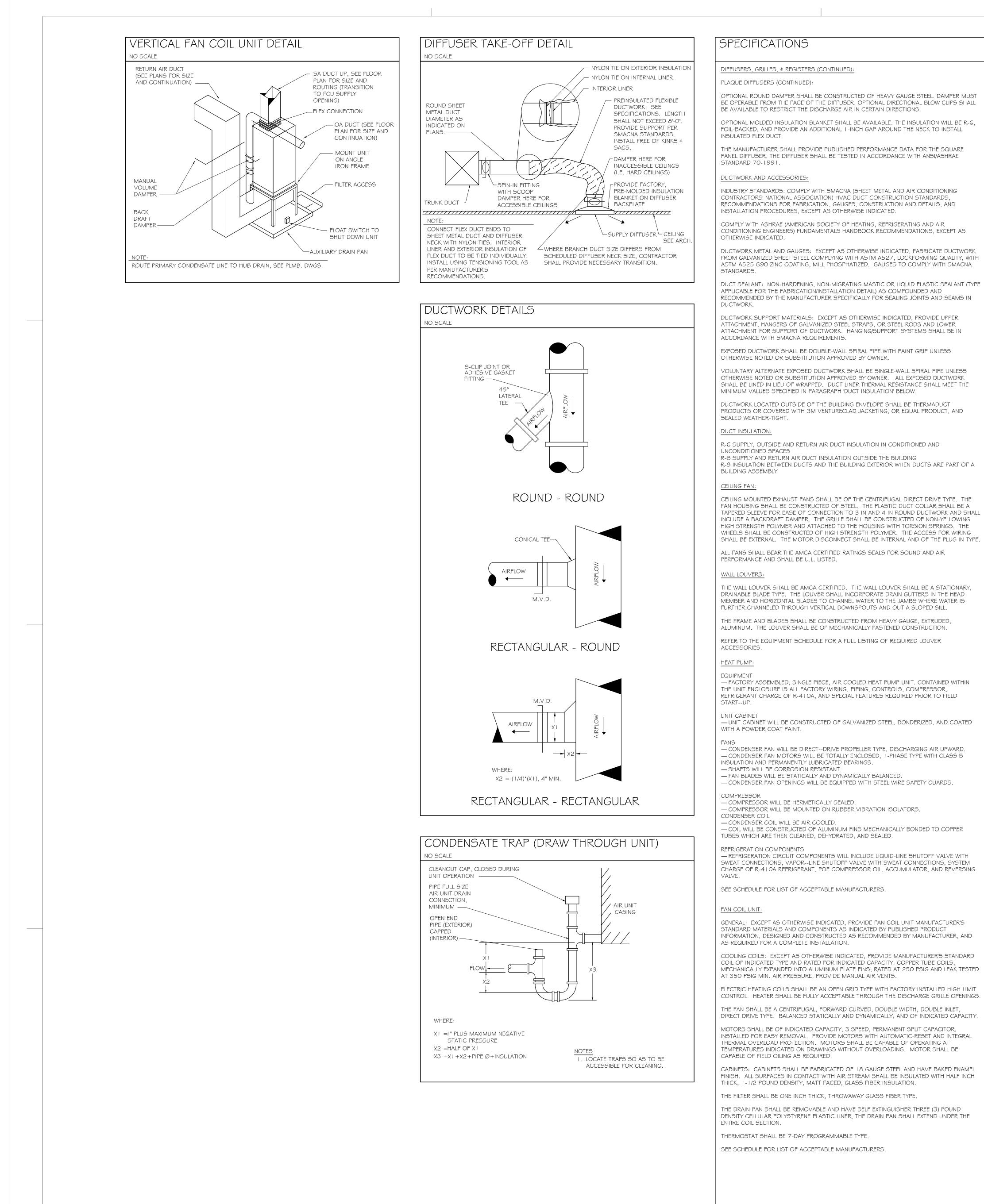


(12) TYPICAL JAMB ATTACHMENT \$3.10 N.T.S.



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DRAINABLE BLADE TYPE. THE LOUVER SHALL INCORPORATE DRAIN GUTTERS IN THE HEAD MEMBER AND HORIZONTAL BLADES TO CHANNEL WATER TO THE JAMBS WHERE WATER IS FURTHER CHANNELED THROUGH VERTICAL DOWNSPOUTS AND OUT A SLOPED SILL.

- FACTORY ASSEMBLED, SINGLE PIECE, AIR-COOLED HEAT PUMP UNIT. CONTAINED WITHIN REFRIGERANT CHARGE OF R-4 I OA, AND SPECIAL FEATURES REQUIRED PRIOR TO FIELD

- UNIT CABINET WILL BE CONSTRUCTED OF GALVANIZED STEEL, BONDERIZED, AND COATED

- CONDENSER FAN MOTORS WILL BE TOTALLY ENCLOSED, I-PHASE TYPE WITH CLASS B

- COIL WILL BE CONSTRUCTED OF ALUMINUM FINS MECHANICALLY BONDED TO COPPER

- REFRIGERATION CIRCUIT COMPONENTS WILL INCLUDE LIQUID-LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, VAPOR--LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, SYSTEM CHARGE OF R-4 I OA REFRIGERANT, POE COMPRESSOR OIL, ACCUMULATOR, AND REVERSING

GENERAL: EXCEPT AS OTHERWISE INDICATED. PROVIDE FAN COIL UNIT MANUFACTURER'S STANDARD MATERIALS AND COMPONENTS AS INDICATED BY PUBLISHED PRODUCT NFORMATION, DESIGNED AND CONSTRUCTED AS RECOMMENDED BY MANUFACTURER, AND

COOLING COILS: EXCEPT AS OTHERWISE INDICATED. PROVIDE MANUFACTURER'S STANDARD COIL OF INDICATED TYPE AND RATED FOR INDICATED CAPACITY. COPPER TUBE COILS, MECHANICALLY EXPANDED INTO ALUMINUM PLATE FINS: RATED AT 250 PSIG AND LEAK TESTED

CONTROL. HEATER SHALL BE FULLY ACCEPTABLE THROUGH THE DISCHARGE GRILLE OPENINGS.

MOTORS SHALL BE OF INDICATED CAPACITY, 3 SPEED, PERMANENT SPLIT CAPACITOR, INSTALLED FOR EASY REMOVAL. PROVIDE MOTORS WITH AUTOMATIC-RESET AND INTEGRAL THERMAL OVERLOAD PROTECTION. MOTORS SHALL BE CAPABLE OF OPERATING AT

CABINETS: CABINETS SHALL BE FABRICATED OF 18 GAUGE STEEL AND HAVE BAKED ENAMEL FINISH. ALL SURFACES IN CONTACT WITH AIR STREAM SHALL BE INSULATED WITH HALF INCH

OPTIONAL ROUND DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL. DAMPER MUST BE OPERABLE FROM THE FACE OF THE DIFFUSER. OPTIONAL DIRECTIONAL BLOW CLIPS SHALL

OPTIONAL MOLDED INSULATION BLANKET SHALL BE AVAILABLE. THE INSULATION WILL BE R-G. FOIL-BACKED, AND PROVIDE AN ADDITIONAL 1-INCH GAP AROUND THE NECK TO INSTALL

THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE SQUARE PANEL DIFFUSER. THE DIFFUSER SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE

INDUSTRY STANDARDS: COMPLY WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION) HVAC DUCT CONSTRUCTION STANDARDS, RECOMMENDATIONS FOR FABRICATION, GAUGES, CONSTRUCTION AND DETAILS, AND

COMPLY WITH ASHRAE (AMERICAN SOCIETY OF HEATING. REFRIGERATING AND AIR CONDITIONING ENGINEERS) FUNDAMENTALS HANDBOOK RECOMMENDATIONS, EXCEPT AS

FROM GALVANIZED SHEET STEEL COMPLYING WITH ASTM A527, LOCKFORMING QUALITY, WITH ASTM A525 G90 ZINC COATING, MILL PHOSPHATIZED. GAUGES TO COMPLY WITH SMACNA

RECOMMENDED BY THE MANUFACTURER SPECIFICALLY FOR SEALING JOINTS AND SEAMS IN

ATTACHMENT, HANGERS OF GALVANIZED STEEL STRAPS, OR STEEL RODS AND LOWER ATTACHMENT FOR SUPPORT OF DUCTWORK. HANGING/SUPPORT SYSTEMS SHALL BE IN

EXPOSED DUCTWORK SHALL BE DOUBLE-WALL SPIRAL PIPE WITH PAINT GRIP UNLESS

OTHERWISE NOTED OR SUBSTITUTION APPROVED BY OWNER. ALL EXPOSED DUCTWORK SHALL BE LINED IN LIEU OF WRAPPED. DUCT LINER THERMAL RESISTANCE SHALL MEET THE

PRODUCTS OR COVERED WITH 3M VENTURECLAD JACKETING, OR EQUAL PRODUCT, AND

CEILING MOUNTED EXHAUST FANS SHALL BE OF THE CENTRIFUGAL DIRECT DRIVE TYPE. THE FAN HOUSING SHALL BE CONSTRUCTED OF STEEL. THE PLASTIC DUCT COLLAR SHALL BE A TAPERED SLEEVE FOR EASE OF CONNECTION TO 3 IN AND 4 IN ROUND DUCTWORK AND SHALL ICLUDE A BACKDRAFT DAMPER. THE GRILLE SHALL BE CONSTRUCTED OF NON-YELLOWIN HIGH STRENGTH POLYMER AND ATTACHED TO THE HOUSING WITH TORSION SPRINGS. THE WHEELS SHALL BE CONSTRUCTED OF HIGH STRENGTH POLYMER. THE ACCESS FOR WIRING SHALL BE EXTERNAL. THE MOTOR DISCONNECT SHALL BE INTERNAL AND OF THE PLUG IN TYPE.

PLAQUE DIFFUSERS:

# SPECIFICATIONS

### APPLICABLE CODES:

INTERNATIONAL FIRE CODE (IFC), 2018 EDITION

2020 IFC GA AMENDMENTS INTERNATIONAL PLUMBING CODE (IPC), 2018 EDITION

2020 IPC GA AMENDMENTS INTERNATIONAL MECHANICAL CODE (IMC), 2018 EDITION

2020 IMC GA AMENDMENTS INTERNATIONAL FUEL GAS CODE (IFGC), 2018 EDITION 2020 IFGC GA AMENDMENTS

NTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2015 EDITION 2020 SUPPLEMENTS AND AMENDMENTS

MEMBER OF THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB).

### SHOP DRAWINGS:

SUBMIT SHOP DRAWINGS FOR REVIEW. PDF FILES PREFERRED. SHOP DRAWINGS SHALL BE BOUND INTO VOLUMES (FILES), WITH EACH VOLUME (FILE) CONTAINING ONE COPY OF ALL SHOP DRAWINGS. ALL SHOP DRAWINGS SHALL BE SUBMITTED SIMULTANEOUSLY; NO SHOP DRAWINGS WILL BE CHECKED UNTIL ALL HAVE BEEN SUBMITTED.

SUBMITTALS SHALL BE SUPPORTED BY DESCRIPTIVE MATERIAL, SUCH AS CATALOG CUTS, DIAGRAMS, PERFORMANCE CURVES AND CHARTS PUBLISHED BY THE MANUFACTURER, TO SHOW CONFORMANCE TO SPECIFICATION AND DRAWING REQUIREMENTS; MODEL NUMBERS ALONE WILL NOT BE ACCEPTABLE. ALL LITERATURE SHALL CLEARLY INDICATE THE SPECIFIED MODEL NUMBER, DIMENSIONS, ARRANGEMENT, RATING AND CHARACTERISTICS OF THE PROPOSED EQUIPMENT. CAPACITIES AND RATINGS SHALL BE BASED ON CONDITIONS INDICATED OR SPECIFIED HEREIN. ANY DEVIATIONS FROM SPECIFIED EQUIPMENT (PARTICULARLY THOSE WHICH REQUIRE COORDINATION WITH OTHER TRADES) SHALL BE CLEARLY NOTED IN A CONCISE LIST ON A SEPARATE SHEET.

### TEST AND BALANCE:

THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TEST AND BALANCE AGENCY THAT IS INDEPENDENT OF ANY CONTRACTOR, SUB-CONTRACTOR, OR MANUFACTURER TO PERFORM THE TESTING AND BALANCING AND PREPARE REPORTS TO THE GENERAL CONTRACTOR. THE INDEPENDENT TEST AND BALANCE AGENCY SHALL HAVE A CERTIFIED

TEST AND BALANCE SHALL ALSO PROVIDE QUOTE TO PERFORM BALANCING FOR COMFORT SIX MONTHS AFTER THE SPACE IS OCCUPIED. P-TAB.COM OR EQUIVALENT.

### GUARANTEE

GUARANTEE THAT EACH PIECE OF APPARATUS SHALL BE OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNED MANUFACTURER FOR THAT CATALOG NUMBER. GUARANTEE THAT THE AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE

GENERATED FROM THE FAULTY INSTALLATION OF DUCT WORK OR ANY COMPONENT OF THE AIR DISTRIBUTION SYSTEM.

GUARANTEE THAT ALL SYSTEMS AND COMPONENTS SHALL BE PROVIDED WITH A ONE YEAR WARRANTY FROM THE TIME OF DATE OF SUBSTANTIAL COMPLETION. THE WARRANTY SHALL COVER ALL MATERIALS AND WORKMANSHIP. DURING THIS WARRANTY PERIOD, ALL DEFECTS IN MATERIALS AND WORKMANSHIP SHALL BE CORRECTED BY REPAIR OR REPLACEMENT WITHOUT INCURRING ADDITIONS TO THE CONTRACT.

### GENERAL NOTES:

REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT.

ALL DUCT DIMENSIONS INDICATED IN THESE DOCUMENTS ARE INSIDE-CLEAR DIMENSIONS. PORTIONS OF DUCTWORK OR PIPING VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK. PAINT BLACK BEHIND ALL GRILLES. ALL WIRING IN THE CEILING PLENUM SHALL BE PLENUM RATED CABLE.

MOUNTING FRAME OF CEILING MOUNTED AIR DISTRIBUTION DEVICES SHALL BE COMPATIBLE WITH CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE.

ALL FIRE SEPARATIONS MUST BE PROTECTED WHEN APPLICABLE. PROVIDE NEW FILTERS (MERV 7 OR BETTER PER OWNER) FOR ALL APPLICABLE HVAC

EQUIPMENT AT THE END OF CONSTRUCTION.

ALL MATERIAL IN PLENUM MUST MEET FIRE AND SMOKE SPREAD AS REQUIRED BY NFPA 90A. ALL ROOF PENETRATIONS TO BE 12" APART AND AT LEAST 12" AWAY FROM CURBS, WALLS, AND DRAIN SUMPS TO PROVIDE ROOFING CONTRACTOR WITH SUFFICIENT ACCESS FOR FLASHING EACH ROOF PENETRATION.

SUBSTITUTIONS MUST BE APPROVED IN WRITING BY ARCHITECT PRIOR TO BID SUBMISSION. CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND SHALL BE FAMILIAR WITH THE SCOPE AND REQUIREMENTS OF THIS PROJECT. ANY DISCREPANCIES OR LACK OF CLARITY IN THE DOCUMENTS SHALL BE IDENTIFIED TO THE ARCHITECT OR ENGINEER PRIOR TO THE SUBMISSION OF PRICING BIDS. WITH A SUBMITTED BID, CONTRACTOR IS ACCEPTING THESE DOCUMENTS AS SUFFICIENT DEFINITION OF THE SCOPE OF WORK, AND ANY ADDITIONAL COSTS BASED ON UNCLARITY OF CONTRACT DOCUMENTS WILL NOT BE CONSIDERED.

THE CONTRACTOR SHALL REFERENCE THE FULL SET OF CONSTRUCTION DOCUMENTS DURING PRICING AND CONSTRUCTION FOR COORDINATION BETWEEN DISCIPLINES RELATIVE TO THE MECHANICAL SCOPE.

DIFFUSERS, GRILLES, & REGISTERS:

### EGGCRATE GRILLE:

RETURN GRILLES SHALL BE TITUS MODEL 50F FOR THE SIZES AND MOUNTING TYPES AS SHOWN ON THE PLANS AND OUTLET SCHEDULE. RETURN GRILLES MUST PROVIDE A FREE AREA OF AT LEAST 90%. OUTER BORDERS SHALL BE CONSTRUCTED OF HEAVY EXTRUDED ALUMINUM WITH A THICKNESS OF 0.040-0.050 INCH AND SHALL HAVE COUNTERSUNK SCREW HOLES FOR A NEAT APPEARANCE. BORDER WIDTH SHALL BE 11/4 INCHES ON ALL SIDES AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. CHOICE OF THREE SIZES OF ALUMINUM GRID: 1/2 X 1/2 X 1/2 INCH, 1/2 X 1/2 X 1 INCH, OR | X | X | INCH SHALL BE AVAILABLE.

OPTIONAL OPPOSED-BLADE VOLUME DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE. DOUBLE DEFLECTION REGISTERS:

ALUMINUM SUPPLY GRILLES SHALL BE OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE DEFLECTION BLADES SHALL BE AVAILABLE PARALLEL TO THE LONG OR SHORT DIMENSION OF THE GRILLE OR REGISTER. CONSTRUCTION SHALL BE OF ALUMINUM WITH A 11/4-INCH WIDE BORDER ON ALL SIDES. SIZES 24 X 24 INCHES AND BELOW SHALL HAVE ROLL-FORMED BORDERS WITH A MINIMUM THICKNESS OF 0.032 INCH. LARGER SIZES SHALL BE CONSTRUCTED USING CONTINUOUS ALUMINUM EXTRUSIONS WITH A NOMINAL THICKNESS OF 0.040 THROUGH 0.050 INCH AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. SCREW HOLES SHALL BE COUNTERSUNK FOR A NEAT APPEARANCE.

DEFLECTION BLADES SHALL BE CONTOURED TO A SPECIFICALLY DESIGNED AND TESTED CROSS-SECTION TO MEET PUBLISHED TEST PERFORMANCE DATA. BLADES SHALL BE SPACED ON ¾-INCH CENTERS. BLADES SHALL HAVE FRICTION PIVOTS ON BOTH SIDES TO ALLOW INDIVIDUAL BLADE ADJUSTMENT WITHOUT LOOSENING OR RATTLING OR BE INSERTED THROUGH THE FRAME AND HELD TIGHT WITH STEEL FRICTION WIRE INTERLOCKED TO THE FRAME ON BOTH ENDS OF EACH SIDE. PLASTIC BLADE PIVOTS ARE NOT ACCEPTABLE.

OPTIONAL OPPOSED BLADE VOLUME DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

THE GRILLE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 3 I 5° F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE, BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE GRILLE. THE GRILLE SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-2006.

ARCHITECTURAL SQUARE PANEL CEILING DIFFUSERS SHALL BE OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE FACE PANEL IS REMOVABLE BY MEANS OF FOUR HANGER BRACKETS. THE EXPOSED SURFACE OF THE FACE PANEL SHALL BE SMOOTH, FLAT, AND FREE OF VISIBLE FASTENERS. THE BACK OF THE FACE PANEL SHALL HAVE AN AERODYNAMICALLY SHAPED, ROLLED EDGE TO ENSURE A TIGHT HORIZONTAL DISCHARGE PATTERN, CEILING DIFFUSERS WITH A 24 X 24-INCH

FULL FACE SHALL HAVE NO LESS THAN AN 18 X 18-INCH FACE PANEL SIZE. CEILING DIFFUSERS WITH A 12 X 12-INCH FULL FACE SHALL HAVE NO LESS THAN A 9 X 9-INCH FACE PANEL SIZE. THE BACKPAN SHALL BE ONE PIECE PRECISION DIE-STAMPED AND SHALL INCLUDE AN

INTEGRALLY DRAWN INLET. THE DIFFUSER NECK SHALL HAVE A MINIMUM OF 11/4-INCH DEPTH AVAILABLE FOR DUCT CONNECTION. THE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT

3 I 5°F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY

TEST WITHOUT CREEPAGE, BLISTERING OR DETERIORATION OF FILM, THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

| LEGEND          |   |
|-----------------|---|
| SYMBOLS         | DESCRIPTION   |
| $\frac{XI}{X2}$ | DIFFUSER, GRILLE, REGISTER OR LOUVER TAG<br>XI = TYPE, X2 = CFM                                     |
| $\square$       | POSITIVE PRESSURE (AIR GOES OUT) DIFFUSER OR REGISTER, 4-WA<br>AIR PATTERN (UNLESS OTHERWISE NOTED) |
|                 | NEGATIVE PRESSURE (AIR GOES IN) GRILLE  |
|                 | POSITIVE PRESSURE AIRFLOW (TYP. SUPPLY)   |
| _/+             | NEGATIVE PRESSURE AIRFLOW (TYP. RETURN/EXHAUST)   |
| 1111111         | FLEXIBLE DUCT   |
| Г               | MANUAL VOLUME DAMPER (MVD)  |
|                 | BACKDRAFT DAMPER (BDD)  |
| FD              | VERTICAL (TYP. WALL) FIRE DAMPER  |
| ,<br>FSD        | VERTICAL (TYP. WALL) COMBINATION FIRE/SMOKE DAMPER  |
| FD              | HORIZONTAL (TYP. FLOOR/CEILING) FIRE DAMPER   |
| FSD             | HORIZONTAL (TYP. FLOOR/CEILING) COMBINATION FIRE/SMOKE<br>DAMPER                                    |
| (T)             | THERMOSTAT  |
| H               | HUMIDISTAT  |
| (5)             | REMOTE TEMPERATURE SENSOR   |
|                 | INTERNALLY LINED DUCT   |
|                 | DUCT UP   |
|                 | DUCT UP   |
|                 | DUCT DOWN   |
|                 | SUPPLY DUCT   |
| UNIT<br>#       | EQUIPMENT TYPE<br>EQUIPMENT NUMBER. WHERE A LETTER IS USED, THERE ARE MULTIF<br>INSTANCES.          |

### ABBREVIATIONS

| AFF  | ABOVE FINISHED FLOOR          | М     | MOTOR                  |
|------|-------------------------------|-------|------------------------|
| BDD  | BACKDRAFT DAMPER              | MA    | MAKE-UP AIR            |
| AHU  | AIR HANDLING UNIT             | MAU   | MAKE-UP AIR UNIT       |
| CO2  | CARBON DIOXIDE                | MAV   | MANUAL AIR VENT        |
| CU   | CONDENSING UNIT               | MBH   | I ,000 BTU PER HR      |
| D    | CONDENSATE DRAIN              | MFCU  | MINI FAN COIL UNIT     |
| DB   | DRY BULB                      | MHP   | MINI HEAT PUMP         |
| DH   | DEHUMIDIFIER                  | MVD   | MANUAL VOLUME DAMPER   |
| EA   | EXHAUST AIR                   | NC    | NORMALLY CLOSED        |
| EAT  | ENTERING AIR TEMPERATURE      | NO    | NORMALLY OPEN          |
| EDH  | ELECTRIC DUCT HEATER          | OA    | OUTSIDE AIR            |
| EF   | EXHAUST FAN                   | OBD   | OPPOSED BLADE DAMPER   |
| ESP  | EXTERNAL STATIC PRESSURE      | PIU   | POWER INDUCTION UNIT   |
| EWH  | ELECTRIC WALL HEATER          | RA    | RETURN AIR             |
| F    | DEGREES FAHRENHEIT            | RH    | RELIEF HOOD            |
| FCU  | FAN COIL UNIT                 | RTU   | ROOFTOP UNIT           |
| FD   | FIRE DAMPER                   | SA    | SUPPLY AIR             |
| FSD  | COMBINATION FIRE/SMOKE DAMPER | SP    | STATIC PRESSURE        |
| FURN | FURNACE                       | U.N.O | UNLESS NOTED OTHERWISE |
| Н    | HUMIDISTAT                    | UC    | UNDER CUT DOOR         |
| ІН   | INTAKE HOOD                   | VAV   | VARIABLE AIR VOLUME    |
| LAT  | LEAVING AIR TEMPERATURE       | WB    | WET BULB               |
| LWT  | LEAVING WATER TEMPERATURE     | WL    | WALL LOUVER            |

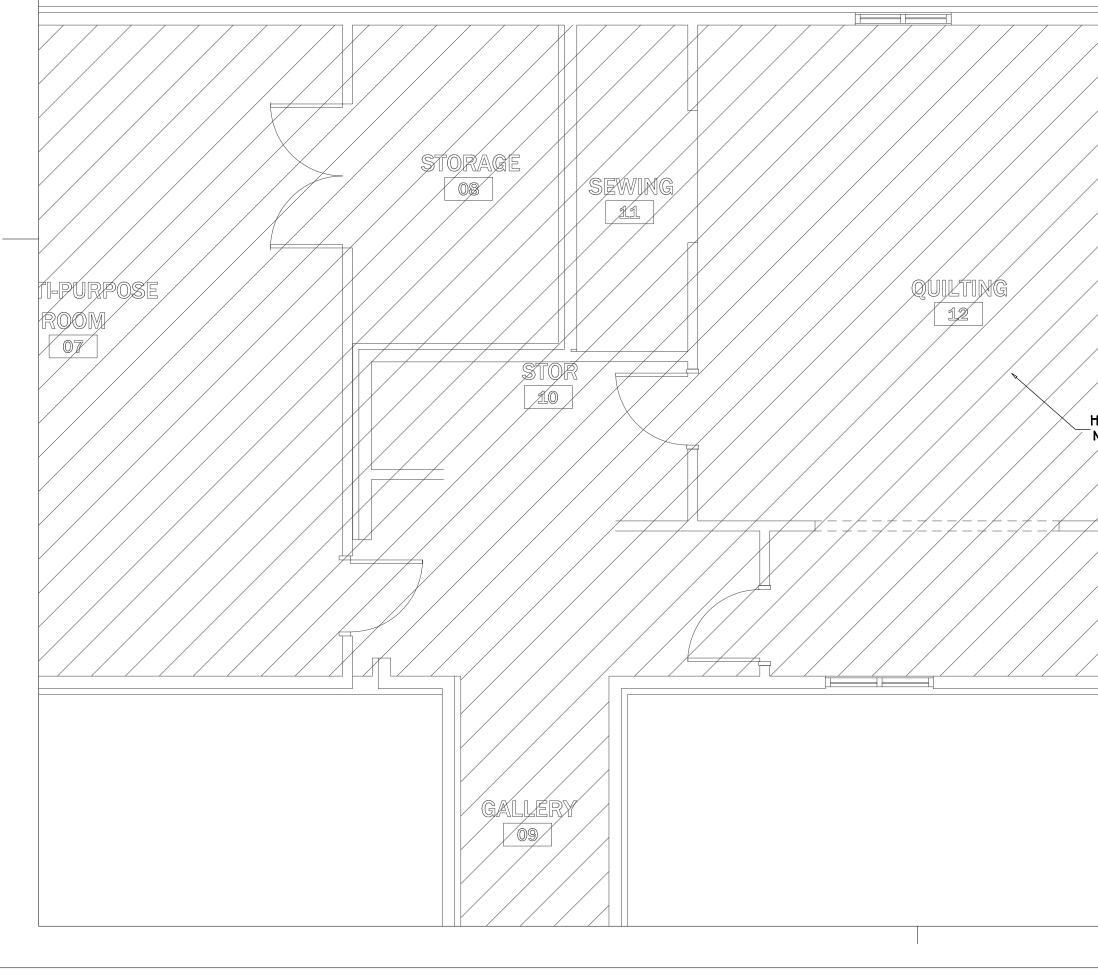


| LOUV       | ERS              |                                 |                  |
|------------|------------------|---------------------------------|------------------|
| SYMBOL     | MODEL/<br>SERIES | SERVES                          | SIZE<br>WxH (IN) |
| WL- I      | ESD-635          | FCU- I OUTSIDE AIR INTAKE       | 8x 8             |
| WL-2       | ESD-635          | RESTROOM EXHAUST                | 24x18            |
| NOTES (APP | ly to all):      |                                 |                  |
| A. FINAL C | OLOR SELECTIO    | ON SHALL BE MADE BY ARCHITECT A | T TIME OF S      |
| B. DESIGN  | IS BASED ON F    | RODUCTS BY GREENHECK. ACCEPT    | ABLE ALTERI      |
| DEMADKS /  |                  |                                 |                  |

REMARKS (APPLY AS SCHEDULED): I. BIRD SCREEN

2. BAKED ON ENAMEL FINISH.

| DIFFUSER, GRILLE, AND REGISTER SCHEDULE |   |                   |                    |                                |             |  |  |  |  |  |  |
|---|---|-------------------|--------------------|--------------------------------|-------------|--|--|--|--|--|--|
| CALLOUT                                 | DESCRIPTION   | FACE SIZE<br>(IN) | INLET SIZE<br>(IN) | NOISE<br>CRITERIA @<br>MAX CFM | MODEL       |  |  |  |  |  |  |
| RC2424                                  | EGGCRATE GRILLE   | 24x24             | 24x24              | 25                             | TITUS 50F   |  |  |  |  |  |  |
| SCPOG                                   | SUPPLY CEILING PLAQUE DIFFUSER  | 24x24             | бØ                 | 25                             | TITUS OMNI  |  |  |  |  |  |  |
| SCP08                                   | SUPPLY CEILING PLAQUE DIFFUSER  | 24x24             | 8Ø                 | 25                             | TITUS OMNI  |  |  |  |  |  |  |
| 550804                                  | DOUBLE DEFLECTION SUPPLY  | I Ox6             | 8x4                | 25                             | TITUS 300FS |  |  |  |  |  |  |
| SUBMIT COLO                             | E (I.E. DIFFUSERS, REGISTERS AND GRILLES) CC<br>DR/FINISH CHARTS FOR ARCHITECTURAL REVIEW<br>RACTOR SHALL COORDINATE AIR DEVICE FRAME | AND SELECTIO      | N.                 |                                |             |  |  |  |  |  |  |



| E    | MIN FREE AREA | CFM | MAX PRESS.<br>DROP | OPERATOR | INTERLOCK | FRAME    | RE | MAR | KS |
|------|---------------|-----|--------------------|----------|-----------|----------|----|-----|----|
| (IN) | (SQ FT)       |     | (IN WC)            |          |           |          | -  | 2   | 3  |
| 18   | 0.4           | 190 | 0.05               | N/A      | N/A       | ALUMINUM | Х  | Х   |    |
| 18   | 0.8           | 420 | 0.05               | N/A      | N/A       | ALUMINUM | Х  | Х   |    |

F SHOP DRAWING APPROVAL. PROVIDE COLOR/FINISH CHARTS AS PART OF SUBMITTAL. TERNATES SHALL BE BY UNITED ENERTECH, ARROW, RUSKIN.

# SPLIT DIRECT EXPANSION (DX) EQUIPMENT

| INDOOR UNIT    |                       |       |       |         |         |           | OUTDOOR UNIT |            |      |      | COMBINED COOLING CAPACITIES |          |         |             |       |       |          |          |          |          |     |     |   |   |  |
|----------------|-----------------------|-------|-------|---------|---------|-----------|--------------|------------|------|------|-----------------------------|----------|---------|-------------|-------|-------|----------|----------|----------|----------|-----|-----|---|---|--|
|                |                       | TOTAL |       |         |         | AUXILIARY |              | BASIS      |      |      |                             | BASIS    | NOMINAL | IAL COOLING |       |       | REMAR    |          |          | ₹KS      |     |     |   |   |  |
| MARK           | SERVES                | S.A.  | O.A.  | E.S.P.  | MOTOR   | HEATER    | WEIGHT       | OF         | MIN. | MIN. | WEIGHT                      | OF       | TONNAGE | TOTAL       | SENS  | LAT   | Ent. Tdb | Ent. Twb | Lvg. Tdb | Lvg. Twb |     |     |   |   |  |
|                |                       | (CFM) | (CFM) | (IN WG) | (hp)    | (kW)      | (LBS)        | DESIGN     | SEER | HSPF | (LBS)                       | DESIGN   | (TONS)  | (MBH)       | (MBH) | (MBH) | (°F)     | (°F)     | (°F)     | (°F)     | - L | 2 3 | 4 | 5 |  |
| FCU-1/<br>HP-1 | EXERCISE<br>EQUIPMENT | 1,990 | 190   | 0.50    | 3/4 ECM | 11.3      | 175.0        | FX4DNFOG I | 14.0 | 8.2  | 250.0                       | 25HCE460 | 5.0     | 58.1        | 43.2  | 14.9  | 76.8     | 65.0     | 56.0     | 55.0     | X   | x x | X | x |  |

NOTES (APPLY TO ALL):

A. SEE ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS.

B. SUBMITTED UNIT CAPACITIES SHOULD BE WITHIN +/- I 0% OF SCHEDULED CAPACITIES.

C. BASIS OF DESIGN: CARRIER. REFER TO SPECIFICATIONS. ACCEPTABLE ALTERNATES: JCI/YORK, TRANE, DAIKIN/MCQUAY, LENNOX

D. ALL EVAPORATORS AND COOLING COILS LOCATED ABOVE THE LOWEST LEVEL FINISHED FLOOR SHALL BE INSTALLED WITH AN AUXILIARY CONDENSATE DRAIN PAN UNDER THE UNIT. PROVIDE AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION OF WATER IN THE AUXILIARY DRAIN PAN.

E. AS AN ALTERNATIVE TO THE AUXILIARY CONDENSATE DRAIN PAN, AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION OF WATER MAY BE INSTALLED IN THE PRIMARY DRAIN LINE, THE OVERFLOW DRAIN LINE OR THE EQUIPMENT SUPPLIED DRAIN PAN. THE WATER LEVEL DETECTOR SHALL BE LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

# GENERAL NOTES

|   |                | MECH/ELECT.                |
|---|----------------|----------------------------|
| WOOD WORKING<br>14<br>ATCHED AREA<br>IOT IN SCOPE | CERAMICS<br>15 |                            |
|   |                | <u>3CP08</u><br>225<br>100 |

REMARKS (APPLY AS SCHEDULED): I. PROGRAMMABLE THERMOSTAT.

2. LOW AMBIENT PACKAGE

3. DISPOSABLE FILTER.

4. ANTI-SHORT CYCLE TIMER.

5. INDOOR FAN DELAY KIT.

6. DISCONNECT SWITCH PROVIDED BY ELECTRICAL SUBCONTRACTOR AT BOTH THE INDOOR AND OUTDOOR UNIT. REFER TO THE ELECTRICAL DOCUMENTS.

7. MOUNT OUTDOOR HEAT PUMP ON CONCRETE HOUSEKEEPING PAD. PAD SHALL BE A MINIMUM 4" THICK AND SHALL EXTEND 6" BEYOND UNIT ON ALL SIDES.

|   | FAN SCHEDULE |         |                 |     |                   |                   |        |                          |                         |                             |    |    |   |  |  |
|---|--------------|---------|-----------------|-----|-------------------|-------------------|--------|--------------------------|-------------------------|-----------------------------|----|----|---|--|--|
| - | MARK         | DUTY    | TYPE            | CFM | E.S.P.<br>(IN WG) | MOTOR<br>(W / hp) | DRIVE  | MAX.<br>NOISE<br>(SONES) | CONTROL<br>BY           | BASIS<br>OF DESIGN<br>MODEL | RE | MA | _ |  |  |
| - | EF-A         | EXHAUST | CEILING CABINET | 210 | 0.5               | 240               | DIRECT | 4.0                      | SWITCHED WITH<br>LIGHTS | GREENHECK SP                | Х  | X  |   |  |  |

NOTES (APPLY TO ALL):

A. SEE ELECTRICAL PLANS FOR POWER CHARACTERISTICS

B. DESIGN IS BASED ON PRODUCTS BY GREENHECK. ACCEPTABLE ALTERNATES SHALL BE BY LOREN-COOK, TWIN-CITY, PENN BARRY.

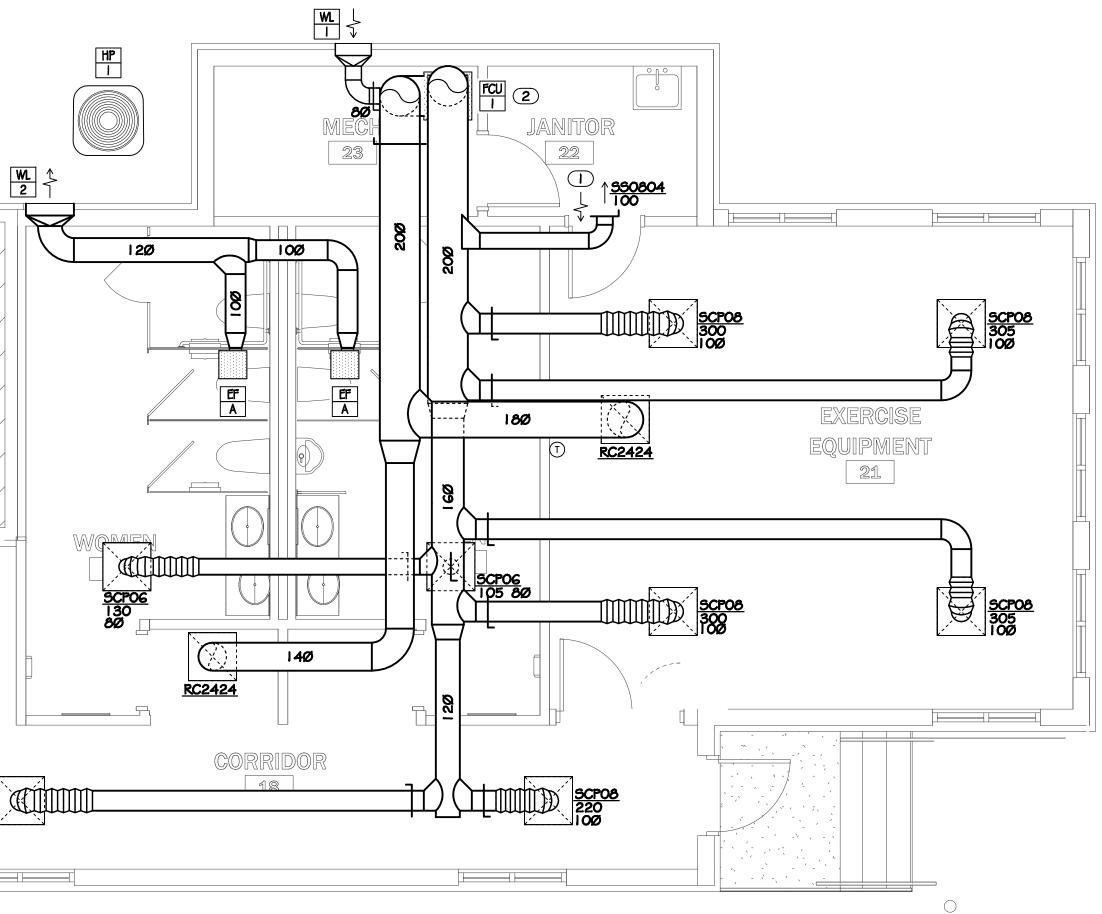
REMARKS (APPLY AS SCHEDULED): I . FAN SPEED CONTROLLER. 2. FACTORY DISCONNECT SWITCH/PLUG. 3. GRAVITY BACKDRAFT DAMPER.

# **KEYNOTES**

A. EACH SUPPLY DIFFUSER/REGISTER RUNOUT SHALL BE PROVIDED WITH A VOLUME DAMPER. REFER TO THE DIFFUSER TAKE-OFF DETAIL FOR ADDITIONAL INFORMATION.

I 3/4" DOOR UNDERCUT. 2 TRAP & ROUTE I "Ø CONDENSATE DRAIN LINE TO FLOOR DRAIN IN JANITOR CLOSET.

B. DRAWINGS ARE DIAGRAMMATIC ONLY; FINAL ROUTING OF DUCTWORK AND EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD. ADDITIONAL OFFSETS, ELBOWS, ETC. SHALL BE PROVIDED AND INSTALLED WITHOUT ADDITIONAL COST TO THE OWNER. C. SUPPLY AND RETURN DUCT TO BE ROUTED IN ATTIC SPACE ABOVE.



FLOOR PLAN 5CALE: 1/4" = 1'-0" (1)



### SPECIFICATIONS

### GENERAL

OF CONSTRUCTION.

ALL INSTALLATION OF DEVICES AND CONNECTION OF CONDUCTORS SHALL BE PERFORMED

BY LICENSED AND SKILLED ELECTRICIAN OR JOURNEYMAN. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER. IF ANY PORTION OF THE WORK IS FOUND UNSATISFACTORY BY THE OWNER, IT SHALL BE REMOVED AND

REINSTALLED WITHOUT DELAY AT NO COST TO THE OWNER. THE WORK INCLUDES. BUT NOT LIMITED TO:

THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM. INCLUDING OWNER PROVIDED EQUIPMENT. LIGHTING CONTROL LIGHTING FIXTURES

EACH CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY THE REGULATORY AUTHORITIES. ALL FEES RELATED TO OBTAINING PERMITS AND INSPECTION SHALL BE PAID FOR BY EACH CONTRACTOR IN HIS TRADE.

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL ELECTRICAL CODE 2020, SPECIFICATIONS, UTILITY COMPANY REQUIREMENTS AND ALL INDUSTRY STANDARDS. ANY DIFFERENCES IN ABOVE MENTIONED REQUIREMENTS, THE MOST STERN SHALL

OVERRULE ALL OTHERS.

IN ADDITION TO ABOVE MENTIONED CODES AND SPECIFICATIONS, THE FOLLOWING INDUSTRY STANDARDS SHALL BE COMPLIED IF THEY ARE MORE STRINGENT. IEEE

IFS IECC 2015 ASHRAE 90. NFPA NEMA UL ADA

### THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION AND WIRING OF ALL EQUIPMENT AND MATERIAL.

THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. THE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO THE ITEMS SHOWN ON THE DRAWINGS. EXACT LOCATIONS OF THESE ITEMS SHALL BE DETERMINED BY REFERENCE TO THE GENERAL PLANS AND MEASUREMENTS AT THE BUILDING AND IN COOPERATION WITH THE OTHER SUBCONTRACTORS, AND IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGE IN THE LOCATION OF ANY PART OF THIS WORK WITHOUT ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FOR ANY CHANGES TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS ANY EXCEPTIONS, INCONSISTENCIES AND CONFLICTS IN CONTRACT DOCUMENTS, SPECIFICATIONS AND CONTRACT DOCUMENTS BY OTHER TRADE SHALL BE BROUGHT TO

ATTENTION TO THE OWNER PRIOR TO BID. CONTRACTOR SHALL COORDINATE AND VERIFY THE WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADE PRIOR TO ANY FABRICATIONS OR INSTALLATION. IF THE LAYOUT OF THE DEVICES ON DRAWINGS ARE IMPRACTICAL TO THE CONDITION IN FIELD, CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY PRIOR TO ANY FABRICATION OR

INSTALLATION.

ELECTRICAL DEVICES ARE INDICATED ON DRAWINGS AT APPROXIMATE LOCATIONS. THE OWNER RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN LOCATIONS WITHOUT ADDITIONAL COSTS.

THE LINES INDICATING BRANCH CIRCUITS DO NOT REPRESENT THE ROUTING OF ELECTRICAL CONDUITS. THEY INDICATE THE LAYOUT AND CONTROL OF CIRCUITS.

PRODUCTS AND WORK

UNDERWRITER'S LABORATORIES' SEAL OF APPROVAL.

LISTED MANUFACTURERS, MODELS, OR CATALOGUE NUMBERS IN PART OR ALL SHALL ENTAIL TO INCLUDE THE PUBLISHED MANUFACTURER'S DESCRIPTION AND SPECIFICATION.

CONTRACTOR SHALL NOT INTERPRET THAT THE LISTED MANUFACTURERS IN SPECIFICATIONS

OR DRAWINGS TO EXCLUDE ALL OTHER MANUFACTURERS

CONTRACTOR SHALL MAKE CERTAIN THAT ALL EQUIPMENT FIT IN THE SPACE DESIGNATED

AND DESIGNED FOR THE SURROUNDINGS IT OCCUPIES.

COMPLETE CATALOGUE ILLUSTRATION AND DESCRIPTIONS OF ALL EQUIPMENT SHALL BE SUBMITTED TO THE OWNER PRIOR TO ORDERING ANY EQUIPMENT.

ALL HORIZONTAL RUNS OF CONDUITS SHALL BE SUPPORTED BY MEANS OF APPROVED HANGER FROM THE STRUCTURAL CEILING.

CONDUITS AND RACEWAYS:

OUTDOORS EXPOSED: RIGID STEEL.

MOTOR DRIVEN EQUIPMENT): LFMC.

INDOORS DAMP OR WET LOCATIONS: IMC. INDOORS LOW-VOLTAGE CABLES: EMT.

COPPER CONDUCTORS #10 AND SMALLER:

COPPER CONDUCTORS #8 OR LARGER:

ELECTRICAL, WIREMOLD.

WET LOCATIONS.

CONDUCTORS:

PIRFILIE

AETNA

KERITE

REPUBLIC

SOUTHWIRE

ENCORE WIRE

### CONTRACTOR SHALL REFER TO ALL RELATED DOCUMENTS, ARCHITECTURAL, STRUCTURAL, CIVIL AND MEP DRAWINGS, AND FULLY UNDERSTAND THE SCOPE OF WORK AND CONDITION

THE WORK UNDER THIS SPECIFICATIONS AND DRAWINGS SHALL INCLUDE ALL LABOR.

ROUGH-IN AND FINAL CONNECTIONS TO ALL DEVICES REQUIRING ELECTRICAL POWER,

### MATERIALS FURNISHED SHALL BE NEW AND BY STANDARD MANUFACTURERS AND MUST CONFORM TO THE NATIONAL BOARD OF FIRE UNDERWRITER'S REQUIREMENTS AND BEAR THE

COORDINATE THE WORK UNDER THIS SECTION WITH ALL OTHER TRADES.

MANUFACTURERS: SQUARE D, B-LINE, ALLIED TUBE & CONDUIT, HOFFMAN, CARLON

OUTDOORS CONCEALED ABOVE GROUND: RIGID STEEL. OUTDOORS UNDERGROUND: TYPE EPC-40-PVC

OUTDOORS CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND BOXES AND ENCLOSURES ABOVE GROUND: NEMA 3R UNLESS NOTED OTHERWISE ON PLANS. INDOORS EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE: EMT. INDOORS EXPOSED NOT SUBJECT TO SEVERE PHYSICAL DAMAGE: EMT. INDOORS EXPOSED SUBJECT TO SEVERE PHYSICAL DAMAGE: RIGID STEEL CONDUIT.

INDOORS CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT. INDOORS CONNECTION TO VIBRATING EQUIPMENT: FMC, EXCEPT USE LFMC IN DAMP OR

LABELED PER UL 83, TYPE THHN/THWN, SOLID COPPER 600 VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA. METAL CLAD (TYPE MC) CABLE WHERE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 330.

LABELED PER UL 83, TYPE THHN/THWN, STRANDED COPPER, GOOVOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA. ACCEPTABLE MANUFACTURERS OF CONDUCTORS:

CONTRACTOR MAY USE ALUMINUM CONDUCTORS FOR #4 AWG OR LARGER IN THE PLACE OF COPPER CONDUCTORS. CONTRACTOR SHALL REFER TO NEC TABLE 310-16 FOR EQUIVALENT AMPACITY AND SHALL COMPENSATE FOR VOLTAGE DROP.

STANDARD DATA AND TIME-CURRENT CURVES. ALL DATA SHALL BE BASED ON TEST OF STANDARD PRODUCTS. APPROVED MANUFACTURERS: GENERAL ELECTRIC CUTLER HAMMER SQUARE D SIEMENS THERMAL-MAGNETIC BOLT-IN TYPE CIRCUIT BREAKERS WITH QUICK-MAKE, QUICK-BREAK CONTACTS; TRIP-FREE OPERATION WITH OVER-THE-CENTER TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE. MULTI-POLE BREAKERS SHALL HAVE INTERNAL COMMON TRIP AND COMMON RESET WITH A SINGLE TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE. TRIP RATINGS SHALL BE MOLDED ON THE HANDLE OR FACE OF BREAKER. BREAKER TERMINALS SHALL BE RATED TO ACCOMMODATE A MINIMUM OF 75 DEGREE C. CONDUCTORS. BREAKER SHALL BE RATED FOR MOUNTING AND OPERATION IN ANY POSITION: SHALL ACCOMMODATE AND MATCH THE TYPE OF TERMINATIONS REQUIRED. SINGLE POLE BREAKERS RATED 15 AND 20 AMPERES SHALL BE UL LABELED AS "SWITCHING BREAKERS" AT THE APPLIED CIRCUIT VOLTAGE. MULTI-POLE BREAKERS RATED 100 AMPERES AND LARGER SHALL BE MOLDED CASE THERMAL-MAGNETIC BOLT-IN TYPE BREAKER WITH ADJUSTABLE INSTANTANEOUS TRIP. LIGHTING FIXTURE SUBMITTAL: SCHEDULE BY TYPE DESIGNATION ALL LIGHTING FIXTURES, EACH COMPLETE WITH DATA SHEET WITH COMPLETE PHYSICAL, ELECTRICAL AND LIGHTING CHARACTERISTICS, LAMP TYPE AND LAMP DATA. REFER TO THE "LIGHTING FIXTURE SCHEDULE" \IN THE DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS AND MANUFACTURER TYPES. PROVIDE LAMPS FOR EACH FIXTURE OF QUANTITY, TYPE AND COLOR AS LISTED IN LIGHTING FIXTURE SCHEDULE. GE, SYLVANIA OR PHILIPS ARE ACCEPTABLE. EACH LIGHTING FIXTURE SHALL BE UL LABELED FOR PROPER OPERATION IN THE TYPE OF CEILING CONSTRUCTION AND FOR THE MOUNTING ARRANGEMENT ON/IN WHICH IT IS INSTALLED. FIELD VERIFY ACTUAL CEILING SLOPE FOR FIXTURES INSTALLED IN SAME AND ACTUAL FIELD DIMENSIONS AND ANGLES OF CONSTRUCTION FOR ANY FIXTURE CONFORMING THE SHAPE AND LENGTH OF SAME, FOR COORDINATION OF FIXTURE CONSTRUCTION. PANELBOARD SUBMITTAL: INCLUDE SCHEDULE OF EACH PANELBOARD WITH ALL DEVICES AND COMPLETE WITH PHYSICAL AND ELECTRICAL DATA AND WITH RATINGS FOR EACH COMPONENT INCLUDING BREAKER/FUSE OVERLAY CURVES.

INCLUDE SCHEDULE OF ALL FUSES, RATINGS, TIME COORDINATION DATA, MANUFACTURER'S

LABELED PER UL #67 AND #50, CONFORM WITH NEMA #250 AND PB1, NFPA #70-384 AND 70-373. ALL JUNCTION BOXES SHALL BE LABELED WITH PANEL AND CIRCUIT DESIGNATION.

PROVIDE TYPED CIRCUIT DIRECTORY WITH EACH CIRCUIT SERVING DEVICES AND AREA IT'S SERVING. APPROVED MANUFACTURERS: GENERAL ELECTRIC

CUTLER HAMMER SQUARE D

SPECIFICATIONS

MOLDED CASE CIRCUIT BREAKER:

SIEMENS

LIGHTING CONTROL TIME SWITCHES:

SOLID STATE, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917. 20-A BALLAST LOAD, 120/240VAC.

TWO ON-OFF SET POINTS ON A 24-HOUR SCHEDULE AND ANNUAL HOLIDAY SCHDULE THAT OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS.

ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF A PROGRAM

BATTERY BACKUP FOR NOT LESS THAN SEVEN DAYS RESERVE TO MAINTAIN SCHEDULES AND TIME CLOCK. INDOOR OCCUPANCY SENSORS:

WALL OR CEILING MOUNTED SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK

ADJUSTABLE TIME-DELAY OVER A RANGE OF I TO 30 MINUTES. SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH

UL773A. SENSOR IS POWERED FROM POWER PACK. POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120 OR 277 VAC.

AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC (21.5 TO 2152 LUX); TURN LIGHTS OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.

DUAL SENSOR TYPE: DETECT OCCUPANCY AREA USING PIR (PASSIVE INFRA-RED) AND ULTRASONIC DETECTION METHOD. GROUNDING AND BONDING

ALL GROUNDING AND BONDING SHALL CONFORM TO NEC ARTICLE 250.

COPPER WIRE OR CABLE INSULATED FOR GOOV UNLESS REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.

INSTALL SOLID CONDUCTOR FOR #8 AWG AND SMALLER AND STRANDED CONDUCTORS FOR #6 OR LARGER.

INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR ALL EQUIPMENT.

# ELECTRICAL GENERAL NOTES

FIXTURE TYPE INDICATED BY UPPER CASE CHARACTERS, SWITCHING AND GROUPING PLACEMENT AND DIMENSIONS. AND DIMENSIONS.

PLAN. TYPICAL.

TRIM

SWITCHING DEVICES. SHUTDOWN AND FIRE ALARM SIGNAL INITIATION.

EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS, WHICH REQUIRE ELECTRICAL SERVICE. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS. WALL SWITCHES CONTROLLING CIRCUITS OF OPPOSITE PHASES SHALL NOT BE INSTALLED IN

COMMON BOX UNLESS PERMANENT BARRIER IS PROVIDED. ALL HOME RUNS SHALL RUN PARALLEL TO STRUCTURE AS MUCH AS POSSIBLE WHERE CEILING IS EXPOSED.

INCHES OF PANEL POINT ON BAR JOISTS.

PROPER LOCATION. ACCESSIBILITY.

SHALL BE A MINIMUM OF 8" APART. TELEVISION AND RADIO ANTENNAS CABLES SHALL HAVE SURGE PROTECTION. GROUND ALL MASTS.

PROVIDE SURGE PROTECTION FOR ELECTRICAL AND TELEPHONE SERVICES. PROVIDE TVSS FOR FIRE ALARM CONTROL PANEL.

FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT ELECTRICAL CHARACTERISTICS WITH DIV. 15 CONTRACTOR PRIOR TO ROUGH-IN. ADJUST ELECTRICAL CONNECTIONS IF NECESSARY TO MATCH ACTUAL EQUIPMENT IN FIELD. FOR EXAMPLE, COORDINATE THE NAMEPLATE OVERCURRENT PROTECTION DEVICE RATING OF MECHANICAL EQUIPMENT AMONG MECHANICAL AND ELECTRICAL SUBCONTRACTORS. ADJUST CIRCUIT BREAKER TO MATCH NAMEPLATE RATING OF EQUIPMENT AT NO ADDITIONAL COST.

FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS FOR ANY SUPPLEMENTAL POWER REQUIREMENTS, INCLUDING BUT NOT LIMITED TO CONTROL CIRCUITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ALL EQUIPMENT TO ITS INTENDED OPERATIONAL STATUS.

REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF FLOW AND TAMPER SWITCHES. EACH PENETRATION OF A FIRE RESISTANT RATED ASSYMBLY BY A PIPE, TUBE WIRE OR CONDUIT SHALL BE PROTECTED BY A THROUGH PENETRATION FIRE STOP SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTME 814 OR E199.

ELECTRIC RECEPTACLES, SWITCHES, OUTLETS, ETC. SHALL NOT BE INSTALLED BACK TO BACK ON FIRE RESISTANCE RATED WALLS. THEY SHALL BE AT LEAST 24-INCHES APART. LIGHT SWITCHES AND ELECTRICAL OUTLETS, LOCATED IN ROOMS ACCESSIBLE TO THE

DISABLED SHALL BE LOCATED NO HIGHER THAN 48 INCHES AND NO LOWER THAN 15 INCHES ABOVE THE FINISHED FLOOR SURFACE. IF THE REACH OR THE CONTROL IS OVER AN OBSTRUCTION, THE MINIMUM HEIGHT SHALL BE REACHED TO 44 INCHES FOR A FORWARD APPROACH OR 46 INCHES FOR A SIDE APPROACH.

REFER TO LOW VOLTAGE CONSULTANT'S DRAWINGS FOR VOICE, DATA AND CATV OUTLET LOCATIONS. REFER TO LV CONSULTANT'S DRAWINGS FOR ANY ADDITIONAL INFORMATION. CONNECT ALL EXIT SIGNS TO NEAREST UNSWITCHED PORTION OF THE LIGHTING CIRCUIT IN THE AREA.

ELECTRICAL BOXES INSTALLED IN FIRE RATED WALLS SHALL MAINTAIN THE INTEGRITY OF THE RATED WALL.

SUPPORT ALL VERTICAL RACEWAY PER NEC TABLE 300.19(A). MAKE ELECTRICAL CONNECTIONS TO ELECTRIC WATER COOLERS FROM GFCI PROTECTED OUTLET IN WALL BEHIND COOLER HOUSING. THE OUTLET AND CORD SHALL NOT BE VISIBLE

FROM PUBLIC VIEW. COORDINATE WITH CUTSHEETS OF ALL EQUIPMENT TO BE INSTALLED AND PROVIDE ADDITIONAL CIRCUITS FOR CONTROLS IF REQUIRED BY MANUFACTURER.

FINAL COLOR, FINISH AND OTHER AESTHETIC PORTIONS OF ALL DEVICES SHALL BE COORDINATED WITH ARCHITECT OR OWNER'S REPRESENTATIVE. THIS SET OF DRAWINGS DOES NOT SUPERCEDE ARCHITECTURAL OR INTERIOR DOCUMENTS.

PERPENDICULAR TO EXTERIOR WALLS.

PLENUM.

LISTED PER NEC 240.87(B).

THE DESIGN OF THIS SET OF DOCUMENT IS BASED ON NEC 2020.

ELECTRICAL CONTRACTOR SHALL REFER TO ALL OTHER DESIGN DRAWINGS PRIOR TO BID AND RETAIN FULL UNDERSTANDING OF THE SCOPE OF WORK.

DESIGNATED BY LOWER CASE LETTER AND CIRCUIT BY NUMBER (WHERE APPLICABLE). REFER TO THE ARCHITECTURAL/INTERIORS REFLECTED CEILING PLANS FOR EXACT FIXTURE

REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS FOR ACTUAL DEVICE LOCATIONS

COORDINATE THE INSTALLATION OF ALL CEILING MOUNTED DEVICES (FIRE ALARM SYSTEM DEVICES AND SPEAKERS, SOUND SYSTEM SPEAKER, ETC.) TO BE SYMMETRICAL ABOUT

LIGHT FIXTURES AND SPRINKLER HEADS. REFER TO THE ARCHITECTURAL REFLECTED CEILING

ALL MOUNTING OF EQUIPMENT IS AS SHOWN UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECT THE COLOR/FINISHES OF ALL ELECTRICAL DEVICES, OUTLETS, COVERPLATES AND

EMERGENCY BATTERY PACKS AND EXIT SIGNS SHALL BE CONNECTED AHEAD OF ANY

REFER TO MECHANICAL DRAWINGS FOR DUCT SMOKE DETECTOR LOCATIONS AND QUANTITIES OPERATION SHALL INCLUDE DUAL CONTACT BASE WITH LOCAL EQUIPMENT

WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT. REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION AND REQUIREMENTS OF

ALL RACEWAY AND EQUIPMENT SUPPORTS AND HANGERS SHALL BE FULLY COORDINATED WITH STRUCTURAL DRAWINGS TO INSURE LOCATION OF SAME OCCURS WITHIN FOUR (4)

COORDINATE LOCATION OF ALL FLOOR MOUNTED MECHANICAL AND PLUMBING EQUIPMENT IN ORDER TO VERIFY POWER & CONTROL RACEWAY CONCEALED IN SLABS TERMINATED AT

DISCONNECT SWITCHES, MOTOR STARTERS AND OTHER ELECTRICAL EQUIPMENT INSTALLED ABOVE ACCESSIBLE CEILINGS, AND REQUIRING ACCESS FOR MAINTENANCE, SHALL BE INSTALLED WITH BOTTOM OF DEVICE ONE (1) FOOT ABOVE CEILING TO PROVIDE READY

MECHANICAL. PLUMBING, FIRE PROTECTION AND OTHER EQUIPMENT ARE SHOWN ON FLOOR PLAN IN APPROXIMATE LOCATION. COORDINATE WITH M, P, FP AND CONTRACT DRAWINGS/SUBMITTALS FOR EXACT LOCATION OF EQUIPMENT.

GENERAL DIAGRAMATIC RACEWAY INTERCONNECTIONS OF EQUIPMENT, FIXTURES AND DEVICES ARE INDICATED ON FLOOR AND REFLECTED CEILING PLANS, REFER TO STRUCTURAL AND ARCHITECTURAL PLANS FOR ELEVATION CHANGES AND RACEWAY ROUTES. RACEWAY FOR EXTERIOR LIGHTING MAY BE INDICATED OUTSIDE OF BUILDING FOOTPRINT FOR CLARITY. ROUTE ALL EXTERIOR LIGHTING RACEWAY WITHIN BUILDING STRUCTURE.

POWER AND COMMUNICATIONS/DATA CONDUITS CAN CROSS AT 90°, BUT WHERE PARALLEL,

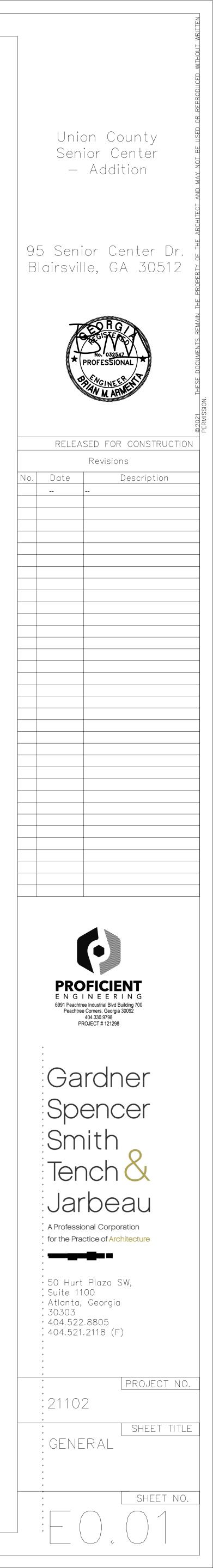
ALL EXPOSED HORIZONTAL RUNS OF CONDUITS SHALL BE EITHER PARALLEL OR

PROVIDE PLENUM RATED CABLES IF THE CABLES ARE EXPOSED AND ROUTED THROUGH

FOR ALL FUSES 1200A OR HIGHER, PROVIDE ARC ENERGY REDUCTION PER NEC 240.67. WHERE HIGHEST TRIP SETTING IN INSTALLED OVERCURRENT DEVICE IS 1 200A OR HIGHER, CONTRACTOR TO PROVIDE DOCUMENTATION OF CIRCUIT BREAKER(S) LOCATION AND PROVIDE AT LEAST ONE METHOD TO REDUCE CLEARING TIME VIA ENERGY-REDUCING /AINTENANCE SWITCH, INSTANTANEOUS TRIP SETTING, OR OTHER APPROVED METHOD AS

| LEGEND                      |   |                                    |
|-----------------------------|---|------------------------------------|
| SYMBOLS                     | DESCRIPTION   | MOUNTING                           |
| φ                           | DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R  | 18" AFF                            |
| $\oplus$                    | DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R  | 42" AFF OR 6" ABOVE<br>COUNTER TOP |
| ₽                           | QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA<br>5-20R   | 18" AFF                            |
| ₽AC                         | QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA<br>5-20R   | 42" AFF OR 6" ABOVE<br>COUNTER TOP |
| $\bigcirc$                  | DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R  | FLUSH WITH FINISHED<br>FLOOR       |
| Φ                           | DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R  | IN CEILING                         |
| $\bigcirc$                  | SPECIAL RECEPTACLE, CONFIGURATION AND ELECTRICAL CHARACTERISTIC AS NOTED ON DWG   | 18" AFF                            |
| Q                           | JUNCTION BOX FLUSH IN WALL WITH COVER. SIZE PER NEC.  | 18" AFF                            |
| J                           | JUNCTION BOX FLUSH IN CEILING WITH COVER.<br>SIZE PER NEC.  | IN CEILING                         |
| J                           | JUNCTION BOX FLUSH IN FINSHED FLOOR WITH COVER. SIZE PER NEC.   | FLUSH WITH FINISHED<br>FLOOR       |
| \$                          | SWITCH  | 42" AFF                            |
| <b>\$</b> / \$ <sub>3</sub> | SWITCH - 3 WAY  | 42" AFF                            |
| ¢ / \$ <sub>05</sub>        | SWITCH - WALL MTD, INTEGRAL OCCUPANCY SENSOR  | 42" AFF                            |
| $\mathcal{L}$               | SWITCH - WALL MTD, LOW VOLTAGE, PILOT LIGHT   | 42" AFF                            |
| ₽ / \$ <sub>D</sub>         | SWITCH - WALL MTD, DIMMING  | 42" AFF                            |
| 63                          | SWITCH - CEILING MOUNTED OCCUPANCY SENSOR   | IN CEILING                         |
| P                           | TV OUTLET   | I 8" AFF                           |
| ▼                           | TELEPHONE OUTLET  | 18" AFF                            |
| ₹                           | TELEPHONE OUTLET. SUBSCRIPT: F - FIREMAN'S<br>PHONE, H - HOUSE PHONE, P - PAY PHONE   | 42" AFF OR 6" ABOVE<br>COUNTER TOP |
| $\mathbf{V}$                | TELEPHONE / DATA COMBINATION OUTLET   | 18" AFF                            |
| $\mathbf{V}$                | TELEPHONE / DATA COMBINATION OUTLET   | FLUSH WITH FINISHED<br>FLOOR       |
| <b>A</b>                    | TELEPHONE / DATA COMBINATION OUTLET   | 42" AFF OR 6" ABOVE<br>COUNTER TOP |
| $\bigtriangledown$          | DATA OUTLET   | I 8" AFF                           |
| $\overline{\Delta}$         | DATA OUTLET   | 42" AFF OR 6" ABOVE<br>COUNTER TOP |
|                             | DISCONNECT SWITCH. SUBSCRIPT: AMP / # OF<br>POLES / ENCLOSURE   | AS INDICATED ON<br>DWG             |
| $\square$                   | FUSED DISCONNECT SWITCH. SUBSCRIPT: AMP / #<br>OF POLES / ENCLOSURE / FUSE  | AS INDICATED ON<br>DWG             |
|                             | ELECTRICAL PANELBOARD. REFER TO PANELBOARD SCHEDULE.  | SURFACE MOUNTED<br>ON WALL         |
|                             | EQUIPMENT AS NOTED ON DRAWING.  | SURFACE MOUNTED<br>ON WALL         |
|                             | MOTOR   |                                    |
| XX-#                        | HOME RUN WITH WIRE TICKS. XX - PANEL<br>DESIGNATION, # - CIRCUIT DESIGNATION. WIRE<br>TICKS - (1) NEUTRAL , (3) HOT III \$ (1) GROUND • |                                    |
| ©/©-                        | SMOKE DETECTOR. CEILING / WALL MOUNTED  |                                    |
| ⊕/⊕-                        | HEAT DETECTOR. CEILING/WALL MOUNTED   |                                    |
|                             | FIRE ALARM NOTIFICATION DEVICE. AUDIO AND VISUAL.   | 80" AFF                            |
| ×                           | FIRE ALARM NOTIFICATION DEVICE. AUDIO.  | 80" AFF                            |
| ¤⊠                          | FIRE ALARM NOTIFICATION DEVICE. VISUAL.   | 80" AFF                            |
| $\boxtimes$                 | FIRE ALARM INITIATION DEVICE. PULL STATION.   | 42" AFF                            |
|                             | 1   | I                                  |

| ABBREV     | ABBREVIATIONS                        |       |                                       |  |  |  |
|------------|--------------------------------------|-------|---------------------------------------|--|--|--|
| AC         | 6" ABOVE COUNTER SPACE OR<br>42" AFF | IG    | ISOLATED GROUND                       |  |  |  |
| AF         | AMP FUSE                             | ISC   | SHORT CIRCUIT CURRENT                 |  |  |  |
| AFF        | ABOVE FINISHED FLOOR                 | LTG   | LIGHTING                              |  |  |  |
| AL         | ALUMINUM                             | MTD   | MOUNTED                               |  |  |  |
| BFC        | BELOW FINISHED CEILING               | N     | NEUTRAL                               |  |  |  |
| BKR        | BREAKER                              | NL    | NIGHT LIGHT                           |  |  |  |
| CND        | CONDUIT                              | NEC   | NATIONAL ELECTRICAL CODE              |  |  |  |
| CONN       | CONNECTED OR CONNECTION              | PNL   | PANEL                                 |  |  |  |
| СТВ        | CABLE TV TERMINAL<br>BACKBOARD       | RECPT | RECEPTACLE                            |  |  |  |
| CU         | COPPER                               | TEL   | TELEPHONE                             |  |  |  |
| DN         | DOWN                                 | TTB   | TELEPHONE TERMINAL BOARD              |  |  |  |
| EC         | EMPTY CONDUIT                        | TV    | TELEVISION                            |  |  |  |
| ELEC       | ELECTRICAL                           | TVSS  | TRANSIENT VOLTAGE SURGE<br>SUPPRESSOR |  |  |  |
| FACP       | FIRE ALARM CONTROL PANEL             | TYP   | TYPICAL                               |  |  |  |
| FAA        | FIRE ALARM ANNUNCIATOR<br>PANEL      | XFMR  | TRANSFORMER                           |  |  |  |
| G OR GRND  | GROUND                               | UG    | UNDERGROUND                           |  |  |  |
| GFCI OR GF | GROUND FAULT CIRCUIT<br>INTERRUPTER  | WP    | WEATHERPROOF                          |  |  |  |



|   |   | ing Compliance C   | entincate  |                            |   | CC<br>directly in the COM <i>check</i> software  |
|---|---|--|--|----------------------------|---|--|
| Project Inforr<br>Energy Code:<br>Project Title:<br>Project Type:                         | 2015 IECC   | OUNTY SENIOR CENTER- ADDITION  |  | requireme                  | nt, the user certifies that a code r  | n is provided by the user in the COMcheck Re<br>equirement will be met and how that is docu<br>zed in a separate table, a reference to that ta   |
| Construction Site<br>95 SENIOR CE<br>BLAIRSVILLE, (                                       | NTER DR.<br>GA 30512  | Agent: Designer/C  | ontractor:   | [PR4] <sup>1</sup>         | Plan Review<br>Plans, specifications, and/or<br>calculations provide all information<br>with which compliance can be<br>determined for the interior lighting                                    | Complies?     Comments       □Complies     Requirement will be met.       □Does Not     Not Observable   |
| Reduced interior  | ficiency Package(s)<br>ighting power. Requirements are implicit<br>ior Lighting Power   | ly enforced within interior lighting allowance calculat  |  |                            | and electrical systems and equipment<br>and document where exceptions to<br>the standard are claimed. Information<br>provided should include interior<br>lighting power calculations, wattage o |  |
| 1-Gymnasium   | A<br>Area Category  | B<br>Floor Area<br>(ft2)<br>1500   | CDAllowedAllowed WattsWatts / ft2(B X C)0.851269   | C406<br>[PR9] <sup>1</sup> | bulbs and ballasts, transformers and<br>control devices.<br>Plans, specifications, and/or<br>calculations provide all information<br>with which compliance can be                               | □Complies Requirement will be met.<br>□Does Not  |
|   | erior Lighting Power  |  | tal Allowed Watts = 1269   |                            | determined for the additional energy<br>efficiency package options.   | □Not Observable<br>□Not Applicable   |
| <u>1-Gymnasium</u>  | ure ID : Description / Lamp / Watta   | age Per Lamp / Ballast Lamps/  | # of Fixture (C X D)<br>Fixtures Watt.   |                            |   |  |
| LED: B: 2x2 LE  | D RECESSED TROFFER: Other:<br>D RECESSED TROFFER: Other:<br>D STRIP: Other:   | 1<br>1<br>1  | 17         40         680           2         35         70           2         42         84           Total Proposed Watts =         834 |                            |   |  |
| Interior Light  | ing PASSES: Design 34% bette<br>ing Compliance Statement  |  |  |                            |   |  |
| designed to me  | tement: The proposed interior light<br>and other calculations submitted wit<br>et the 2015 IECC requirements in Co<br>sted in the Inspection Checklist. | ting design represented in this document is co<br>th this permit application. The proposed interi<br>OMcheck Version 4.1.2.0 and to comply with a  | onsistent with the building plans,<br>or lighting systems have been<br>any applicable mandatory  |                            |   |  |
| Brian M. A  | rmenta -PE  |  | 06/22/2021<br>Date   |                            |   |  |
|   |   |  |  |                            |   |  |
|   |   |  |  |                            |   |  |
|   |   |  |  |                            |   |  |
|   |   |  |  |                            | 1 High Impact (Tier 1)  | 2 Medium Impact (Tier 2) 3 Low Impac   |
|   | UNION COUNTY SENIOR CENTER- A<br>P:\Public\121\121298 Union County  | DDITION<br>Senior Center Blairsville GA\ELEC\121298 CC   | Report date: 06/22/21<br>MCHECK E.cck Page 1 of 5  |                            | : UNION COUNTY SENIOR CENTER-   |  |
|   |   |  |  |                            |   |  |
|   |   |  |  |                            |   |  |
|   | ough-In Electrical Inspection   | Complies? Comme  | ents/Assumptions   | Section<br>#               | Final Inspection  | Complies? Comments   |
| & Req.ID           C405.2.1         Ligh           [EL15] <sup>1</sup> redu           50% |   | Does Not   |  | C408.2.5.                  | Furnished O&M instructions for<br>systems and equipment to the<br>building owner or designated  | Complies Requirement will be met.  |
| C405.2.1 Occ  | upancy sensors installed in   | □Not Observable<br>□Not Applicable<br>□Complies Requirement will be met.   |  | [FI17] <sup>3</sup>        | representative.   | □Not Observable<br>□Not Applicable<br>□Complies See the Interior Lighting fixture sc   |
| [EL18] <sup>1</sup> requ  |   | □Does Not<br>□Not Observable<br>□Not Applicable  |  | [FI18] <sup>1</sup>        | Interior installed lamp and fixture<br>lighting power is consistent with what<br>is shown on the approved lighting<br>plans, demonstrating proposed watts                                       | □Does Not<br>□Not Observable   |
| C405.2.2. per<br>3 mar  | nual controls readily accessible and  | Does Not   |  | C408.2.5.                  | are less than or equal to allowed<br>watts.<br>Furnished as-built drawings for  | One of the second s |
| C405.2.2. Auto  | omatic controls to shut off all   | One of the second s | s related to means of egress in  | [FI16] <sup>3</sup>        | electric power systems within 90 days<br>of system acceptance.  | □Not Observable<br>□Not Applicable   |
| 1 buil<br>[EL22] <sup>2</sup> buil  | dings.  | Does Not stairways, ramps, corridor<br>Not Observable<br>Not Applicable  | s, or emergency routes.  | [FI33] <sup>1</sup>        | Lighting systems have been tested to<br>ensure proper calibration, adjustment,<br>programming, and operation.   | □Complies Requirement will be met.<br>□Does Not<br>□Not Observable   |
| [EL16] <sup>2</sup> indi<br>ligh  | vidual controls that control the ts independent of general area   | □Complies Exception: Requirement of<br>□Does Not<br>□Not Observable  | does not apply.  | Additiona                  | l Comments/Assumptions:   | □Not Applicable  |
| C405.2.3. equ   | nary sidelighted areas are<br>ipped with required lighting  | □Not Applicable<br>□Complies Exception: Requirement of<br>□Does Not  | does not apply.  | -                          |   |  |
|   | trols.  | □Not Observable<br>□Not Applicable   |  |                            |   |  |
| C405.2.3, Enc<br>C405.2.3. und  | er skylights and rooftop monitors   | Complies Exception: Requirement of Does Not  | does not apply.  | -                          |   |  |
| 1, are<br>C405.2.3. con<br>3<br>[EL21] <sup>1</sup>                                       | equipped with required lighting   | □Not Observable<br>□Not Applicable   |  |                            |   |  |
| C405.2.4 Sep  |   | □Complies Requirement will be met.<br>□Does Not  |  | _                          |   |  |
| ligh  | ting plans.   | □Not Observable<br>□Not Applicable   |  |                            |   |  |
| [EL8] <sup>1</sup> allo<br>app<br>auto  | wed for special functions per the<br>roved lighting plans and is<br>omatically controlled and   | Complies Requirement will be met. Does Not Not Observable Not Applicable   |  |                            |   |  |
| sep   | arated from general lighting.<br>signs do not exceed 5 watts per<br>e.  | □Not Applicable<br>□Complies Requirement will be met.<br>□Does Not   |  |                            |   |  |
| م ب ب ب الدام   |   | □Not Observable<br>□Not Applicable   |  |                            |   |  |
|   | omments/Assumptions:  |  |  |                            |   |  |
|   |   |  |  |                            |   |  |
|   | 1 High Impact (Tier 1)  | 2 Medium Impact (Tier 2) 3 Low Im  | pact (Tier 3)  |                            | 1 High Impact (Tier 1)  | 2 Medium Impact (Tier 2) 3 Low Impac   |
|   | UNION COUNTY SENIOR CENTER- A<br>P:\Public\121\121298 Union County  | DDITION<br>v Senior Center Blairsville GA\ELEC\121298 CC   | Report date: 06/22/21<br>MCHECK E.cck Page 3 of 5  |                            | : UNION COUNTY SENIOR CENTER- ,<br>ne: P:\Public\121\121298 Union Count   | ADDITION<br>ty Senior Center Blairsville GA\ELEC\121298 COMC   |
|   |   |  |  |                            |   |  |
|   |   |  |  |                            |   |  |

| Plan Review   | Complies?  | Comments/Assumptions     |  |
|---|--|--------------------------|--|
| fications, and/or<br>provide all information<br>compliance can be<br>for the interior lighting<br>al systems and equipment<br>ent where exceptions to<br>d are claimed. Information<br>ould include interior<br>ver calculations, wattage of<br>allasts, transformers and<br>ces. | □Complies<br>□Does Not<br>□Not Observable<br>□Not Applicable | Requirement will be met. |  |
| fications, and/or<br>provide all information<br>compliance can be<br>for the additional energy<br>ackage options.   | □Complies<br>□Does Not<br>□Not Observable<br>□Not Applicable | Requirement will be met. |  |
|   | 1  |                          |  |

| inal Inspection  | Complies?  | Comments/Assumptions  |
|--|--|---|
| 0&M instructions for<br>d equipment to the<br>ner or designated<br>ive.  | □Complies<br>□Does Not<br>□Not Observable<br>□Not Applicable | Requirement will be met.                                      |
| alled lamp and fixture<br>ver is consistent with what<br>the approved lighting<br>onstrating proposed watts<br>n or equal to allowed | □Complies<br>□Does Not<br>□Not Observable<br>□Not Applicable | <i>See the Interior Lighting fixture schedule for values.</i> |
| s-built drawings for<br>ver systems within 90 days<br>cceptance.   | □Complies<br>□Does Not<br>□Not Observable<br>□Not Applicable | Requirement will be met.                                      |
| stems have been tested to<br>ber calibration, adjustment,<br>ng, and operation.  | Complies<br>Does Not<br>Not Observable                       | Requirement will be met.                                      |

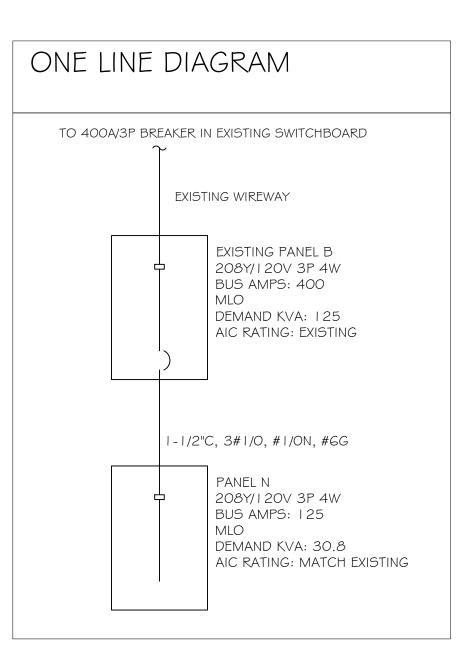
|                                      | Par  | nel<br><b>3</b>  |   | ROOM<br>MOUNTIN<br>FED FRO<br>NOTE E  |                           | ACE             | TS 2<br>AMPS<br>TRAL   | 08Y/120<br>6 400<br>100%   |
|--------------------------------------|--|--|---|---|---------------------------|-----------------|--|--|
|                                      | CKT<br>#   | CKT<br>BKR   | load<br>Kva   | CIRCUIT   | DESCRIP                   | TION            | CKT<br>#   | CKT<br>BKR   |
|                                      | <br>3  | 60/3<br>   | 17.2  | EXISTING  |                           |                 | a 2<br>b 4   | 20/1<br>60/2   |
|                                      | 5<br>7<br>9  | 50/3   | 4.4   | EXISTING  |                           |                 | c 6<br>a 8<br>b 10   | 50/3   |
|                                      | <br> 3<br> 5   | <br> 50/3  | 14.4  | EXISTING  | 2                         |                 | c 12<br>a 14<br>b 16   | <br>20/1<br>20/1   |
| -<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 17<br>19<br>21<br>23<br>25<br>27<br>29<br>31<br>33<br>35<br>37<br>39<br>41 | <br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1 | 1.2<br>0.6<br>1.4<br>1.8<br>1.2<br>1.6<br>0.4<br>0.8<br>0.2<br>28.9 | EXISTING<br>EXISTING<br>EXISTING<br>EXISTING<br>EXISTING<br>EXISTING<br>EXISTING<br>EXISTING<br>PANEL N |                           |                 | c       18         a       20         b       22         c       24         a       26         b       28         c       30         a       32         b       34         c       36         a       38         b       40         c       42 | 20/1<br>20/1<br>20/1<br>20/1<br>20/2<br> <br>20/1<br>30/2<br> <br>20/1<br>20/1<br>20/1<br>20/1 |
|                                      |  | GHTING<br>ARGEST MC  |   | CONN<br>KVA<br>4.2<br>7.2   | CALC<br>KVA<br>5.3<br>4.3 | (125%)<br>(25%) | RECI<br>HEA <sup>-</sup><br>TOT,<br>BALA<br>LO,  | AL LOAD<br>ANCED 3-1   |

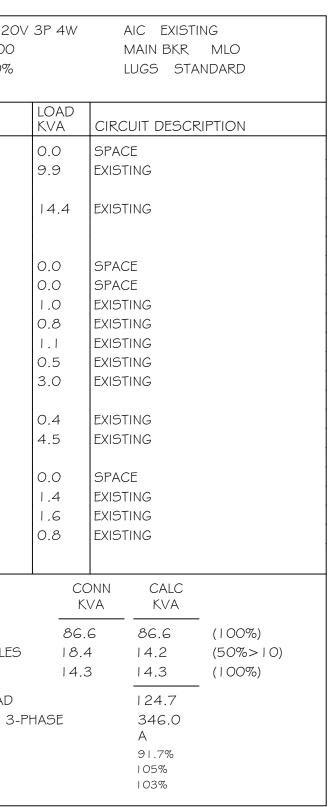
# GENERAL NOTES

PHASE B

PHASE C

CONTRACTOR SHALL INSTALL RECORDING AMMETER ON FEEDER CONDUCTORS SERVING PANELS TO DETERMINE ACTUAL EXISTING LOAD IN ACCORDANCE WITH NEC ARTICLE 220.87(1). METER SHALL BE CAPABLE OF CONTINUOUSLY RECORDING THE AVERAGE POWER REACHED AND MAINTAINED FOR 15 MINUTE INTERVAL, FOR A MINIMUM DURATION OF 30-DAYS PRIOR TO COMMENCING WORK.

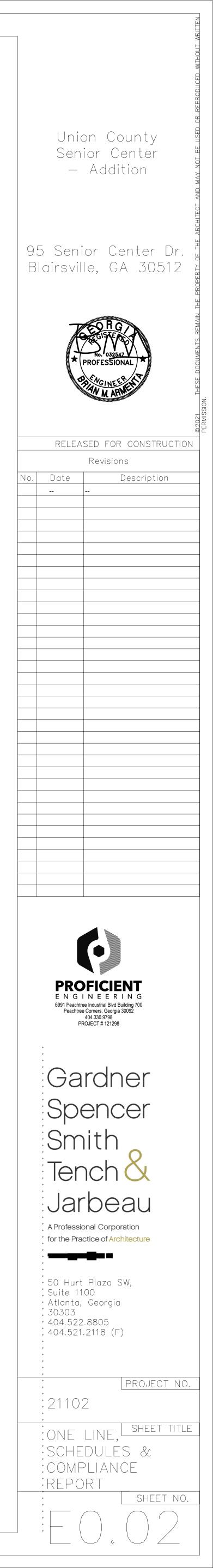


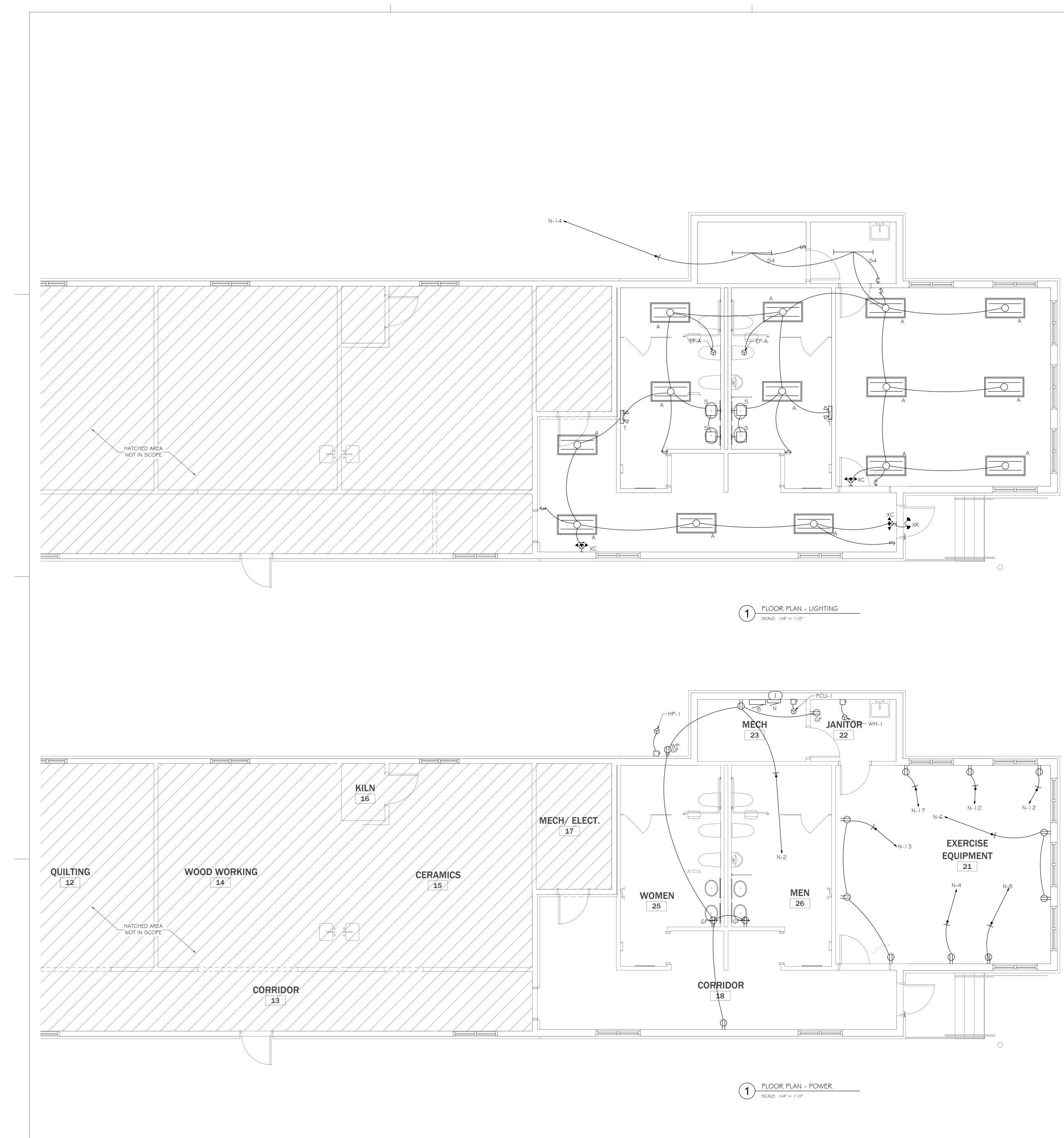


| Par  | nel  |   | ROOM<br>MOUNTING SURFACE<br>FED FROM B<br>NOTE  | BUS | TS 20<br>AMPS<br>TRAL  | 08Y/120V<br>125<br>100%                                      | 3P 4W   | AIC MATCH EXISTING<br>MAIN BKR MLO<br>LUGS STANDARD   |
|--|--|---|---|-----|--|--|---|---|
| CKT<br>#   | CKT<br>BKR   | load<br>Kva   | CIRCUIT DESCRIPTION   |     | CKT<br>#   | CKT<br>BKR   | load<br>Kva   | CIRCUIT DESCRIPTION   |
| <br>3  | 20/2<br>   | 3.0   | WH-I  |     | a 2<br>b 4   | 20/1<br>20/1   | 1.1<br>0.6  | RECEPTACLE<br>GYM   |
| 5<br>7   | 50/2   | 6.7   | HP-1  |     | c 6<br>a 8   | 20/1<br>20/1   | 0.4<br>0.6  | RECEPTACLE<br>GYM   |
| 9<br>  | 80/2   | 13.0  | FCU-1   |     | Ь 10<br>с 12   | 20/1<br>20/1   | 0.6<br>0.6  | GYM<br>GYM  |
| <ol> <li>13</li> <li>15</li> <li>17</li> <li>21</li> <li>23</li> <li>25</li> <li>27</li> <li>29</li> <li>31</li> <li>33</li> <li>35</li> <li>37</li> </ol> | 20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1 | 0.5<br>0.0<br>0.6<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0 | RECEPTACLE<br>SPACE<br>GYM<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE |     | <ul> <li>a 14</li> <li>b 16</li> <li>c 18</li> <li>a 20</li> <li>b 22</li> <li>c 24</li> <li>a 26</li> <li>c 30</li> <li>a 32</li> <li>b 34</li> <li>c 36</li> <li>a 38</li> </ul> | 20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1<br>20/1 | 1.3<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0 | EF-A, LIGHTING<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE<br>SPACE |
| 39<br>4 I  | 20/1<br>20/1   | 0.0<br>0.0  | SPACE   |     | b 40<br>c 42   | 20/1<br>20/1   | 0.0<br>0.0  | SPACE<br>SPACE  |
|  | 1  | <u> </u>  | CONN CALC<br>KVA KVA  | 1   |  |  |   | DNN CALC<br>VA KVA  |
|  | GHTING<br>\RGEST MC  |   | 0.8 I.O (I25%)<br>5.7 I.7 (25%)   |     | MOT<br>RECE<br>HEAT  | PTACLES  | .8<br>5.0<br>  .3   | 5.0 (50%>10)  |
|  |  |   |   |     | BALA<br>LOA<br>PHA<br>PHA  | AL LOAD<br>NCED 3-PI<br>AD<br>SE A<br>SE B<br>SE C           | HASE  | 30.8<br>85.4 A<br>85.5%<br>97.6%  |

| CALLOUT | SYMBOL | LAMP         | DESCRIPTION                                 | MODEL  | VOLTS      |
|---------|--------|--------------|---|--|------------|
| A       |        | (1) 40W LED  | 2x4 LED RECESSED TROFFER                    | LITHONIA 2GTL-4-40L-EZ I                     | 120V IP 2W |
| 5       | H      | (1) 42W LED  | LED BATHROOM SCONCE                         | TO BE DETERMINED                             | 120V IP 2W |
| 54      | +      | (1) 42W LED  | 4' LED STRIP                                | LITHONIA ZL I N-L48-<br>5000LM-FST-MVOLT-40K | 120V IP 2W |
| Т       |        | (2) I.5W LED | EMERGENCY LIGHTING UNIT                     | LITHONIA ELM2L-LED                           | 120V IP 2W |
| ХС      |        | (2) 1.5W LED | COMBINATION EXIT/EMERGENCY<br>LIGHTING UNIT | LITHONIA LHQM-LED-R-HO                       | 120V IP 2W |
| XR      |        | (I) INCLUDED | REMOTE LAMP HEAD                            | LITHONIA<br>ELA-QWP-L0309-SD                 | 120V IP 2W |

| GENERAL SCHEDULE |        |                |       |                     |                           |  |
|------------------|--------|----------------|-------|---------------------|---------------------------|--|
| CALLOUT          | SYMBOL | VOLTS          | KVA   | WIRE CALLOUT        | DISCONNECT<br>DESCRIPTION |  |
| EF-A             | Ø      | 120V IP 2W     | 0.24  | /2"C, # 2,# 2N,# 2G | SWITCHED WITH LIGHTS      |  |
| EF-A             | Ø      | 120V IP 2W     | 0.24  | /2"C, # 2,# 2N,# 2G | SWITCHED WITH LIGHTS      |  |
| FCU-1            | 8° Ľ   | 208/120V 2P 3W | 12.96 | - /4"C,2#2,#2N,#8G  | I OOA/2P/NEMA I           |  |
| HP-1             | 0° Ū'  | 208/120V 2P 3W | 6.66  | 3/4"C,2#6,#6N,#10G  | GOA/2P/NEMA 3R            |  |
| WH-1             | 8~Ľ    | 208/120V 2P 3W | 3     | /2"C,2# 2,# 2N,# 2G | 30A/2P/NEMA I             |  |





# GENERAL NOTES

REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES.

PROVIDE UNSWITCHED HOT LEG OF CIRCUIT TO EMERGENCY LIGHTING AND EXIT SIGNS.

ALL CABLES AND WIRES BEING ROUTED IN PLENUM SPACES NOT IN CONDUITS SHALL BE PLENUM RATED.

NO SCOPE IN HATCHED REGION.

CLEAN AND REPAIR EXISTING ITEMS TO REMAIN. ALL ITEMS NEED TO BE TESTED FOR FUNCTIONALITY AND REPLACED IF FAULTY. ANY DAMAGED ITEMS WILL NEED TO BE REPLACED.

CONTRACTOR SHALL VERIFY EXISTING CIRCUITING, SPARE BREAKERS, SPACES, AND EXISTING EQUIPMENT AND DEVICES TO REMAIN PRIOR TO COMMENCING WORK.

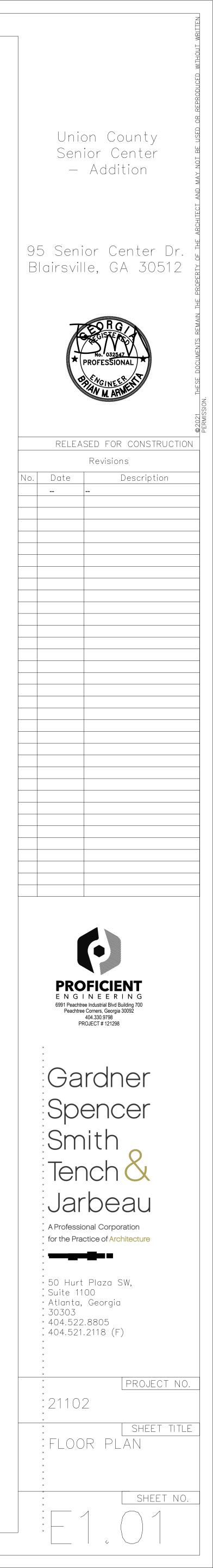
ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY ARTICLE 250-146.

CONTRACTOR SHALL INSTALL RECORDING AMMETER ON FEEDER CONDUCTORS SERVING PANELS TO DETERMINE ACTUAL EXISTING LOAD IN ACCORDANCE WITH NEC ARTICLE 220.87(1). METER SHALL BE CAPABLE OF CONTINUOUSLY RECORDING THE AVERAGE POWER REACHED AND MAINTAINED FOR 15 MINUTE INTERVAL, FOR A MINIMUM DURATION OF 30-DAYS PRIOR TO COMMENCING WORK.

CONTRACTOR TO FIELD COORDINATE EXACT LOCATION IN EXERCISE ROOM FOR GYM EQUIPMENT THAT NEEDS ELECTRICAL POWER. CONTRACTOR TO COORDINATE EXACT REQUIREMENT WITH ACTUAL EQUIPMENT INSTALLED.

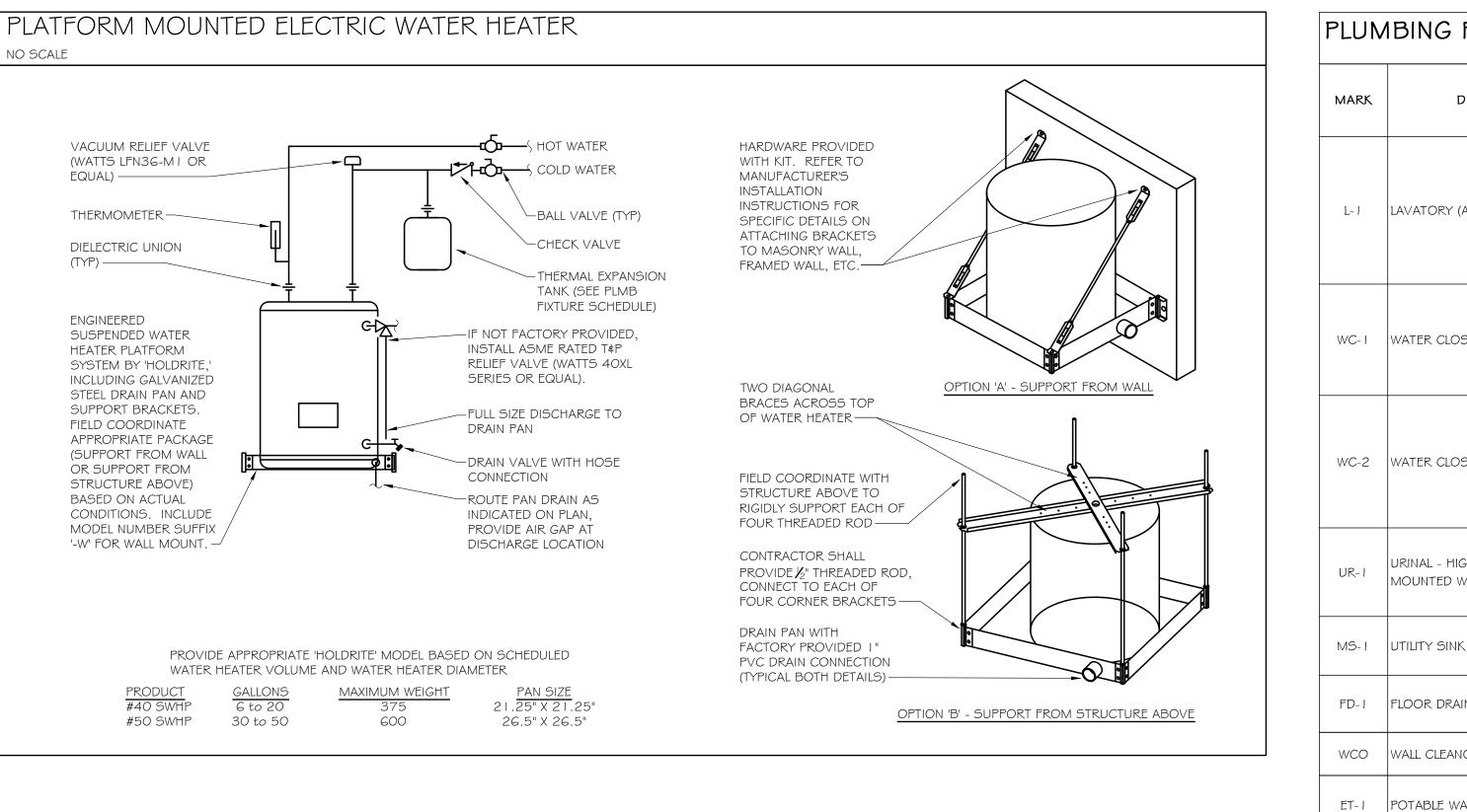
# KEYNOTES

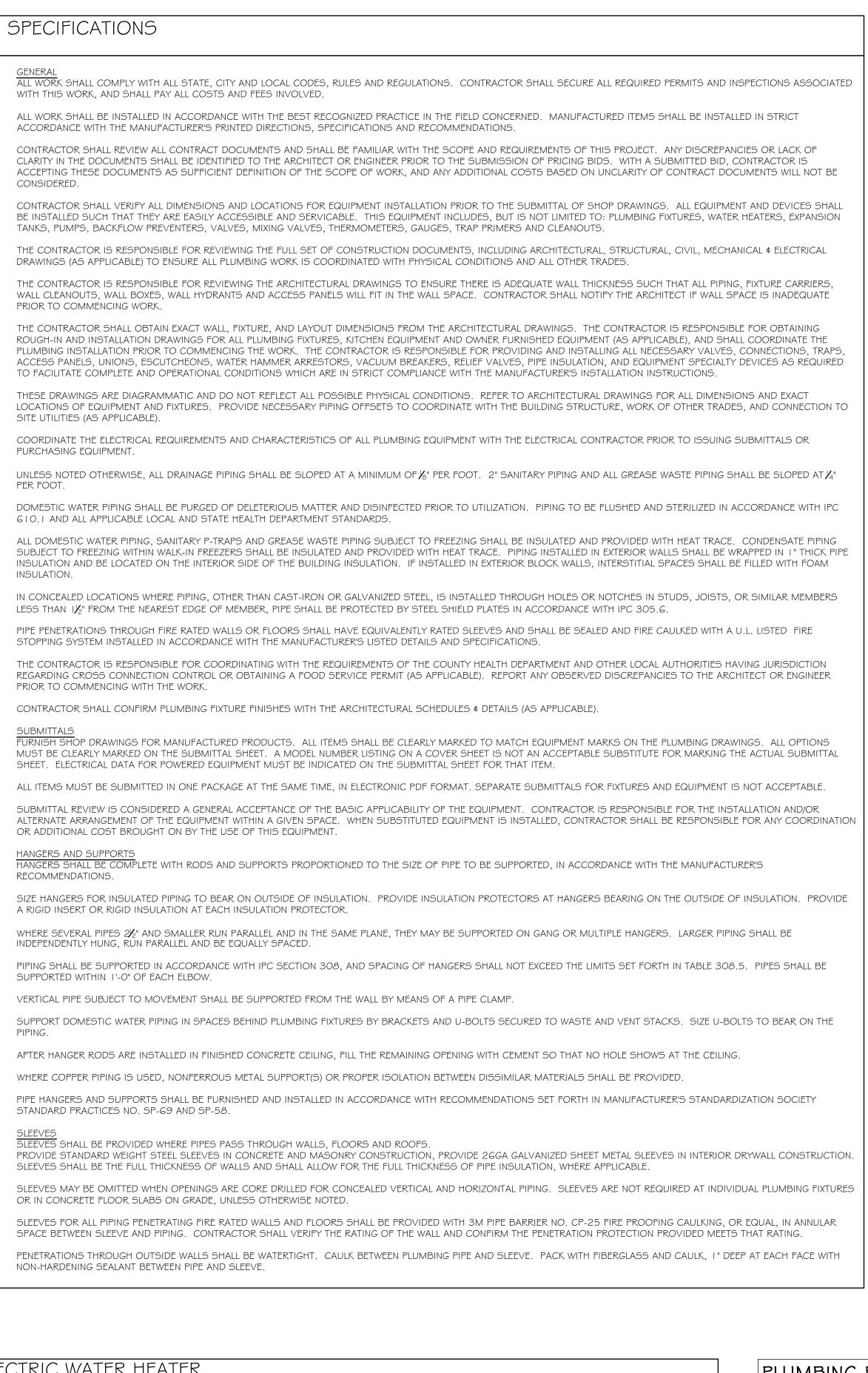
I NEW DISTRIBUTION PANEL. FIELD COORDINATE EXACT LOCATION.



| ABBR     | EVIATIONS                  |        |                            |
|----------|----------------------------|--------|----------------------------|
| AAV      | AIR ADMITTANCE VALVE       | IMB    | ICE MACHINE BOX            |
| A/C      | ABOVE CEILING              | IE     | INVERT ELEVATION           |
| A/F      | ABOVE FLOOR                | IWH    | INSTANTANEOUS WATER HEATER |
| AFF, AFG | ABOVE FINISHED FLOOR/GRADE | L, LAV | LAVATORY                   |
| B/F, B/G | BELOW FLOOR/GRADE          | MBH    | I OOO BTU/HR               |
| BFP      | BACKFLOW PREVENTER         | MS     | MOP SINK                   |
| CD       | CONDENSATE DRAIN           | MV     | MIXING VALVE               |
| CONT     | CONTINUATION               | O/H    | OVERHEAD                   |
| CW       | COLD WATER                 | G      | NATURAL GAS                |
| DN       | DOWN                       | PD     | PUMPED DISCHARGE           |
| ET       | EXPANSION TANK             | PRV    | PRESSURE REDUCING VALVE    |
| EWC      | ELECTRIC WATER COOLER      | RP     | RECIRCULATION PUMP         |
| ex.      | EXISTING                   | S, SAN | SANITARY                   |
| FCO      | FLOOR CLEANOUT             | SH     | SHOWER                     |
| FD       | FLOOR DRAIN                | SK     | SINK                       |
| FHB      | FREEZEPROOF HOSE BIBB      | TP     | TRAP PRIMER                |
| FS       | FLOOR SINK                 | TYP    | TYPICAL                    |
| FRH      | FREEZEPROOF ROOF HYDRANT   | UR     | URINAL                     |
| FWH      | FREEZEPROOF WALL HYDRANT   | V      | VENT                       |
| GCO      | GRADE CLEANOUT             | VTR    | VENT THROUGH ROOF          |
| GI       | GREASE INTERCEPTOR         | WC     | WATER CLOSET               |
| HB       | HOSE BIBB                  | W.C.   | WATER COLUMN               |
| HD       | HUB DRAIN                  | WCO    | WALL CLEANOUT              |
| HW       | HOT WATER                  | WHA    | WATER HAMMER ARRESTER      |
| HWR      | HOT WATER RETURN           | WMB    | WASHING MACHINE BOX        |

| LEGEND    |  |  |  |
|-----------|--|--|--|
|           | COLD WATER PIPE                        |  |  |
|           | HOT WATER PIPE                         |  |  |
| 5         | SANITARY PIPE                          |  |  |
|           | VENT PIPE                              |  |  |
| 0 C       | PIPE UP / PIPE DOWN                    |  |  |
|           | PIPE TEE FROM TOP / TEE FROM BOTTOM    |  |  |
| E         | PIPE CAP / PIPE CONTINUATION           |  |  |
|           | DIRECTIONAL FLOW ARROW                 |  |  |
|           | BALL VALVE / CHECK VALVE               |  |  |
|           | MIXING VALVE / PRESSURE REDUCING VALVE |  |  |
|           | BACKFLOW PREVENTER ASSEMBLY            |  |  |
| [æ ¢-œ    | WALL HYDRANT / HOSE BIBB               |  |  |
|           | FLOOR DRAIN / FLOOR SINK               |  |  |
|           | WATER HAMMER ARRESTOR                  |  |  |
| æ         | P-TRAP                                 |  |  |
| 2©        | HUB DRAIN                              |  |  |
| ۲         | FLOOR CLEANOUT / GRADE CLEANOUT        |  |  |
| $\otimes$ | VENT THROUGH ROOF                      |  |  |
| ·⊢ ⊢      | PIPE CLEANOUT / WALL CLEANOUT          |  |  |





# SPECIFICATIONS

WASTE AND VENT PIPING SYSTEMS AND ACCESSORIES SANITARY PIPING SHALL BE PVC SCHEDULE 40 SOLID WALL PIPE AND DWV FITTING SYSTEM.

PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D-1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D-1785 AND ASTM D-2665. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D-2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F-1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D-2564. PRIMER SHALL CONFORM TO ASTM F-656. BURIED PIPE SHALL CONFORM TO ASTM D-2321.

WASTE AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH THE GOVERNING CODES. AT A MINIMUM, WASTE PIPING SHALL BE TESTED WITH AT LEAST 10 FOOT OF WATER HEAD PRESSURE APPLIED.

ALL VENTS THROUGH ROOF SHALL BE LOCATED AT LEAST 10'-0" AWAY FROM ANY AIR INTAKE, EVAPORATIVE COOLER, OR ANY OTHER DEVICE THAT WOULD DRAW AIR FROM THE VENT. FLASH AROUND ALL PIPES PENETRATING THROUGH ROOF WITH STANDARD MANUFACTURED FLASHINGS. FLASHING SHALL BE SHEET METAL WITH RUBBER GASKETS AND SHALL EXTEND INTO ROOFING AND UP PIPE DISTANCES IN ACCORDANCE WITH THE LOCAL CODE. NO DOUBLE COMBINATION FITTINGS MAY BE UTILIZED IN THE HORIZONTAL.

WHERE TWO HORIZONTAL PIPES (BACK-TO-BACK WATER CLOSETS OR TWO SANITARY BRANCHES) COMBINE IN THE VERTICAL, A DOUBLE COMBINATION WYE EIGHTH BEND FITTING SHALL BE INSTALLED. DOUBLE SANITARY TEE OR SANITARY CROSS IS NOT ACCEPTABLE.

WHERE DRAWINGS REQUIRE CONNECTION TO EXISTING SANITARY SEWER PIPING IN BUILDING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD DETERMINE EXACT LOCATION, DEPTH AND DIRECTION OF FLOW PRIOR TO COMMENCING WORK. CONTRACTOR SHALL ALERT ARCHITECT/ENGINEER IF THERE IS A POTENTIAL ISSUE MAINTAINING PROPER SLOPE IN CONNECTING TO EXISTING, OR IF THERE IS A MORE DIRECT CONNECTION POSSIBLE. CONTRACTOR SHALL CONFIRM THAT ANY EXISTING PIPING TO BE REUSED IS CLEAN, FREE OF DEFECTS, ADEQUATELY SLOPED 🔏 "/FT MINIMUM) AND THAT THERE ARE NO DIPS THAT COULD HOLD WATER. PROVIDE CAMERA SCOPING TO DOCUMENT THIS INFORMATION. CONTRACTOR SHALL ALERT ARCHITECT/ENGINEER OF ANY DEFICIENCIES.

DOMESTIC WATER SYSTEMS AND ACCESSORIES WATER PIPING ABOVE SLAB: TYPE 'L' HARD DRAWN COPPER TUBING, ASTM B88, WROUGHT SOLDER JOINTS, ANSI BIG.22.

WATER PIPING BELOW SLAB: TYPE 'K SOFT DRAWN COPPER TUBING, WITH NO JOINTS BELOW SLAB, ASTM B88.

ALL DOMESTIC HOT WATER PIPING SHALL HAVE A MINIMUM PRESSURE RATING OF LOOPSI AT L80°F.

DOMESTIC WATER PIPING SHALL BE TESTED IN ACCORDANCE WITH ALL GOVERNING CODES. PIPING SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. PIPING TO BE FLUSHED AND STERILIZED IN ACCORDANCE WITH IPC 610.1 AND ALL APPLICABLE LOCAL AND STATE HEALTH DEPARTMENT STANDARDS.

BALL VALVES SHALL BE TWO-PIECE BRONZE BODY, LARGE PORT WITH SOLID, SMOOTH BORE CHROME PLATED BRASS BALL. SEATS SHALL BE REINFORCED TFE WITH TEFLON PACKING RING AND THREADED ADJUSTABLE PACKING NUT. PROVIDE STEM EXTENSION AS NEEDED TO PROVIDE HANDLE ON OUTSIDE OF PIPE INSULATION. VALVES SHALL BE APOLLO 70 OR EQUAL.

BACKFLOW PREVENTERS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS FOR EASE OF TESTING AND SERVICING. FOR BACKFLOW PREVENTERS WITH VENT CONNECTIONS, ROUTE VENT LINE TO NEAREST DRAIN AND DISCHARGE WITH AIR GAP. BACKFLOW PREVENTERS SHALL BE TESTED IN ACCORDANCE WITH IPC 312.10.2. CONTRACTOR SHALL PROVIDE CERTIFICATIONS THAT STATE DEVICES HAVE BEEN TESTED AND APPROVED.

THERMOMETERS SHALL BE 9" ADJUSTABLE ANGLE, 30°-180°F RANGE (TRERICE BX9 OR EQUAL). PRESSURE GAUGES SHALL BE 4/2" DIAL SIZE, 0-160PSI (TRERICE GOOCB OR EQUAL). CONTRACTOR SHALL FIELD VERIFY INCOMING DOMESTIC WATER PRESSURE TO CONFIRM ADEQUATE PRESSURE TO SERVE THE DOMESTIC WATER SYSTEM. CONTRACTOR SHALL ALERT ENGINEER TO A POTENTIAL LOW PRESSURE CONDITION. WHERE PRESSURE EXCEEDS 80PSI, PROVIDE PRESSURE REGULATING VALVE (WATTS LF223) AND UPSTREAM STRAINER (WATTS LSF777).

CONTRACTOR SHALL FIELD COORDINATE LOCATION OF ACCESSIBLE ISOLATION VALVES ON DOMESTIC HOT & COLD WATER SUPPLIES TO FIXTURES OR GROUPS OF FIXTURES SUCH THAT THEY MAY BE SHUT OFF FOR SERVICING. SERVICE AND HOSE BIBB VALVES SHALL BE IDENTIFIED. ALL OTHER VALVES INSTALLED IN LOCATIONS THAT ARE NOT ADJACENT TO THE FIXTURE(S) SHALL BE IDENTIFIED, INDICATING THE FIXTURE(S) SERVED.

ALL EXPOSED MATERIALS WITHIN RETURN AIR PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50, AS DETERMINED IN ACCORDANCE WITH ASTM E84/UL723. COPPER AND CAST IRON PIPING IS APPROVED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL RETURN AIR PLENUM LOCATIONS WITH THE MECHANICAL CONTRACTOR.

### INSULATION INSULATE ALL DOMESTIC HOT WATER AND HOT WATER RECIRCULATION PIPING IN ACCORDANCE WITH IECC TABLE C403.2.10. PIPE UP TO 1/4": 1" THICK INSULATION. PIPE 1/2" OR LARGER: 1/2" THICK INSULATION

RETURN AIR PLENIUM

PROTECTION OF PIPIN

INSULATE ALL HORIZONTAL COLD WATER PIPING LOCATED ABOVE CEILING, VERTICAL PIPING LOCATED IN AN EXTERIOR WALL, EXPOSED PIPING (I.E. MECH ROOMS). PIPE UP TO 1": "" THICK. PIPING 1/4" AND OVER: 1" THICK INSULATION. ALL WATER AND DRAINAGE PIPING INSTALLED IN EXTERIOR WALLS SHALL BE WRAPPED IN 1" THICK PIPE INSULATION AND BE LOCATED ON THE INTERIOR SIDE OF THE BUILDING INSULATION. IF INSTALLED IN EXTERIOR BLOCK WALLS, INTERSTITIAL SPACES SHALL BE FILLED WITH FOAM INSULATION. ALL JOINTS SHALL BE SEALED WITH MATCHING VAPOR BARRIER TAPE.

INSULATION SHALL HAVE A K-FACTOR (AVERAGE THERMAL CONDUCTIVITY) NOT TO EXCEED 0.27 BTU-IN/HR x SQFT x °F.

PIPING PASSING UNDER FOOTINGS OR THROUGH FOUNDATION WALLS SHALL BE PROVIDED WITH A SLEEVE TWICE THE DIAMETER OF THE PIPE. OPEN ENDS OF SLEEVES SHALL BE SEALED. PIPING PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED IN ACCORDANCE WITH IPC 305.1. ALL PIPING INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS SHALL BE PROTECTED BY STEEL SHIELD PLATES IN ACCORDANCE WITH IPC 305.6. VERTICAL STACKS IN WOOD CONSTRUCTION SHALL BE PROTECTED FROM BUILDING SETTLING WITH COMPRESSION/EXPANSION FITTINGS AND PIPE CLAMPS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS (FERNCO XJ SERIES OR EQUAL).

TANK TYPE WATER HEATERS WATER HEATERS SHALL BE U.L. LISTED AND SHALL MEET OR EXCEED THE STANDBY LOSS REQUIREMENTS OF U.S. DEPT. OF ENERGY AND CURRENT EDITION OF ASHRAE/IESNA 90.1. WATER HEATERS SHALL HAVE I 50PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE ROD AND HIGH TEMPERATURE CUTOFF SWITCH. WATER HEATERS SHALL BE THERMOSTATICALLY CONTROLLED AND SET TO 120° UNLESS OTHERWISE NOTED. WATER HEATERS SHALL BE INSTALLED ON SUSPENDED PLATFORM, STEEL STAND OR CONCRETE PAD, AS INDICATED ON DRAWINGS. WATER HEATERS SHALL HAVE A MINIMUM 3 YEAR LIMITED WARRANTY.

WATER HEATERS SHALL BE INSTALLED LEVEL AND PLUMB. FIELD COORDINATE EXACT WATER HEATER LOCATION. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES, AND INSTALL SUCH THAT CONTROLS AND DEVICES ARE ACCESSIBLE FOR SERVICING.

INSTALL SHUTOFF VALVES IN COLD WATER INLET AND HOT WATER OUTLET. INSTALL THERMOMETER ON HOT WATER OUTLET. WATER HEATER SHALL HAVE ASME RATED COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE IN TOP PORTION OF TANK (FACTORY OR FIELD INSTALLED). PIPE RELIEF VALVE OUTLET TO FLOOR DRAIN, MOP SINK, INDIRECT WASTE RECEPTOR OR TO EXTERIOR. MAINTAIN CONTINUOUS DOWNWARD PITCH TOWARD DISCHARGE LOCATION, AND PROVIDE AIR GAP AT DISCHARGE LOCATION. WHERE WATER HEATER DRAIN PAN IS INDICATED ON PLANS, ROUTE DRAIN TO SAME LOCATION AS RELIEF VALVE AND DISCHARGE WITH AIR GAP.

### ELECTRIC WATER HEATER SCHEDULE

| MARK | TANK CAPACITY | RECOVERY          | SETPOINT | ELECTRICAL | BASIS             | TYP  |
|------|---------------|-------------------|----------|------------|-------------------|------|
| WH-1 | 20 GAL        | 15 GPH @ 80° RISE | 1 20°    | 3.0 KW     | A.O. SMITH DEL-20 | LOWB |

DIRECTLY WITH THE ELECTRICAL CONTRACTOR AND THE POWER PANEL SCHEDULES ON THE ELECTRICAL DRAWINGS.

# PLUMBING FIXTURE SCHEDULE

| MARK  | DESCRIPTION   | WASTE<br>RUNOUT | WASTE<br>CONN. | VENT | WATER RUNOUT |      | WATER CONN. |      |   |
|-------|---|-----------------|----------------|------|--------------|------|-------------|------|---|
|       |   |                 |                |      | cw           | HW   | CW          | HW   | SPECIFICATION   |
| L- I  | LAVATORY (ADA) - UNDERMOUNT                             | 2"              | /2"            | 2"   | 1/2"         | 1/2" | 3/8"        | 3/8" | UNDERMOUNT LAVATORY (AMERICAN STANDARD "OVALYN," 0496.221) AND 0.5GPM SING<br>HANDLE FAUCET WITH POLISHED CHROME FINISH (DELTA 501LF-HGMHDF). HANDICAP DRA<br>OFFSET W/GRID DRAIN (ZURN 8746-PC) AND CHROME PLATED P-TRAP (ZURN Z8701-PC).<br>CHROME PLATED BRASS ANGLE SUPPLY STOPS WITH 12" LONG X 3/8" FLEX SUPPLIES<br>(MCGUIRE H165). WHERE NOT CONCEALED BY COUNTER SHROUD, INSULATE OFFSET, TRA<br>AND SUPPLY LINES (TRUEBRO "LAVGUARD," #103 E-Z). PROVIDE THERMOSTATIC MIXING<br>VALVE TO TEMPER HOT WATER TO 110 DEGREES (LEONARD 170-LF). LEAD FREE, ASSE<br>1070. |
| WC-1  | WATER CLOSET - TANK TYPE                                | 4"              | 3"             | 2"   | 1/2"         |      | 1/2"        |      | FLOOR MOUNTED, ELONGATED TANK TYPE WATER CLOSET (AMERICAN STANDARD "CADET<br>PRO," 215CA.104), 1.28 GPF, WHITE VITREOUS CHINA, GRAVITY FED FLUSH ACTION. TO<br>OF RIM AT 15" AFF. HIGH EFFICIENCY 'WATERSENSE' LISTED. PROVIDE HEAVY DUTY OPEN<br>FRONT SEAT, LESS COVER, WITH SELF-SUSTAINING CHECK HINGE (BEMIS 10555SC).<br>CHROME PLATED BRASS ANGLE SUPPLY STOP WITH 12" LONG X 3/8" FLEX SUPPLY (MCGUIR<br>M166).   |
| WC-2  | WATER CLOSET (ADA) - TANK TYPE                          | 4"              | 3"             | 2"   | 1/2"         |      | 1/2"        |      | FLOOR MOUNTED, ADA TANK TYPE WATER CLOSET (AMERICAN STANDARD "CADET PRO<br>RIGHT HEIGHT," 215AA.104), 1.28 GPF, WHITE VITREOUS CHINA, GRAVITY FED FLUSH<br>ACTION. TOP OF RIM AT 16.5" AFF. HIGH EFFICIENCY 'WATERSENSE' LISTED. PROVIDE<br>ALTERNATE TANK CONFIGURATION (215AA.105) WITH TRIP LEVER ON RIGHT HAND SIDE IF<br>NECESSARY TO HAVE LEVER ON OPEN SIDE OF WATER CLOSET. HEAVY DUTY OPEN FRONT<br>SEAT, LESS COVER, WITH SELF-SUSTAINING CHECK HINGE (BEMIS 1055SSC). CHROME<br>PLATED BRASS ANGLE SUPPLY STOP WITH 12" LONG X 3/8" FLEX SUPPLY (MCGUIRE M166).    |
| UR-1  | URINAL - HIGH EFFICIENCY, WALL<br>MOUNTED W/FLUSH VALVE | 2"              | 2"             | 2"   | j.,          |      | 3/4"        |      | WALL MOUNTED, FLUSH VALVE URINAL (AMERICAN STANDARD "WASHBROOK," 6590.001),<br>WHITE VITREOUS CHINA. HIGH EFFICIENCY 'WATERSENSE' LISTED. PROVIDE ZURN 1222<br>SUPPORT SYSTEM. COORDINATE MOUNTING HEIGHT(S) AND ADA DESIGNATIONS WITH<br>ARCHITECTURAL DRAWINGS. PROVIDE CHROME PLATED URINAL FLUSHOMETER, 0.5 GPF<br>(AMERICAN STANDARD "FLOWISE" 6045.051.002).  |
| MS-1  | UTILITY SINK  | 2"              | /2"            | 2"   | 1/2"         | 1/2" | 3/8"        | 3/8" | FLOOR MOUNTED SINGLE BOWL UTILITY SINK (FIAT "FLT.") CHROME PLATED FAUCET (DELTA<br>2133). GRID DRAIN W/REMOVABLE STRAINER. MCGUIRE CHROME PLATED P-TRAP W/C.O.,<br>CHROME PLATED BRASS ANGLE SUPPLY STOPS, 12" LONG X 3/8" FLEX SUPPLIES.  |
| FD-1  | FLOOR DRAIN - GENERAL PURPOSE                           | 3"              | 3"             | 2"   |              |      |             |      | GENERAL PURPOSE FLOOR DRAIN (J.R. SMITH #2005) WITH FLASHING COLLAR, ADJUSTABL<br>STRAINER HEAD \$ 5" ROUND NICKEL BRONZE STRAINER. PROVIDE SQUARE STRAINER FOR<br>TILE APPLICATIONS. PROVIDE ASSE 1072 TRAP SEALER (ZURN Z1072).   |
| WCO   | WALL CLEANOUT   | 4"              | 4"             |      |              |      |             |      | CLEANOUT PLUG AND COVER TO BE INSTALLED ON SANITARY TEE (J.R. SMITH 4472). CAS<br>BRONZE TAPERED THREAD PLUG WITH STAINLESS STEEL ROUND COVER.  |
| ET-I  | POTABLE WATER EXPANSION TANK                            |                 |                |      | 3/4"         |      | 3/4"        |      | LEAD-FREE POTABLE WATER EXPANSION TANK (WATTS PLT-5). 2.1 GALLONS TOTAL<br>VOLUME, 0.8 GALLONS MAXIMUM ACCEPTANCE VOLUME. TANK SHALL BE PRE-CHARGED T<br>THE SYSTEM PRESSURE PRIOR TO INSTALLATION (CONTRACTOR TO FIELD-VERIFY).  |
| WHA-X | WATER HAMMER ARRESTOR                                   |                 |                |      | see plan     |      | see plan    |      | WATER HAMMER ARRESTOR, ASSE 1010 (J.R. SMITH SERIES 5005-5050), 'X' IN 'WHA-X'<br>REFERS TO PDI SIZE INDICATED ON DRAWINGS.   |



