GENERAL NOTES:

1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES FOR ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.

2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION, AS ADOPTED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2018 EDITION.

3. THE WORK UNDER THE FOLLOWING SPECIFICATION SECTIONS IS SUBJECT TO SPECIAL INSPECTIONS AND TESTS AS DESCRIBED IN SECTION 1704 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION:
   - A. 312000 - EARTH MOVING
   - B. 032000 - CONCRETE REINFORCING
   - C. 033000 - CAST-IN-PLACE CONCRETE
   - D. 042000 - UNIT MASONRY
   - E. 051200 - STRUCTURAL STEEL
   - F. 052100 - STEEL JOIST FRAMING
   - G. 053100 - STEEL DECK
   - H. 054000 - COLD-FORMED METAL FRAMING
   - I. 072400 - EXTERIOR INSULATED FINISH SYSTEM (EIFS)

4. THE CONTRACTOR MUST BE RESPONSIBLE FOR TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.

5. THE PROJECT SPECIFICATIONS ARE NOT SUPERSEDED BY THE STRUCTURAL NOTES BUT ARE INTENDED TO BE COMPLEMENTARY TO THEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS IN EACH SECTION.

6. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS MUST TAKE PRECEDENCE OVER STRUCTURAL NOTES AND TYPICAL DETAILS.

7. CONSULTANTS' DRAWINGS, INCLUDING STRUCTURAL DRAWINGS, ARE CONSIDERED SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. ANY OMISSIONS OR CONFLICTS, INCLUDING DIMENSIONS, BETWEEN VARIOUS ELEMENTS OF THE CONSULTANTS' DRAWINGS AND/OR SPECIFICATIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

8. THE DOCUMENTS DEFINING THE STRUCTURE ARE INSTRUMENTS OF SERVICE PREPARED BY SPEIGHT, MARSHALL AND FRANCIS, P.L.L.C. FOR ONE USE ONLY. THE STRUCTURAL DOCUMENTS MUST NOT BE REPRODUCED, OR COPIED IN WHOLE OR IN PART BY THE CONTRACTOR OR SUBCONTRACTORS FOR PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.

9. LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
   - A. LIVE LOADS:
     - 1. SLAB-ON-GRADE — 100 PSF
     - 2. ROOF — 20 PSF
   - B. SNOW DESIGN DATA:
     - 1. GROUND SNOW LOAD — 20 PSF
     - 2. EXPOSURE FACTOR — 1.0
     - 3. SNOW IMPORTANCE FACTOR — 1.0
     - 4. THERMAL FACTOR — 1.0
     - 5. FLAT ROOF SNOW LOAD — 14 PSF
     - 6. RAIN-ON-SNOW SURCHARGE LOAD — 5 PSF
   - C. WIND DESIGN DATA:
     - 1. ULTIMATE DESIGN WIND SPEED — 120 MPH
     - 2. NOMINAL DESIGN WIND SPEED — 90 MPH
     - 3. RISK CATEGORY — II
     - 4. WIND EXPOSURE — B
     - 5. INTERNAL PRESSURE COEFFICIENT — ±0.18
     - 6. COMPONENTS AND CLADDING DESIGN PRESSURES
       - A. ZONE 1 WITH 10 SF TRIBUTARY AREA — 33.6 PSF
       - B. ZONE 4 WITH 10 SF TRIBUTARY AREA — 20.9 PSF
   - D. SEISMIC DESIGN DATA:
     - 1. RISK CATEGORY — II
     - 2. SEISMIC IMPORTANCE FACTOR — 1.0
     - 3. SS — 0.184g
     - 4. S1 — 0.062g
     - 5. SITE CLASS — D
     - 6. SDS — 0.196g
     - 7. SD1 — 0.100g
     - 8. SEISMIC DESIGN CATEGORY — B
     - 9. DESIGN BASE SHEAR
       - A. ANIMAL SHELTER MAIN BUILDING — 3329 KIPS
     - 10. SEISMIC RESPONSE COEFFICIENT
       - A. ANIMAL SHELTER MAIN BUILDING — 0.0981
     - 11. RESPONSE MODIFICATION FACTOR
       - A. ANIMAL SHELTER MAIN BUILDING — 2.0
     - 12. ANALYSIS PROCEDURE — EQUIVALENT LATERAL FORCE
     - 13. BASIC SEISMIC-FORCE-RESISTING SYSTEM IS ORDINARY REINFORCED MASONRY SHEAR WALLS

10. MECHANICAL UNIT WEIGHTS AND LOCATIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY LOCATIONS AND WEIGHTS SHOWN AND REPORT DISCREPANCIES TO THE ARCHITECT.

FOUNDATION NOTES:

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL EXPLORATION REPORT PREPARED BY SCHNABEL ENGINEERING DATED JANUARY 5, 2021.

2. FOUNDATIONS HAVE BEEN DESIGNED FOR A BEARING PRESSURE OF 3,000 PSF.

3. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO EXPLORE THE EXTENT OF LOOSE, SOFT OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. THE GEOTECHNICAL ENGINEER WILL PROVIDE DIRECTION FOR CORRECTIVE ACTION WHERE REQUIRED.

4. NO UNBALANCED BACKFILLING MAY BE DONE AGAINST WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION.

5. FROST LINE DEPTH IS 18" BELOW GRADE. BOTTOM OF ALL EXTERIOR FOUNDATIONS MUST BE A MINIMUM OF 36" BELOW EXTERIOR FINISHED GRADE ELEVATION.

CAST-IN-PLACE CONCRETE NOTES:

1. CAST-IN-PLACE CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14) AND COMMENTARY (ACI 318R-14)".

2. CONCRETE MUST BE NORMAL WEIGHT AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
   - A. SLAB-ON-GRADE — 3,500 PSI
   - B. CONCRETE NOT OTHERWISE NOTED — 3,000 PSI

3. REINFORCING MATERIALS MUST BE AS FOLLOWS:
   - A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED
   - B. FIBER REINFORCING:
     - 1. SYNTHETIC - ASTM C1116, TYPE III

4. ALL REINFORCING STEEL AND EMBEDDED ITEMS MUST BE ACCURATELY PLACED IN THE POSITIONS SHOWN AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS INDICATED ON THE DRAWINGS MUST GOVERN WHEN IN CONFLICT WITH ACI 318-14.

6. UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS:
   - A. LAP SPLICE LENGTHS MUST COMPLY WITH 'CAST-IN-PLACE CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE' ON SHEET S-002
   - B. USE TENSION BAR LAP SPLICE LENGTHS
   - C. SPLICES MAY BE MADE WITH MECHANICAL SPLICES (AT CONTRACTOR'S OPTION). MECHANICAL SPLICES MUST BE:
     1. CAPABLE OF RESISTING 125% OF THE TENSION CAPACITY OF THE SPLICED BAR
     2. POSITIVE-CONNECTING TYPE COUPLERS
     3. SUBMITTED FOR REVIEW
     4. STAGGERED A MINIMUM OF 24" ALONG THE LONGITUDINAL AXIS OF ADJACENT BARS

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530-13 / ASCE 5-13 / TMS 402-13.

2. CONCRETE MASONRY CONSTRUCTION MUST CONFORM TO THE "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1-13 / ASCE 6-13 / TMS 602-13.

3. CONCRETE MASONRY UNITS MUST CONFORM TO ASTM C90 AND BE MADE WITH LIGHTWEIGHT AGGREGATE. THE COMPRESSIVE STRENGTH OF MASONRY, F'm, EXPRESSED AS FORCE PER UNIT OF NET CROSS-SECTIONAL AREA, MUST BE 2,000 PSI AT 28 DAYS.

4. REINFORCING STEEL MUST COMPLY WITH ASTM A615, GRADE 60. SHOP FABRICATE REINFORCING BARS SHOWN TO BE BENT OR HOOKED.

5. GROUT MUST COMPLY WITH ASTM C476, AND MUST BE PROPORTIONED TO OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI.

6. MORTAR MUST COMPLY WITH ASTM C270, TYPE S OR M. AGGREGATE FOR MORTAR MUST COMPLY WITH ASTM C144. AGGREGATE FAILING TO COMPLY WITH ASTM C144 GRADATION REQUIREMENTS MAY BE USED PROVIDED THE MORTAR CAN BE PREPARED TO COMPLY WITH THE AGGREGATE RATIO, WATER RETENTION AND COMPRESSIVE STRENGTH REQUIREMENTS OF THE PROPERTY SPECIFICATIONS OF ASTM C270. USE TYPE M BELOW GRADE AND TYPE S ABOVE GRADE (UNLESS CELLS ARE GROUTED SOLID).

7. VERTICAL REINFORCING BARS MUST BE THE GIVEN SIZE AND SPACING SHOWN. LAP REINFORCING AT ALL SPLICES AS FOLLOWS:
   - #3 - 19" D. #6 - 52" G. #9 - 119"
   - #4 - 25" E. #7 - 67" H. #10 OR LARGER - MECHANICALLY SPLICED'
   - #5 - 31" F. #8 - 93"

8. REBAR DOWELS MUST BE THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM FOUNDATION. DOWELS MUST HAVE STANDARD ACI HOOKS.

9. DISCONTINUE ALL HORIZONTAL REINFORCING AT CONTROL JOINTS EXCEPT FOR THE BOND BEAMS AT JOIST BEARING ELEVATIONS. HORIZONTAL BOND BEAMS MUST HAVE CONTINUOUS REINFORCING AS SHOWN IN THE SECTIONS AND DETAILS.

10. HORIZONTAL JOINT REINFORCING MUST BE STANDARD 9 GAGE LADDER TYPE IN CMU WALLS AT 16" ON-CENTER. JOINT REINFORCING MUST COMPLY WITH ASTM A951 AND MUST BE HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153, CLASS B.

11. GROUT ALL CELLS SOLID BELOW FINISHED FIRST FLOOR.

12. VERTICAL REINFORCING MUST HAVE BAR POSITIONERS AT SPACING NOT TO EXCEED 200 BAR DIAMETERS, AT GROUT LIFT HEIGHTS OR BAR SPLICE LOCATIONS, WHICHEVER IS LESS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOURTEENTH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360-10) "STEEL CONSTRUCTION MANUAL" - ALLOWABLE STRESS DESIGN.

2. STRUCTURAL STEEL MUST COMPLY WITH THE FOLLOWING SPECIFICATIONS:
   - A. STRUCTURAL STEEL W- AND WT-SHAPES - ASTM A992, Fy=50 KSI
   - B. RECTANGULAR AND SQUARE HSS - ASTM A500, GRADE B, Fy=46 KSI
   - C. ANCHOR RODS - ASTM F1554, GRADE 36 (WELDABLE)
   - D. HEADED STUDS - ASTM A 108, GRADES 1015 THROUGH 1020, TYPE B, Fu=65 KSI
   - E. ALL OTHER STRUCTURAL STEEL SHAPES, PLATES AND BARS - ASTM A36, Fy=36 KSI (UNLESS OTHERWISE NOTED)

3. UNLESS OTHERWISE NOTED, ALL BEAM CONNECTIONS MUST BE ACCORDING TO "TYPICAL BOLTED WEB PLATE CONNECTION DETAILS" ON SHEET S-511 USING ASTM A325 BOLTS.

4. HIGH STRENGTH BOLTS MAY BE TIGHTENED TO THE "SNUG TIGHT" CONDITION IN LIEU OF FULL PRETENSIONING.

5. WELDING MUST BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE - STEEL". WELD ELECTRODES MUST BE E70XX. CONTINUOUS 3/16" FILLET WELDS ARE REQUIRED UNLESS OTHERWISE NOTED.

6. SEE THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL STEEL (IF ANY) NOT SHOWN ON THE STRUCTURAL DRAWINGS.

7. UNLESS OTHERWISE NOTED, THE TOP OF ALL STEEL COLUMNS MUST HAVE A STEEL CAP PLATE. UNLESS OTHERWISE DETAILED OR NOTED, MINIMUM CAP PLATE DIMENSIONS MUST MATCH COLUMN WIDTH AND DEPTH AND MINIMUM THICKNESS OF CAP PLATE MUST EQUAL COLUMN WEB THICKNESS (1/2" MIN).

8. STRUCTURAL STEEL NOTED TO BE GALVANIZED MUST CONFORM TO ASTM A123 OR ASTM A153. GALVANIZE STRUCTURAL STEEL AFTER FABRICATION WHERE PRACTICAL. REPAIR DAMAGED GALVANIZED COATING USING ASTM A780 ZINC-RICH PAINT.

STEEL JOIST NOTES:

1. STEEL JOISTS MUST CONFORM TO THE LATEST EDITION OF THE STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS.

2. PREPARE AND SUBMIT FOR REVIEW SHOP DRAWINGS SHOWING THE LAYOUT OF JOIST MEMBERS, SPECIAL CONNECTIONS, JOINING AND ACCESSORIES. INCLUDE MARK, NUMBER, TYPE, LOCATION AND SPACING OF JOISTS AND BRIDGING.

3. THE JOIST MANUFACTURER MUST BE RESPONSIBLE FOR CONTINUOUS JOIST BRIDGING LINES SATISFYING THE REQUIREMENTS OF THE SJI SPECIFICATION FOR THE TOP AND BOTTOM CHORDS OF ALL STEEL JOISTS, AS WELL AS ANY ADDITIONAL BRIDGING/BRACING SHOWN OR REQUIRED FOR JOISTS SUBJECTED TO NET UPLIFT OR OTHER SPECIAL LOADS. ALL REQUIRED JOIST BRIDGING MUST BE CLEARLY INDICATED ON THE SHOP DRAWINGS. CROSS-BRIDGING IS REQUIRED AT CHANGES OF JOIST DEPTHS AND ENDS OF ALL BRIDGING LINES, UNLESS SUCH ENDS ARE PROPERLY ANCHORED INTO INTERSECTING INTERIOR OR END WALLS. ALL BRIDGING AND BRIDGING ANCHORS MUST BE COMPLETELY INSTALLED BEFORE PLACING OF ANY CONSTRUCTION LOADS ON THE JOISTS.

4. ROOF JOISTS MUST BE DESIGNED FOR A NET UPLIFT LOAD OF 30 PSF. ONE-THIRD STRESS INCREASE NOT PERMITTED FOR LOAD COMBINATIONS INVOLVING WIND PER IBC SECTION 1605.3.1.1.

5. STEEL JOISTS DESIGNATED "SP" ON PLANS ARE SPECIAL JOISTS AND MUST BE DESIGNED FOR THE SPECIAL CRITERIA INDICATED. THE JOIST MANUFACTURER MUST SUBMIT CALCULATIONS FOR SPECIAL JOISTS.

6. WHERE JOIST SPAN EQUALS 40 FEET OR GREATER JOIST MUST BE ERECTION BOLTED TO STEEL BEAMS, UNLESS PANELIZED JOIST ERECTION IS EMPLOYED. GENERAL CONTRACTOR MUST COORDINATE BOLT HOLE LOCATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS.

7. CONCENTRATED LOADS NOT LOCATED AT JOIST PANEL POINTS MUST BE REINFORCED PER 'TYPICAL DETAIL AT CONCENTRATED LOADS ON JOISTS'.

8. UNLESS OTHERWISE NOTED, JOIST SEAT DEPTHS MUST BE 2 1/2".

STEEL DECK NOTES:

1. STEEL DECK MUST CONFORM TO THE LATEST EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI), "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND THE STEEL DECK INSTITUTE (SDI), "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS."

2. STEEL DECK UNITS MUST COMPLY WITH THE FOLLOWING:
   - A. 1-1/2" ROOF DECK MUST BE 22 GAGE PAINTED GALVANIZED TYPE B RIB DECK SPANNING PERPENDICULAR TO SUPPORTS UNLESS OTHERWISE NOTED. ATTACH DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS AT EVERY RIB, INCLUDING RIBS WHERE SIDELAPS OCCUR AT EVERY OTHER RIB AND ALL RIBS WHERE SIDELAPS OCCUR. FASTEN ADJACENT DECK UNITS WITH #10 SELF-TAPPING HEX HEAD SCREWS AT 1/3 POINTS BETWEEN SUPPORTS ALONG SIDELAPS AND FASTEN EDGEMOST DECK PANEL TO STEEL FRAMING WITH 5/8" DIAMETER PUDDLE WELDS AT SAME SPACING AS SIDELAP FASTENERS.

3. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL". FIELD WELDS MUST BE WIRE BRUSHED AND PRIMED PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.

4. DECK OPENINGS MEASURING GREATER THAN 12" ON ANY SIDE MUST HAVE SUPPORTS ON ALL SIDES OF OPENING. SUPPORTS MUST SPAN BETWEEN ADJACENT BEAMS OR JOISTS ON TWO SIDES. UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS, USE 5x5x5/16" ANGLES FOR SPANS EXCEEDING 6'-0" AND 3x3x1/4" ANGLES FOR SPANS LESS THAN 6'-0". COORDINATE OPENING SIZES, LOCATIONS AND DETAILS WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

5. PERMANENT SUSPENDED LOADS SUCH AS SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, OR OTHER UTILITIES MUST NOT BE SUPPORTED BY STEEL ROOF DECK.

6. DURING STEEL DECK ERECTION AND ROOFING OPERATIONS DISTRIBUTE CONSTRUCTION LOADS TO PREVENT DAMAGE TO DECK. CONCENTRATED CONSTRUCTION LOADS OF 200 POUNDS OR LESS DISTRIBUTED OVER A 1'-0" WIDE SECTION OF DECK MUST NOT REQUIRE ANY FURTHER DISTRIBUTION. USE WORKING PLATFORMS FOR CONCENTRATED CONSTRUCTION LOADS OF OVER 200 POUNDS, SUCH THAT THE RESULTING UNIFORM CONSTRUCTION LOAD ON THE DECK DOES NOT EXCEED 50 PSF.

7. PREPARE AND SUBMIT SHOP DRAWINGS FOR REVIEW SHOWING THE LAYOUT AND TYPES OF DECK UNITS, ANCHORAGE DETAILS AND CONDITIONS REQUIRING CLOSURE STRIPS, SUPPLEMENTARY FRAMING AND OTHER ACCESSORIES.

8. TOUCH-UP ALL SCARRED, ABRADED AND RUST AREAS IN STEEL DECK IN ACCORDANCE WITH THE SPECIFICATIONS.

COLD-FORMED METAL FRAMING NOTES:

1. COLD-FORMED METAL FRAMING MUST BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "COLD-FORMED STEEL DESIGN MANUAL". THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA FOR THE DESIGN OF COLD-FORMED METAL FRAMING, INCLUDING DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE.

2. COLD-FORMED METAL FRAMING (SIZES/GAGES) AND CONNECTIONS INDICATED ON DRAWINGS ARE FOR PRICING PURPOSES ONLY. COLD-FORMED ENGINEER MUST DESIGN AND DETAIL MEMBERS AND THEIR CONNECTIONS.

3. COLD-FORMED METAL FRAMING MEMBERS MUST BE FORMED OF CORROSION-RESISTANT STEEL CONFORMING TO ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR TRACKS AND RUNNERS AND 33 KSI (50 KSI FOR 54 MILS AND HEAVIER) FOR ALL OTHER MEMBERS.

4. WELDING MUST BE IN ACCORDANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL".

5. COLD-FORMED METAL FRAMING MEMBER SIZES AND GAGES INDICATED ARE IN ACCORDANCE WITH THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) NOMENCLATURE.

6. COLD-FORMED METAL FRAMING MEMBERS MUST BE DESIGNED FOR THE LOADS GIVEN IN THE GENERAL NOTES. THE DESIGN LOADS ARE UNFACTORED SERVICE LOADS; ALL APPLICABLE FACTORS MUST BE APPLIED.

7. MAXIMUM LATERAL DEFLECTION OF COLD-FORMED FRAMING MEMBERS MUST BE DETERMINED BY THE FOLLOWING TABLE:

STUD USE	L/y RATIO (LIMIT)
BACKING UP MASONRY	L/600 (0.4 IN)
BACKING UP EIFS	L/240 (MANUF. RECOMMENDATION)
BACKING UP METAL PANEL	L/360 (MANUF. RECOMMENDATION)

8. COLD-FORMED METAL FRAMING MEMBERS MUST BE DESIGNED FOR ALL FRAMING CONDITIONS FOUND IN THE STRUCTURE, INCLUDING WALLS, CORNERS, HEADERS, AND JAMBS. SOME CONDITIONS MAY REQUIRE MODIFICATION OF COLD-FORMED FRAMING MEMBERS (SUCH AS NOTCHING OR REVISING SIZES) OR MULTIPLE STUDS TO SUPPORT INCREASED LOADS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL CONDITIONS AND DETAILS.

9. CROSS BRIDGING OR FULL-DEPTH BLOCKING IS REQUIRED AT ROOF RAFTERS NOT RECEIVING CEILING SHEATHING AND AT WALL STUDS NOT RECEIVING SHEATHING ON BOTH FACES. UNLESS OTHERWISE INDICATED, CROSS BRIDGING MUST BE SIMPSON TB (OR EQUIVALENT); MAXIMUM BRIDGING/BLOCKING SPACING MUST BE 8'-0" o/c OR AT 1/3 POINTS OF MEMBER SPAN, WHICHEVER IS LESS. COORDINATE EXTENTS OF WALL AND CEILING SHEATHING WITH THE ARCHITECTURAL DRAWINGS.

10. COLD-FORMED METAL FRAMING CONNECTIONS TO THE STRUCTURE MUST BE DESIGNED FOR ALL FRAMING CONDITIONS. CONNECTIONS ARE SCHEMATICALLY SHOWN ON THE STRUCTURAL DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL CONNECTION CONDITIONS AND LOCATIONS.

POST-INSTALLED ANCHOR NOTES:

1. POST-INSTALLED ANCHORS MUST BE CAPABLE OF WITHSTANDING DESIGN LOADS INDICATED ON THE DRAWINGS. APPLICABLE POST-INSTALLED ANCHOR TYPE(S) ARE AS FOLLOWS:
   - A. ANCHORAGE TO CRACKED AND/OR UNCRACKED CONCRETE:
     - 1. ADHESIVE ANCHORS: HY 200 WITH HIT-Z ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK-BOLT TZ IS MECHANCIAL BASIS-OF-DESIGN
   - B. REBAR DOWELING INTO CRACKED AND/OR UNCRACKED CONCRETE:
     - 1. ADHESIVE ANCHORS: HY 200 IS BASIS-OF-DESIGN
   - C. ANCHORAGE TO SOLID GROUTED MASONRY:
     - 1. ADHESIVE ANCHORS: HY 270 WITH HAS-E ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK BOLT 3 AND KWIK-HUS EZ SCREW ARE MECHANICAL BASES OF DESIGN
   - D. ANCHORAGE TO HOLLOW OR MULTI-WYTHE MASONRY:
     - 1. ADHESIVE ANCHORS: HY 270 WITH HAS-E ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK-CON II+ SCREW IS MECHANICAL BASIS OF DESIGN

2. ANCHOR CAPACITY MUST BE BASED ON TECHNICAL DATA PUBLISHED BY THE ANCHOR MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. CONTRACTOR MUST PROVIDE CALCULATIONS DEMONSTRATING THE CHOSEN ANCHOR IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES INDICATED. PRODUCTS SUBMITTED WILL BE EVALUATED BY SHOWING ICC ESR COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS INCLUDED IN ANCHOR PACKAGING.

4. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING A PROPERLY TESTED AND APPROVED INSTALLATION METHOD.

5. THE CONTRACTOR MUST ARRANGE A REPRESENTATIVE OF THE ANCHOR MANUFACTURER TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL ANCHORING PRODUCTS. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

7. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS OTHERWISE NOTED, THE REINFORCING BARS CANNOT BE CUT. THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURAL DRAWINGS AND MUST LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS BY GPR X-RAY, CHIPPING OR OTHER MEANS.

DELEGATED DESIGN NOTES:

1. DESIGN RESPONSIBILITY FOR THE FOLLOWING ENGINEERED SYSTEMS AND COMPONENTS IS DELEGATED TO A QUALIFIED SPECIALTY STRUCTURAL ENGINEER RETAINED BY THE CONTRACTOR. THESE SYSTEMS AND COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO:
   A. COLD-FORMED STEEL FRAMING AND CONNECTIONS
2. DELEGATED ENGINEERED SYSTEMS AND COMPONENTS MUST SATISFY ASCE 7 AND REQUIREMENTS OF APPLICABLE MATERIAL-SPECIFIC STANDARDS.
3. COORDINATE WITH THE CONTRACT DOCUMENTS FOR PROFESSIONAL LICENSURE AND SEALING REQUIREMENTS, DESIGN CRITERIA, DETAILS OF THE SYSTEM/COMPONENT INTERFACE WITH THE PRIMARY STRUCTURE AND SUBMITTAL AND CALCULATION REQUIREMENTS.
4. DO NOT FABRICATE OR INSTALL DELEGATED DESIGN ITEMS UNTIL SUBMITTED DELEGATED DESIGN DOCUMENTS HAVE BEEN REVIEWED FOR COMPLIANCE BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
5. SEE THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND THE SPECIFICATIONS FOR ADDITIONAL DELEGATED DESIGN (IF ANY) NOT SHOWN ON THE STRUCTURAL DRAWINGS.

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS MUST BE COMPLETED FOR THE FOLLOWING ELEMENTS ACCORDING TO IBC SECTION 1704 AND 1705.12.
2. EARTHWORK MUST BE SPECIAL INSPECTED AS FOLLOWS:
   A. PRIOR TO PLACEMENT OF PREPARED FILL, QUALITY ASSURANCE AGENT MUST DETERMINE THE SITE HAS BEEN PREPARED ACCORDING TO THE GEOTECHNICAL REPORT.
   B. QUALITY ASSURANCE AGENT MUST DETERMINE FILL MATERIAL AND LIFT THICKNESSES COMPLY WITH GEOTECHNICAL REPORT.
3. CONCRETE AND ELEMENTS EMBEDDED IN CONCRETE MUST BE SPECIAL INSPECTED PRIOR TO AND DURING PLACEMENT OF CONCRETE. SPECIAL INSPECTIONS MUST INCLUDE THE FOLLOWING:
   A. PERIODIC INSPECTION:
      1. REINFORCING STEEL SIZE AND PLACEMENT
      2. VERIFY USE OF APPROVED MIX DESIGN
      3. AFTER PLACEMENT TO ENSURE ADEQUATE CURING AND WEATHER PROTECTION PROCEDURES
      4. SURFACE PREPARATION AND DETAILS AT COLD JOINTS, INCLUDING PLACEMENT OF KEYWAYS
   B. CONTINUOUS INSPECTION:
      1. BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE
      2. DURING PLACEMENT OF CONCRETE
4. STRUCTURAL MASONRY MUST BE SPECIAL INSPECTED ACCORDING TO THE FOLLOWING:
   A. PERIODIC INSPECTION:
      1. PROPORTIONS OF SITE-PREPARED MORTAR
      2. CONSTRUCTION OF MORTAR JOINTS
      3. SPECIFIED SIZE, LOCATION, GRADE AND TYPE OF REINFORCEMENT
      4. SIZE AND LOCATION OF STRUCTURAL ELEMENTS
      5. TYPE, SIZE AND LOCATION OF ANCHORS INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO PRIMARY STRUCTURAL SYSTEM
      6. CLEANLINESS OF GROUT SPACE
      7. PROTECTION OF MASONRY DURING HOT AND COLD WEATHER PLACEMENT
   B. CONTINUOUS INSPECTION:
      1. PREPARATION OF ANY GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS
      2. GROUT PLACEMENT MUST BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS
5. STRUCTURAL STEEL FABRICATION AND ERECTION MUST BE SPECIAL INSPECTED AS FOLLOWS:
   A. PERIODIC INSPECTION:
      1. HIGH-STRENGTH BOLTS, NUTS AND WASHERS ACCORDING TO AISC 360-10
      2. SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"
      3. ROOF DECK WELDS
      4. STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS INCLUDING MEMBER LOCATIONS, CONNECTION DETAILS AND ANY OTHER BRACING AND STIFFENING DETAILS
6. COLD-FORMED METAL FRAMING (TRUSSES, ROOF RAFTERS, FLOOR JOISTS, LOAD-BEARING WALLS, SHEARWALLS AND EXTERIOR CLADDING STUDS) MUST BE SPECIAL INSPECTED AS FOLLOWS:
   A. PERIODIC INSPECTION:
      1. SIZE, GRADE AND LAYOUT OF FRAMING MEMBERS
      2. WELDING OPERATIONS
      3. CONNECTION DETAILS SUCH AS SCREWING, BOLTING, ANCHORING, BRACING AND HOLD DOWNS
7. POST-INSTALLED ANCHORS INCLUDING BUT NOT LIMITED TO EXPANSION ANCHORS, ADHESIVE ANCHORS AND LOW VELOCITY FASTENERS MUST BE SPECIAL INSPECTED ACCORDING TO THE RELEVANT ANCHOR CODE EVALUATION REPORTS.
   A. CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING THE INSTALLATION OF POST-INSTALLED ANCHORS. SPECIAL INSPECTOR MUST VERIFY THE FOLLOWING:
      1. ANCHOR SIZE AND STEEL GRADE
      2. HOLE DIAMETER, LOCATION AND TYPE OF DRILL BIT
      3. COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS INCLUDING HOLE AND ANCHOR CLEANLINESS AND ADHESIVE APPLICATION
      4. ANCHOR EMBEDMENT DEPTH

STRUCTURAL TESTING:

1. THE FOLLOWING MATERIALS MUST BE TESTED ACCORDING TO IBC SECTIONS 1705 AND 1705.13. ANY ITEMS FOUND TO BE DEFICIENT MUST BE CORRECTED AND RE-TESTED AT NO ADDITIONAL COST TO THE OWNER.
2. EARTHWORK: THE IN-PLACE DRY DENSITY OF COMPACTED FILL MUST BE TESTED FOR COMPLIANCE WITH THE GEOTECHNICAL REPORT. SEE THE GEOTECHNICAL REPORT AND SPECIFICATIONS FOR THE FREQUENCY OF TESTING.
3. CONCRETE STRENGTH VERIFICATION AND TESTING: ALL CONCRETE MUST BE TESTED TO VERIFY STRENGTH, SLUMP, UNIT WEIGHT, AIR CONTENT AND TEMPERATURE. SEE THE SPECIFICATIONS FOR TESTING CRITERIA, FREQUENCY AND ACCEPTABILITY CRITERIA.
4. STRUCTURAL MASONRY STRENGTH VERIFICATION AND TESTING: MASONRY STRENGTH, F'm MUST BE VERIFIED USING THE 'UNIT STRENGTH METHOD' PER IBC CHAPTER 2105 AND AS FOLLOWS:
   A. PRIOR TO CONSTRUCTION MASONRY UNITS AND GROUT MUST BE TESTED FOR COMPRESSIVE STRENGTH
   B. CERTIFICATES OF COMPLIANCE WITH STRENGTH REQUIREMENTS OF MASONRY UNITS AND GROUT MUST BE SUBMITTED BY THE MASONRY AND GROUT SUPPLIERS
   C. DURING CONSTRUCTION MASONRY UNITS AND GROUT MUST BE TESTED FOR EVERY 5,000 SQUARE FEET OF MASONRY CONSTRUCTED
   D. PROPORTIONS OF MATERIALS IN MORTAR AND GROUT DELIVERED TO THE SITE MUST BE VERIFIED
5. POST-INSTALLED ANCHORS INCLUDING, BUT NOT LIMITED TO EXPANSION ANCHORS, ADHESIVE ANCHORS AND LOW VELOCITY FASTENERS, MUST BE TESTED ACCORDING TO THE RELEVANT ANCHOR CODE EVALUATION REPORTS.

STRUCTURAL ABBREVIATION LIST:

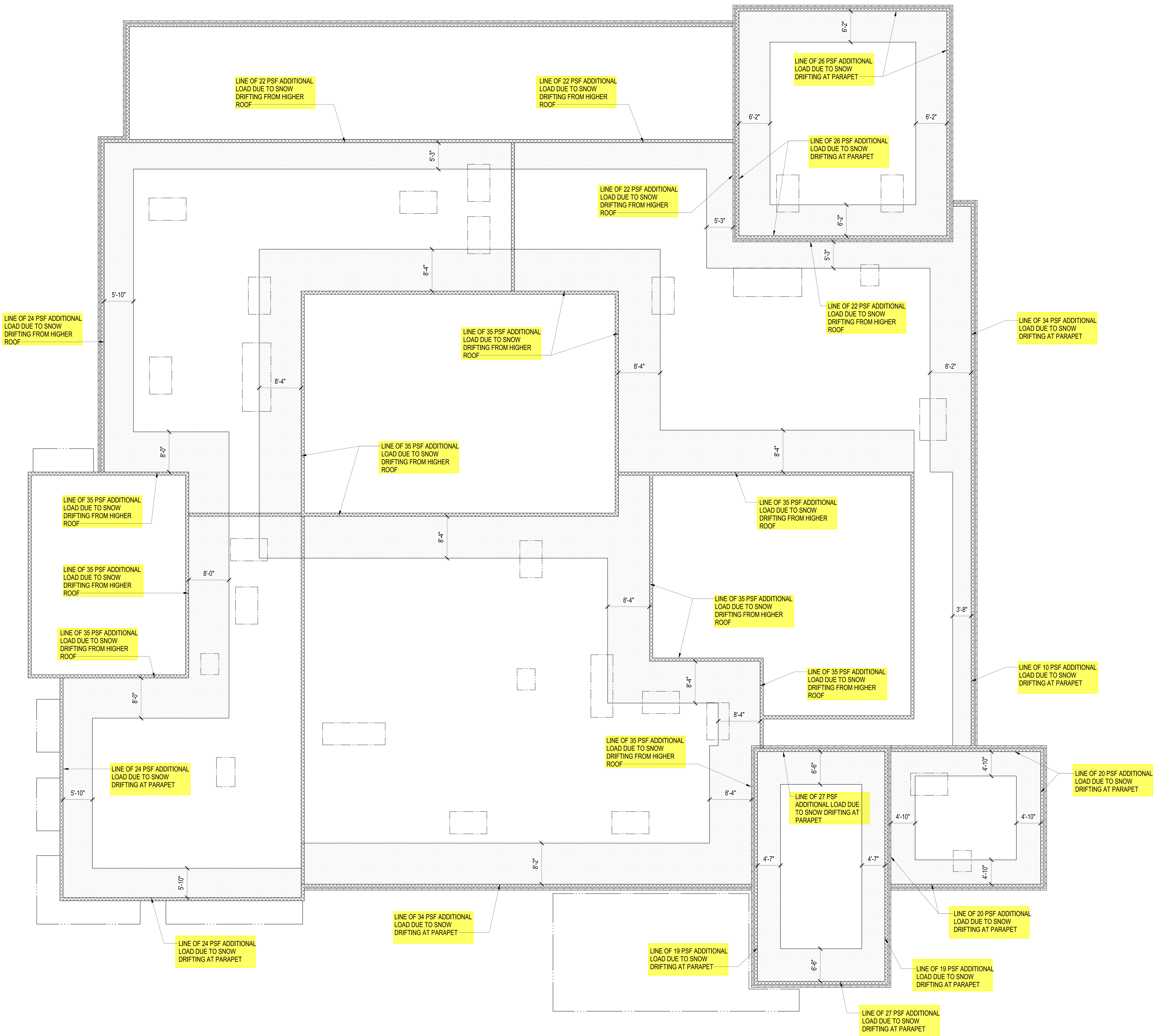
w/	WITH	K	KIPS
±	PLUS/MINUS	K.S.F.	KIPS PER SQUARE FOOT
∅	DIAMETER	K.S.I.	KIPS PER SQUARE INCH
CL	CENTERLINE		
o/c	ON CENTER	LG.	LONG
		LLH	LONG LEG HORIZONTAL
A.B.	ANCHOR BOLT	LLO	LONG LEG OUTSTANDING
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LLV	LONG LEG VERTICAL
		LSH	LONG SIDE HORIZONTAL
ACI	AMERICAN CONCRETE INSTITUTE	LSV	LONG SIDE VERTICAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	M.O.S.	MIDDLE OF SLAB
		M.O.W.	MIDDLE OF WALL
A.R.	ANCHOR ROD	MANUF.	MANUFACTURER or MANUFACTURER'S
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS		
		MAS.	MASONRY
ADJ.	ADJACENT	MATL.	MATERIAL
ARCH.	ARCHITECT or ARCHITECTURAL	MAX.	MAXIMUM
		MECH.	MECHANICAL
B.	BOTTOM	MIN.	MINIMUM
B.E.J.	BUILDING EXPANSION JOINT	MTL.	METAL
B.D.	BAR DIAMETER		
BLDG.	BUILDING	N.T.S.	NOT TO SCALE
BM.	BEAM		
BRCG.	BRACING	OSB	ORIENTED STRAND BOARD
BRDG.	BRIDGING	OPP.	OPPOSITE
BRG.	BEARING		
BTWN.	BETWEEN	P/T	POST-TENSIONED
		PAF	POWDER ACTUATED FASTENER
C.G.	CENTER OF GRAVITY	P.C.	PRECAST
C.I.P.	CAST IN PLACE	PEB	PRE-ENGINEERED BUILDING
C.J.P.	COMPLETE JOINT PENETRATION	PLF	POUNDS PER LINEAR FOOT
CANT.	CANTILEVER	P.S.	PRE-STRESSED
CLR.	CLEAR	PSF	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
COL.	COLUMN	P.T.	PRESSURE TREATED
CONC.	CONCRETE	Pc	PIECE
CONN.	CONNECT or CONNECTION	PLUMB.	PLUMBING
CONT.	CONTINUOUS	PROJ.	PROJECTION
COORD.	COORDINATE		
		R.	RADIUS
D.	DEEP or DEPTH	REF.	REFERENCE
DBL.	DOUBLE	REINF.	REINFORCED or REINFORCING
DET.	DETAIL	REQD.	REQUIRED
DIA.	DIAMETER	REV.	REVISION
DIAG.	DIAGONAL		
DWG.	DRAWING	SLO	SHORT LEG OUTSTANDING
DWL.	DOWEL	S.D.I.	STEEL DECK INSTITUTE
		S.E.J.	SEISMIC EXPANSION JOINT
E.F.	EACH FACE	S.J.I.	STEEL JOIST INSTITUTE
E.O.	EDGE OF	S.O.G.	SLAB-ON-GRADE
E.W.	EACH WAY	S.F.	STEPPED FOOTING
EA.	EACH	SCHED.	SCHEDULE
EL.	ELEVATION	SECT.	SECTION
ELEC.	ELECTRICAL	SHT.	SHEET
ELEV.	ELEVATOR or ELEVATION	SIM.	SIMILAR
EMB.	EMBED or EMBEDMENT	S.I.R.D.A.	SLOPED INTEGRAL ROOF DECK ASSEMBLY
ENG.	ENGINEER		
EQ.	EQUAL	SL	SLOPE
EQUIV.	EQUIVALENT	SPA.	SPACE
EXIST.	EXISTING	STD.	STANDARD
EXP.	EXPANSION	STIFF.	STIFFENER
		STIR.	STIRRUP
F.L.	FULL LENGTH	STL.	STEEL
F.O.	FACE OF	STRUCT.	STRUCTURAL
F.R.	FIRST RISER	SQ.	SQUARE
FIN.	FINISH or FINISHED		
FLR.	FLOOR	T.	TOP
FTG.	FOOTING	T.O.S.	TOP OF STEEL
		TEMP.	TEMPERATURE
G.C.	GENERAL CONTRACTOR	TYP.	TYPICAL
ga	GAGE		
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
GD.	GRADE		
		VERT.	VERTICAL
H.C.	HOLLOW CORE		
HK.	HOOK	W.	WIDE or WIDTH
HORIZ.	HORIZONTAL	W.P.	WORKING POINT
		W.W.F.	WELDED WIRE FABRIC
J.B.E.	JOIST BEARING ELEVATION		
JT.	JOINT		

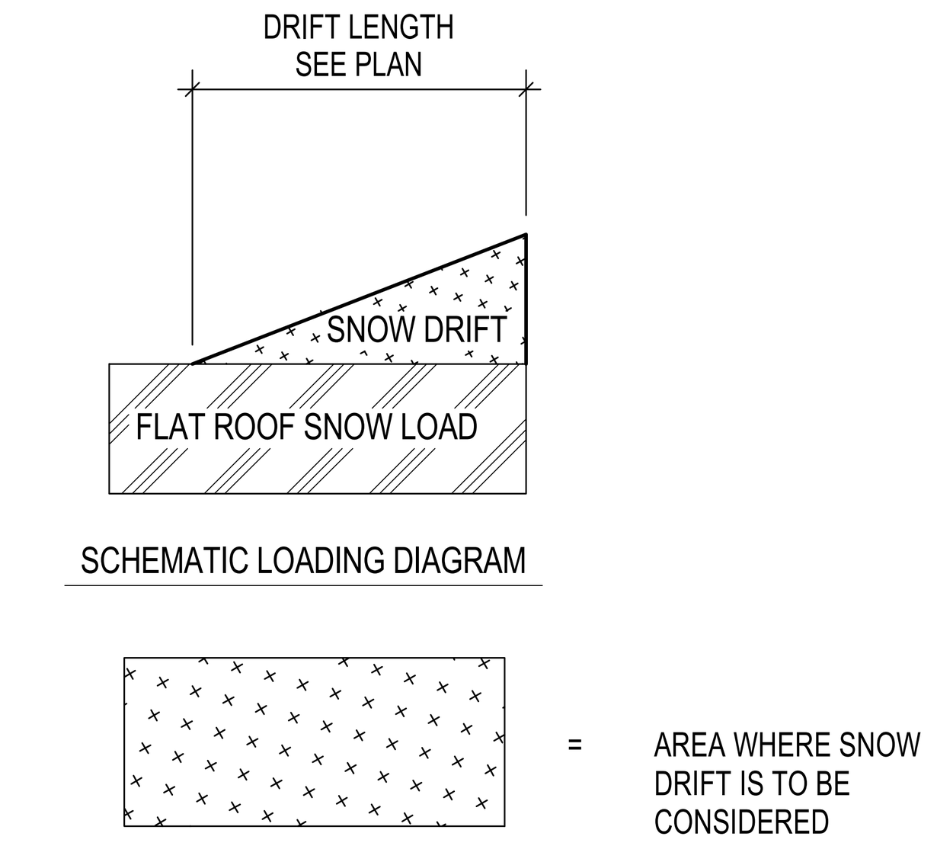
CAST-IN-PLACE CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE Fy = 60 KSI	TENSION BARS																COMPRESSION BARS
	f'c = 3,000 PSI				f'c = 3,500 PSI				f'c = 4,000 PSI				f'c = 5,000 PSI				f'c = ALL
	REGULAR		TOP		REGULAR		TOP		REGULAR		TOP		REGULAR		TOP		
	CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
#3	17"	22"	22"	28"	16"	21"	21"	26"	15"	19"	19"	25"	13"	17"	17"	22"	12"
#4	22"	29"	29"	38"	21"	27"	27"	36"	19"	25"	25"	33"	17"	23"	23"	29"	15"
#5	28"	36"	36"	47"	26"	34"	34"	44"	24"	31"	31"	41"	22"	28"	28"	36"	19"
#6	33"	43"	43"	56"	31"	40"	40"	52"	29"	37"	37"	49"	26"	34"	34"	44"	23"
#7	48"	63"	63"	81"	45"	59"	59"	75"	42"	54"	54"	71"	38"	49"	49"	63"	27"
#8	55"	72"	72"	93"	51"	67"	67"	87"	48"	62"	62"	81"	43"	56"	56"	72"	30"
#9	62"	81"	81"	105"	58"	75"	75"	98"	54"	70"	70"	91"	48"	63"	63"	81"	34"
#10	70"	91"	91"	118"	65"	85"	85"	110"	61"	79"	79"	102"	54"	71"	71"	92"	39"
#11	78"	101"	101"	131"	73"	94"	94"	122"	67"	87"	87"	114"	60"	78"	78"	102"	43"

NOTES (THESE NOTES SHALL BE USED FOR ALL SPLICES UNLESS NOTED OTHERWISE ON DRAWINGS):

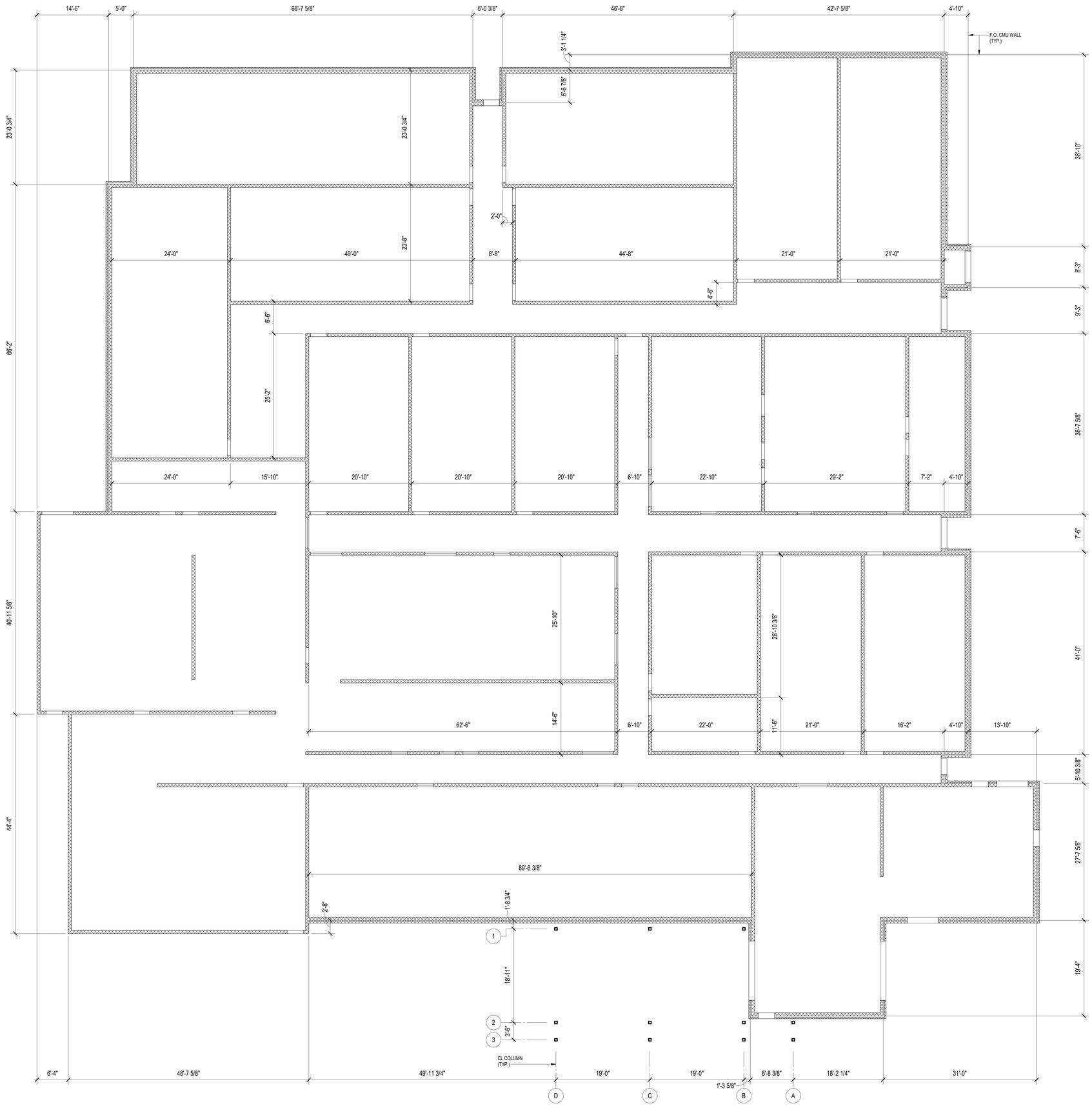
1. TOP BARS ARE HORIZONTAL BARS, SPLICED SO THAT 12" OR MORE OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCING BAR.
2. CLASS A SPLICES MAY BE USED ONLY WHEN 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
3. CLASS B SPLICES SHALL BE USED FOR ALL SPLICES IN SLABS, BEAMS, JOISTS, WALLS, MOMENT RESISTING COLUMNS, AND JAMB COLUMNS, UNLESS THEY MEET THE REQUIREMENTS OF NOTE #2 ABOVE.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED UNLESS APPROVED BY THE ENGINEER OF RECORD. ROUND COLUMN TIES MAY BE SPLICED USING CLASS A LAPS.
5. FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.
6. THE BAR LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.5 WHEN EITHER OF THE FOLLOWING IS TRUE:
   A. CLEAR SPACING OF BARS BEING DEVELOPED IS LESS THAN ONE BAR DIAMETER, CLEAR COVER IS LESS THAN ONE BAR DIAMETER AND STIRRUPS OR TIES ALONG THE LENGTH OF THE SPLICE ARE LESS THAN THE CODE MINIMUM.
   B. CLEAR SPACING OF BARS BEING DEVELOPED IS LESS THAN 2 BAR DIAMETERS AND CLEAR COVER IS LESS THAN ONE BAR DIAMETER.





SNOW DRIFT PLAN

1/8" = 1'-0"



DIMENSION PLAN NOTES :

A. FOR THE STRUCTURAL NOTES AND ABBREVIATIONS SEE SHEETS S-001 AND S-002.

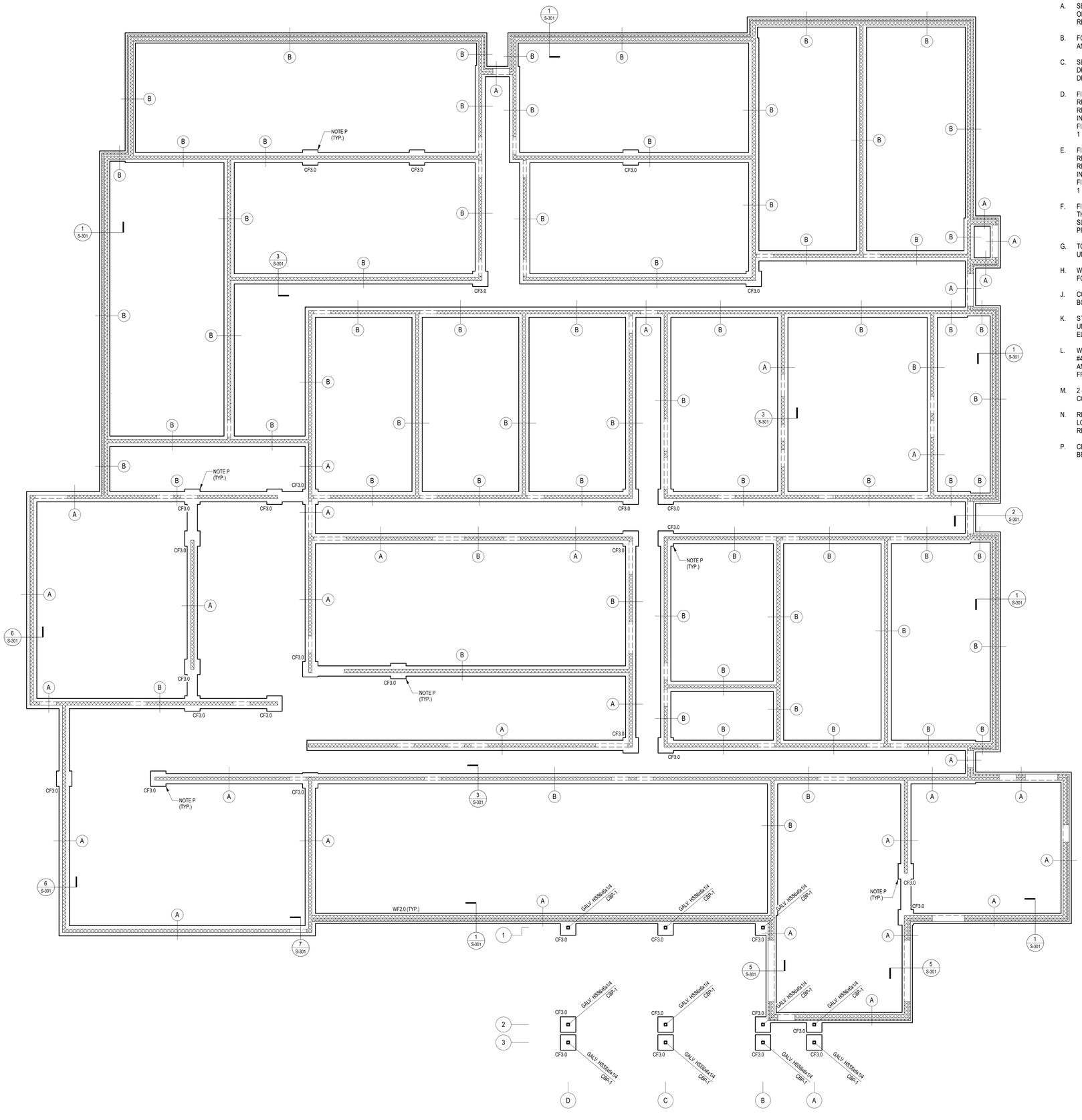
B. FOR DIMENSIONS NOT SHOWN AND LOCATIONS OF MASONRY CONTROL JOINTS SEE THE ARCHITECTURAL DRAWINGS.

DIMENSION PLAN LEGEND :

X = COLUMN GRID MARK

DIMENSION PLAN

1/8" = 1'-0"



FOUNDATION AND SLAB PLAN NOTES :

A. SEE THE CIVIL DRAWINGS FOR ACTUAL FINISHED FLOOR ELEVATION. TOP OF SLAB EQUALS FINISHED FLOOR ELEVATION AND MUST SERVE AS THE REFERENCE ELEVATION 0'-0".

B. FOR THE STRUCTURAL NOTES AND ABBREVIATIONS SEE SHEETS S-001 AND S-002.

C. SEE THE DIMENSION PLAN ON SHEET S-100 AND THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS.

D. FIRST FLOOR MUST BE A 4" THICK FIBRILLATED SYNTHETIC FIBER REINFORCED CONCRETE SLAB-ON-GRADE, OVER 10 MIL. VAPOR RETARDER MINIMUM (SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION), OVER 4" DEPTH OF POROUS FILL. FIBERS MUST BE FIBERMESH 300 AS MANUFACTURED BY PROPEX AT A DOSAGE RATE OF 1 1/2 POUNDS PER CUBIC YARD.

E. FIRST FLOOR MUST BE A 6" THICK FIBRILLATED SYNTHETIC FIBER REINFORCED CONCRETE SLAB-ON-GRADE, OVER 10 MIL. VAPOR RETARDER MINIMUM (SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION), OVER 4" DEPTH OF POROUS FILL. FIBERS MUST BE FIBERMESH 300 AS MANUFACTURED BY PROPEX AT A DOSAGE RATE OF 1 1/2 POUNDS PER CUBIC YARD.

F. FIRST FLOOR CONCRETE PAD SHOWN AS THUS ( ) MUST BE A 4" THICK FIBRILLATED SYNTHETIC FIBER REINFORCED CONCRETE PAD, OVER SLAB-ON-GRADE. FIBERS MUST BE FIBERMESH 300 AS MANUFACTURED BY PROPEX AT A DOSAGE RATE OF 1 1/2 POUNDS PER CUBIC YARD.

G. TOP OF ALL FOOTINGS MUST BE 2'-0" BELOW REFERENCE ELEVATION 0'-0", UNLESS OTHERWISE NOTED.

H. WALL FOOTINGS MUST BE CENTERED ON TOTAL WIDTH OF THE FOUNDATION WALL, UNLESS OTHERWISE NOTED.

J. COLUMNS AND COLUMN FOOTINGS MUST BE CENTERED ON GRIDS IN BOTH DIRECTIONS, UNLESS OTHERWISE NOTED.

K. STEP FOOTING FOR PIPING TO RUN ABOVE TOP OF FOOTING. ALL UNDERGROUND PIPES ARE NOT SHOWN ON PLAN. FOR PIPE INVERT ELEVATIONS AND LOCATIONS, SEE THE PLUMBING AND CIVIL DRAWINGS.

L. WIDEN WALL FOOTING TO ACCOMMODATE WALL ABOVE. REINFORCE WITH #4 AT 12" ON-CENTER PERPENDICULAR TO MAIN FOOTING REINFORCING AND 1 - #4 TIE AT EDGE. EDGE OF FOOTING MUST PROJECT 6" MINIMUM FROM FACE OF WALL ABOVE.

M. 2 - #4 x 3'-0" SPACED AT 2" ON-CENTER, MIDDLE OF SLAB AT RE-ENTRANT CORNERS WHERE NO SLAB JOINT OCCURS.

N. REGION OF SLAB SURFACE WARP AND DIRECTION FROM HIGH POINT TO LOW POINT. MAINTAIN SPECIFIED SLAB THICKNESS THROUGHOUT WARP REGION.

P. CENTERLINE OF COLUMN FOOTING COINCIDES WITH CENTERLINE OF BEAM BEARING POINT ABOVE.

FOUNDATION AND SLAB PLAN LEGEND :

KCJ	=	SLAB-ON-GRADE KEYED CONSTRUCTION JOINT - SEE TYPICAL DETAIL ON SHEET S-501
CJ	=	SLAB-ON-GRADE CONTROL JOINT - SEE TYPICAL DETAIL ON SHEET S-501
	=	SLAB-ON-GRADE JOINT (CONTROL JOINT UNLESS OTHERWISE REQUIRED)
TS	=	THICKENED SLAB - SEE TYPICAL DETAIL ON SHEET S-501
-XX"	=	TOP OF SLAB ELEVATION - MEASURED FROM REFERENCE ELEVATION 0'-0"
	=	CHANGE IN SLAB ELEVATION - SEE THE ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND LOCATION
	=	EXTENT OF SLAB SLOPE - SEE THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION
WFX.X	=	WALL FOOTING MARK - SEE SCHEDULE ON THIS SHEET
CFX.X	=	COLUMN FOOTING MARK - SEE SCHEDULE ON THIS SHEET
SF	=	STEPPED FOOTING - SEE TYPICAL DETAIL ON SHEET S-501
(X'-X")	=	TOP OF FOOTING ELEVATION - MEASURED FROM REFERENCE ELEVATION 0'-0"
X	=	COLUMN GRID MARK
	=	SANITARY OR STORM SEWER PIPING BELOW SLAB - (PIPING PARTIALLY SHOWN), SEE THE PLUMB. DWGS. FOR ADDITIONAL PIPING NOT SHOWN)
FD FD	=	FLOOR DRAIN - COORDINATE WITH ARCH. AND PLUMB. DWGS.
COLUMN SIZE CBR-X	=	COLUMN AND COLUMN BASE PLATE MARK - SEE COLUMN BASE PLATE DETAIL ON SHEET S-501

COLUMN FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCING (BOTTOM)
	WIDTH	LENGTH	DEPTH	
CF3.0	3'-0"	3'-0"	1'-0"	4 - #4 EACH WAY

WALL FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCING (BOTTOM)	
	WIDTH	DEPTH	CONTINUOUS	TIES
WF2.0	2'-0"	1'-0"	3 - #4	#4 AT 4'-0"o/c

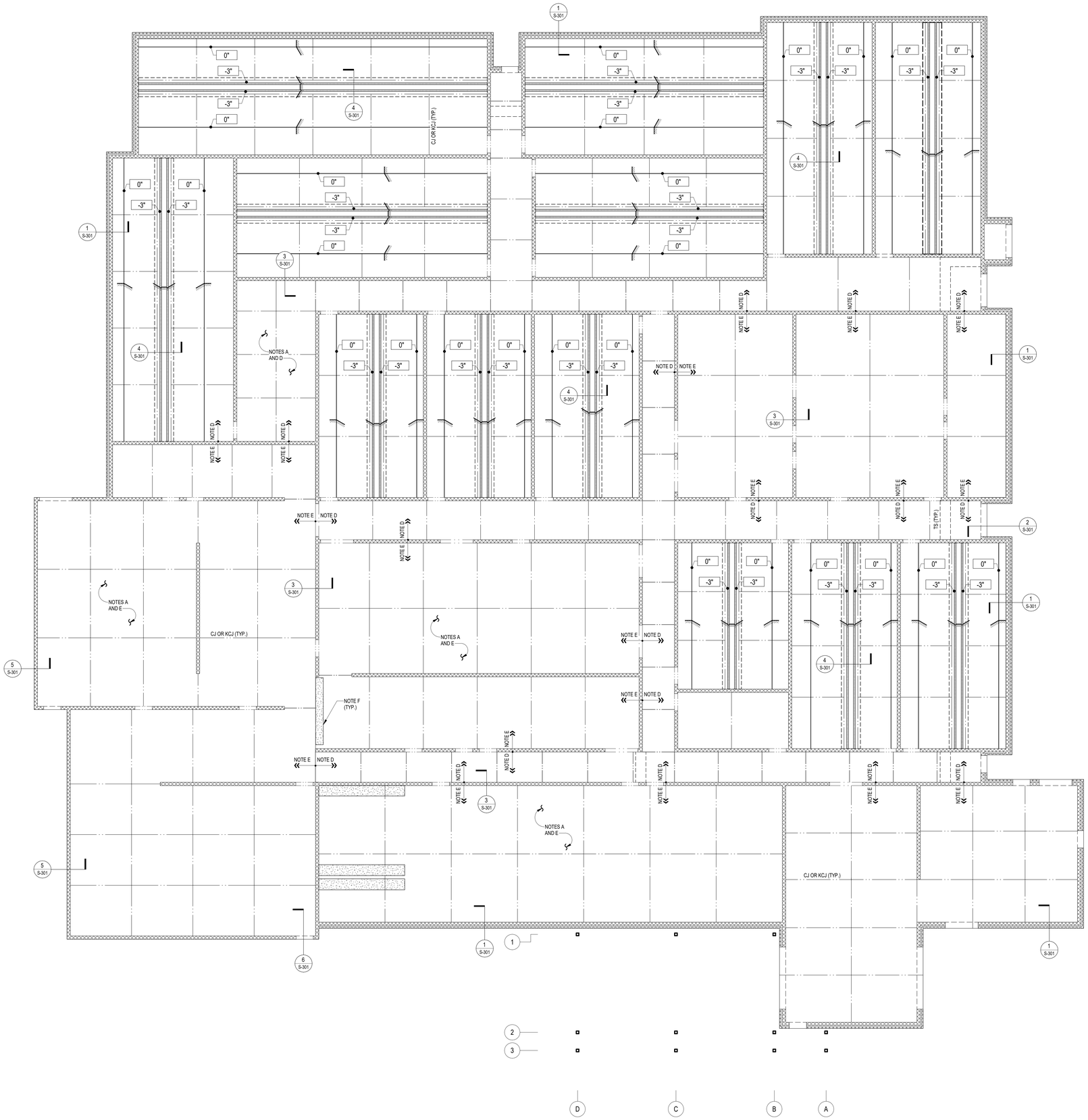
MASONRY WALL VERTICAL REINFORCING SCHEDULE

MARK	A	B
VERTICAL REINFORCING	#4 AT 40"o/c	#4 AT 40"o/c
REMARKS	-	NOTE A

NOTE:
A: GROUT ALL CELLS SOLID TO ROOF DECK.

FOUNDATION PLAN

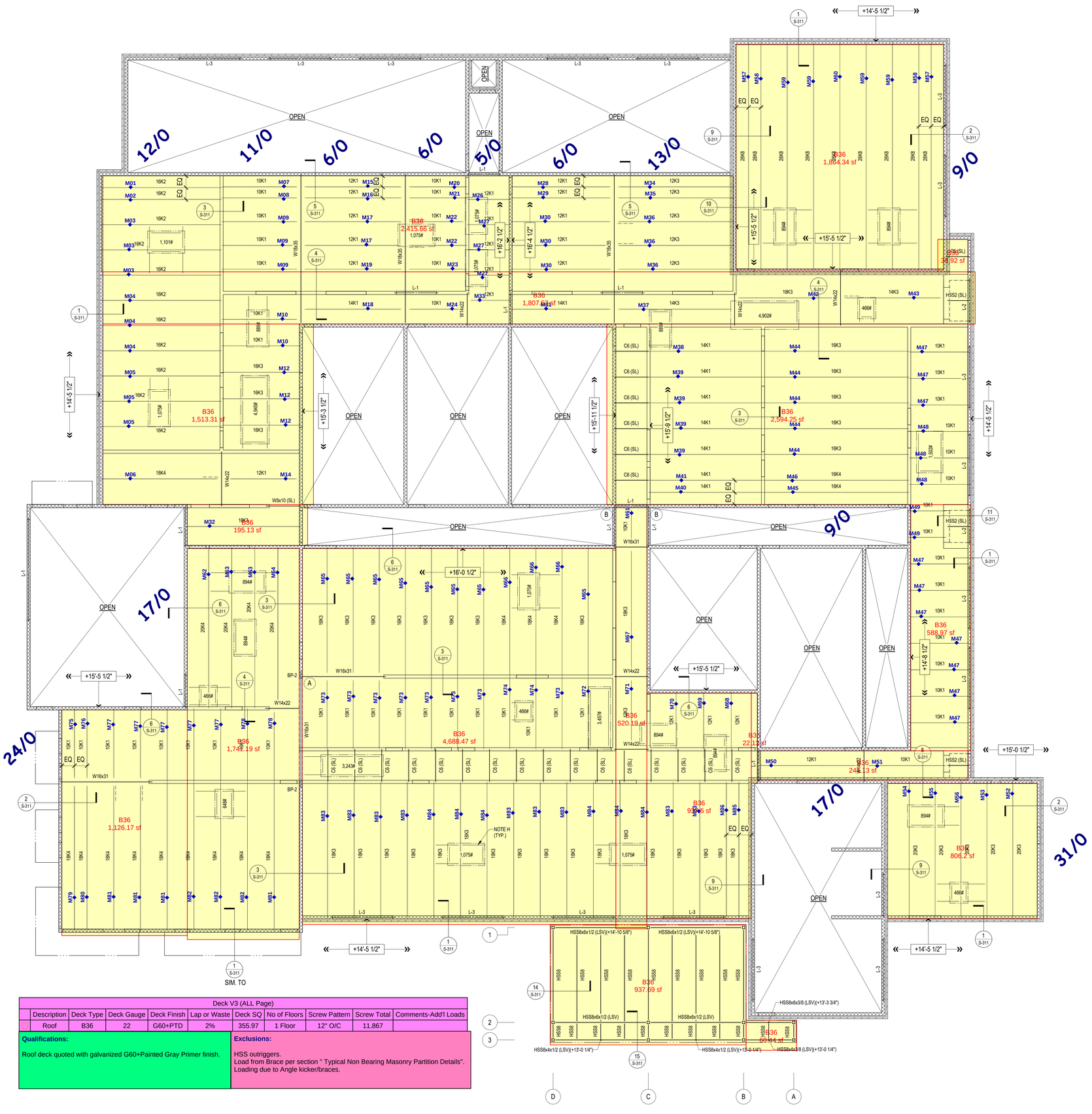
1/8" = 1'-0"



SLAB PLAN

1/8" = 1'-0"

(FOR PLAN NOTES AND LEGENDS SEE SHEET S-101)



Deck V3 (ALL Page)									
	Description	Deck Type	Deck Gauge	Deck Finish	Lap or Waste	Deck SQ	No of Floors	Screw Pattern	Screw Total	Comments-Add'l Loads
	Roof	B36	22	G60+PTD	2%	355.97	1 Floor	12" O/C	11,867	

Qualifications:

Roof deck quoted with galvanized G60+Painted Gray Primer finish.

Exclusions:

HSS outriggers.
Load from Brace per section " Typical Non Bearing Masonry Partition Details".
Loading due to Angle kicker/braces.

Joist		
	Description	Quantity
⋯	9/0	2
⋯	17/0	2
⟷	M01	1
⟷	M02	1
⟷	M03	3
⟷	M04	3
⟷	M05	3
⟷	M06	1
⟷	M07	1
⟷	M08	1
⟷	M09	3
⟷	M10	2
⟷	M12	3
⟷	M14	1
⟷	M15	1
⟷	M16	1
⟷	M17	2
⟷	M18	1
⟷	M19	1
⟷	M20	1
⟷	M21	1
⟷	M22	2
⟷	M23	1
⟷	M24	1
⟷	M26	1
⟷	M27	3
⟷	M28	1
⟷	M29	1
⟷	M30	3
⟷	M31	1
⟷	M32	1
⟷	M33	1
⟷	M34	1
⟷	M35	1
⟷	M36	3
⟷	M37	1
⟷	M38	1
⟷	M39	4
⟷	M40	1
⟷	M41	1
⟷	M42	1
⟷	M43	1
⟷	M44	5
⟷	M45	1
⟷	M46	1
⟷	M47	10
⟷	M48	3
⟷	M49	2
⟷	M50	1
⟷	M51	1
⟷	M52	1
⟷	M53	1
⟷	M54	1
⟷	M55	1
⟷	M56	1
⟷	M57	2
⟷	M58	2
⟷	M59	4
⟷	M60	1
⟷	M61	1
⟷	M62	1
⟷	M63	2
⟷	M64	1
⟷	M65	8
⟷	M66	3
⟷	M67	1
⟷	M68	1
⟷	M69	1
⟷	M70	1
⟷	M71	1
⟷	M72	1
⟷	M73	8
⟷	M74	2
⟷	M75	1
⟷	M76	1
⟷	M77	5
⟷	M78	2
⟷	M79	1
⟷	M80	1
⟷	M81	4
⟷	M82	3
⟷	M83	9
⟷	M84	6
⟷	M85	1
⟷	M86	1

LOW ROOF FRAMING PLAN NOTES :

A. SEE THE DIMENSION PLAN ON SHEET S-100 AND THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS.

B. FOR THE STRUCTURAL NOTES AND ABBREVIATIONS SEE SHEETS S-001 AND S-002.

C. ROOF JOISTS AND OTHER ROOF DECK SUPPORTS MUST BE SPACED EQUALLY BETWEEN GIVEN LOCATIONS. WITH A MAXIMUM SPACING OF 5'-6" ON-CENTER, UNLESS OTHERWISE NOTED.

D. FOR JOIST BEARING ELEVATIONS NOT SHOWN ON PLAN INTERPOLATE LINEARLY BETWEEN GIVEN ELEVATIONS.

E. ROOF ACCESS - SEE THE ARCHITECTURAL DRAWINGS FOR SIZE, LOCATION AND ADDITIONAL INFORMATION.

F. MASONRY WALL OPENING BELOW - SEE THE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION. SEE 'TYPICAL BOND BEAM LINTEL DETAILS' ON SHEET S-502 FOR BOND BEAM REQUIREMENTS.

G. CMU WALL BELOW TO UNDERSIDE OF DECK. SEE 'TYPICAL NON-BEARING MASONRY WALL BRACING DETAILS' ON SHEET S-502.

H. SEE 'TYPICAL ROOF TOP MECHANICAL UNIT SUPPORT DETAIL' ON SHEET S-511 FOR ADDITIONAL INFORMATION.

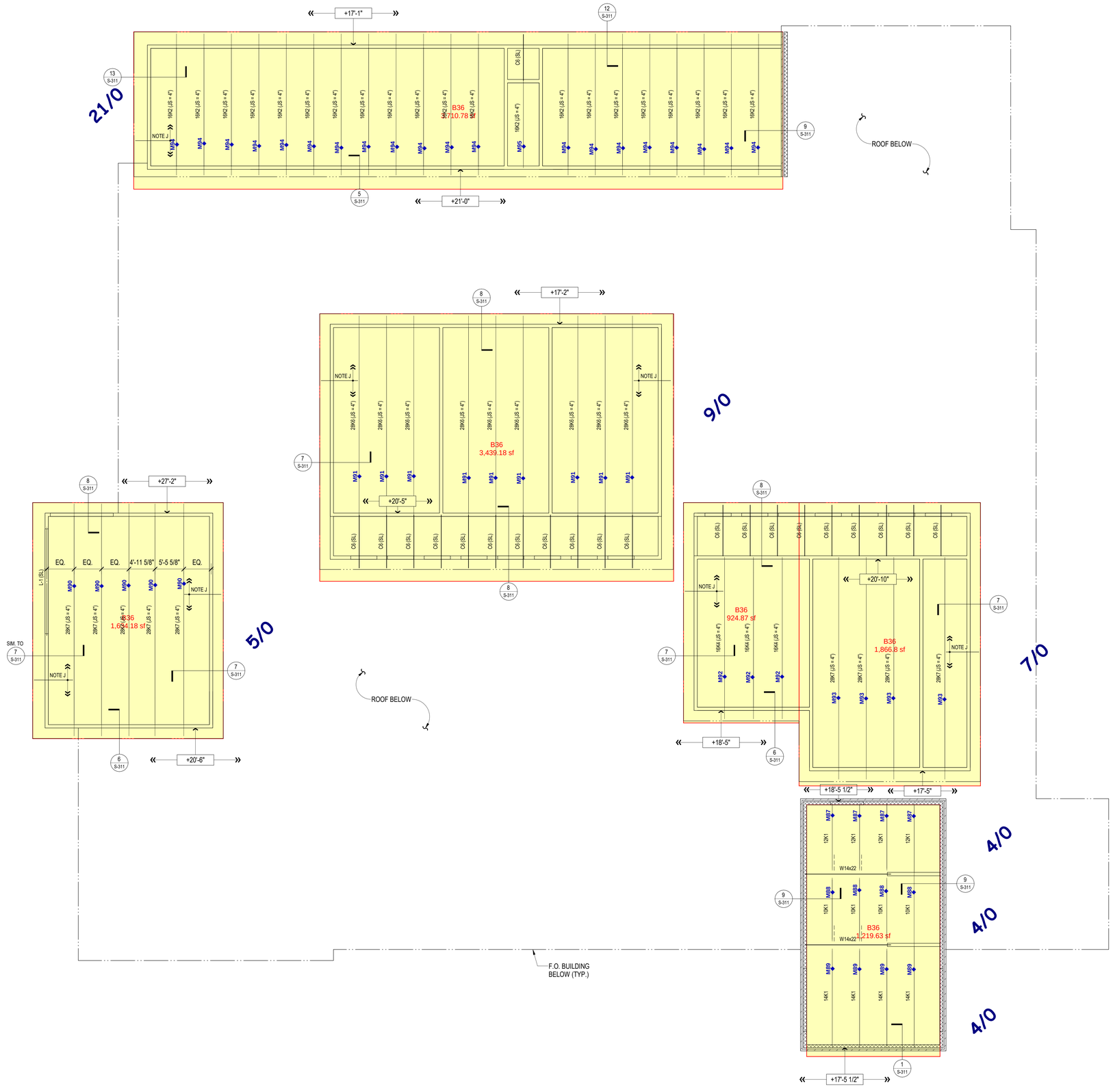
J. HSS2 1/2x2 1/2x1/4 OUTLOOKERS AT 24" ON-CENTER (MAXIMUM).

LOW ROOF FRAMING PLAN LEGEND :

+XX'-XX"	=	JOIST BEARING ELEVATION (J.B.E) - MEASURED FROM REFERENCE ELEVATION 0'-0"
(+XX'-XX")	=	TOP OF STEEL (T.O.S.) ELEVATION - MEASURED FROM REFERENCE ELEVATION 0'-0" (HI = HIGH; LO = LOW; SL = SLOPE)
x,xxx#	=	MECHANICAL UNIT - MAXIMUM OPERATING WEIGHT GIVEN IN POUNDS (COORDINATE WITH THE MECHANICAL DRAWINGS
X	=	COLUMN GRID MARK
X	=	SPECIAL CONNECTION MARK - SEE DETAILS ON SHEET S-512
L-X	=	LINTEL MARK - SEE DETAILS ON SHEET S-502
W10	=	W10x12
C6	=	C6x8.2
HSS2	=	HSS2 1/2x2 1/2x1/4 (GALV.)
HSS8	=	HSS8x4x3/8 (LSV/SL) (GALV.)
BP-X	=	BEAM BEARING PLATE MARK - SEE SCHEDULE AND TYPICAL DETAILS ON SHEET S-502 (BP-1 TYP. U.O.N.)
(JS = X")	=	INDICATES JOIST SEAT DEPTH MEASURED AT CENTERLINE OF SUPPORT
	=	ROOF RIDGE, HIP OR VALLEY LINE - SEE THE ARCHITECTURAL DRAWINGS
	=	CHANGE IN ROOF ELEVATION - SEE THE ARCHITECTURAL DRAWINGS
	=	L2 1/2x2 1/2x1/4 CROSS BRACING (TYP. U.O.N.)
	=	CANTILEVER BEAM TO COLUMN CONNECTION - SEE TYPICAL DETAIL ON SHEET S-511
	=	DIAGONAL BRACE TO BEAM BOTTOM FLANGE - SEE TYPICAL DETAIL ON SHEET S-511

LOW ROOF FRAMING PLAN

1/8" = 1'-0"



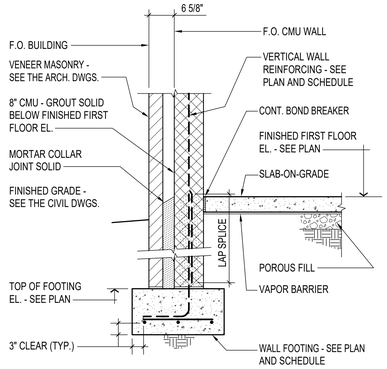
Joist

Description	Quantity
M87	4
M88	4
M89	4
M90	5
M91	9
M92	3
M93	4
M94	20
M95	1

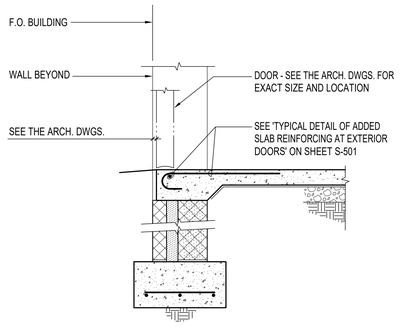
HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

(FOR PLAN NOTES AND LEGENDS SEE SHEET S-111)

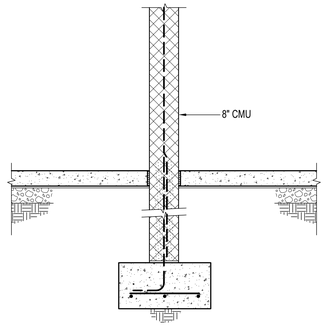


1 S-301 **SECTION**
3/4" = 1'-0"



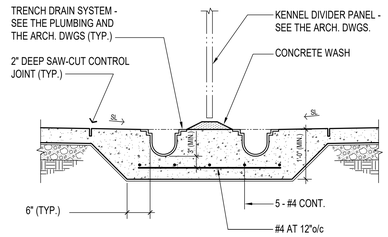
FOR DETAILS NOT NOTED SEE SECTION 1/S-301

2 S-301 **SECTION**
3/4" = 1'-0"



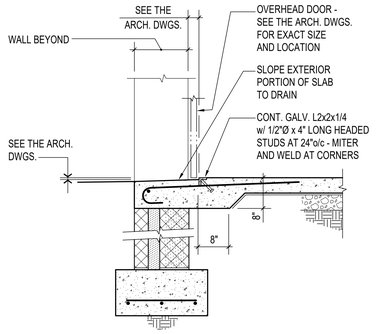
FOR DETAILS NOT NOTED SEE SECTION 1/S-301

3 S-301 **SECTION**
3/4" = 1'-0"



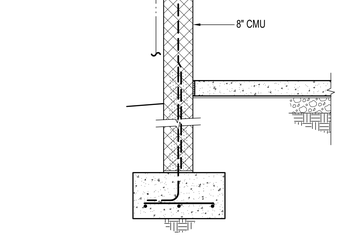
FOR DETAILS NOT NOTED SEE SECTION 3/S-301

4 S-301 **SECTION**
3/4" = 1'-0"



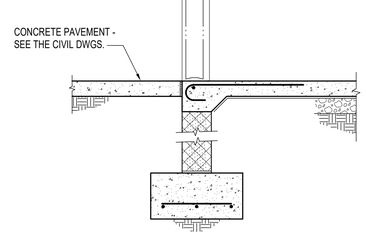
FOR DETAILS NOT NOTED SEE SECTION 3/S-301

5 S-301 **SECTION**
3/4" = 1'-0"



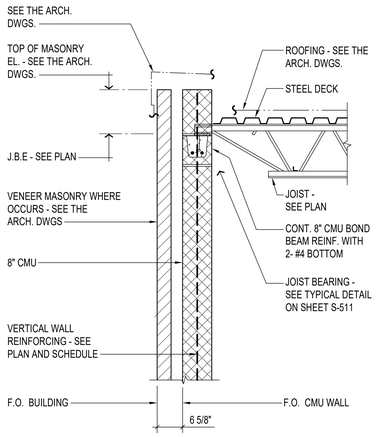
FOR DETAILS NOT NOTED SEE SECTION 5/S-301

6 S-301 **SECTION**
3/4" = 1'-0"

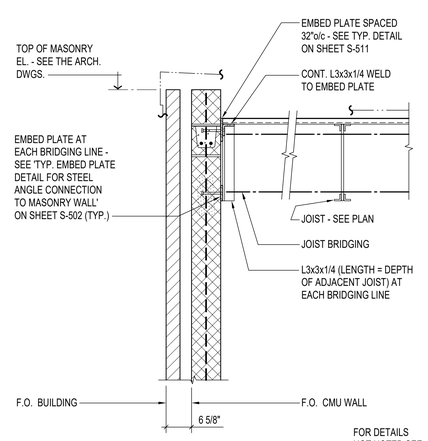


FOR DETAILS NOT NOTED SEE SECTION 6/S-301

7 S-301 **SECTION**
3/4" = 1'-0"

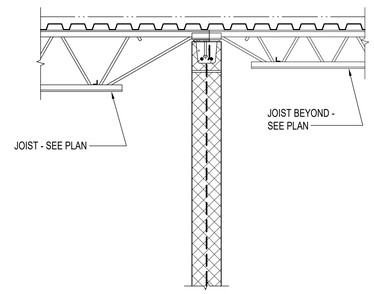


1 S-311 **SECTION**
3/4" = 1'-0"



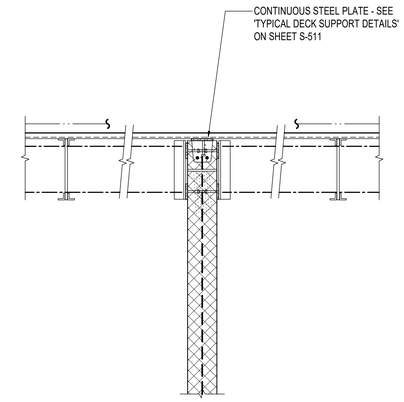
FOR DETAILS NOT NOTED SEE SECTION 1/S-311

2 S-311 **SECTION**
3/4" = 1'-0"



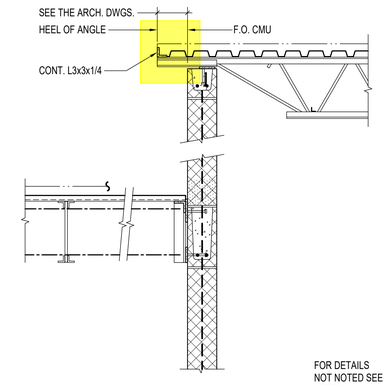
FOR DETAILS NOT NOTED SEE SECTION 2/S-311

3 S-311 **SECTION**
3/4" = 1'-0"



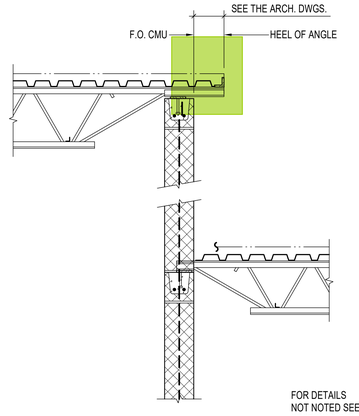
FOR DETAILS NOT NOTED SEE SECTION 3/S-311

4 S-311 **SECTION**
3/4" = 1'-0"



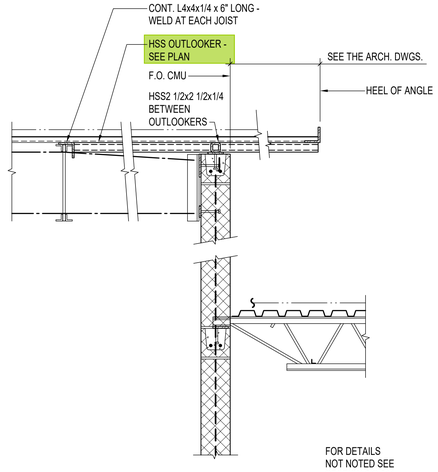
FOR DETAILS NOT NOTED SEE SECTION 4/S-311

5 S-311 **SECTION**
3/4" = 1'-0"



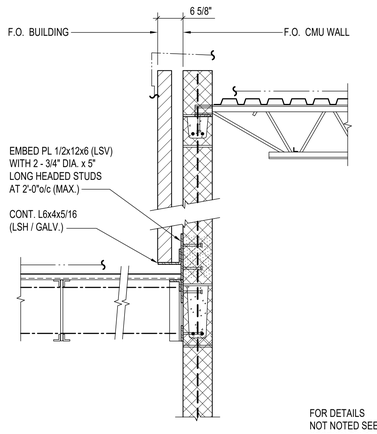
FOR DETAILS NOT NOTED SEE SECTION 5/S-311

6 S-311 **SECTION**
3/4" = 1'-0"



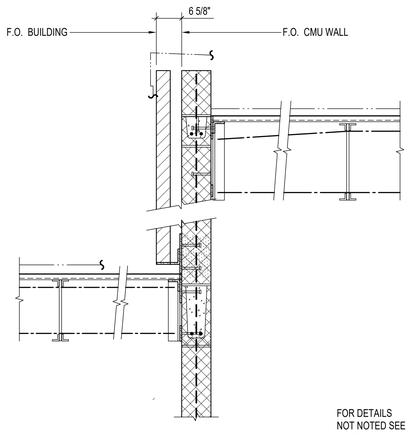
FOR DETAILS NOT NOTED SEE SECTION 6/S-311

7 S-311 **SECTION**
3/4" = 1'-0"



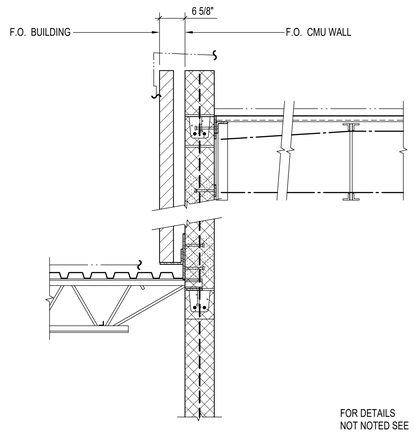
FOR DETAILS NOT NOTED SEE SECTION 7/S-311

8 S-311 **SECTION**
3/4" = 1'-0"



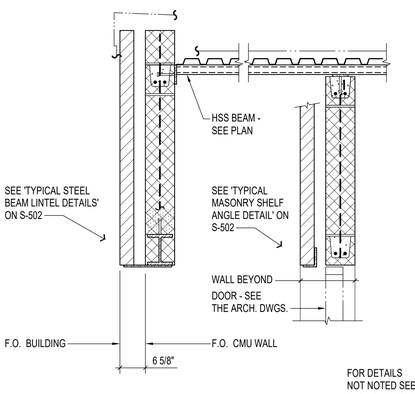
FOR DETAILS NOT NOTED SEE SECTION 8/S-311

9 S-311 **SECTION**
3/4" = 1'-0"



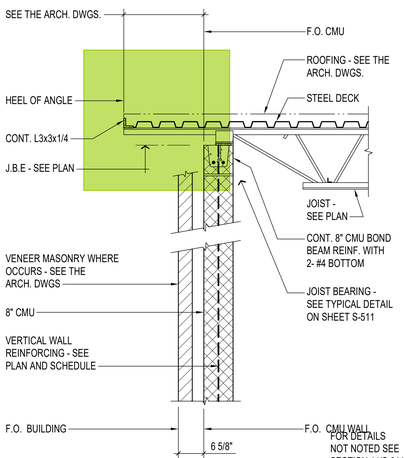
FOR DETAILS NOT NOTED SEE SECTION 9/S-311

10 S-311 **SECTION**
3/4" = 1'-0"



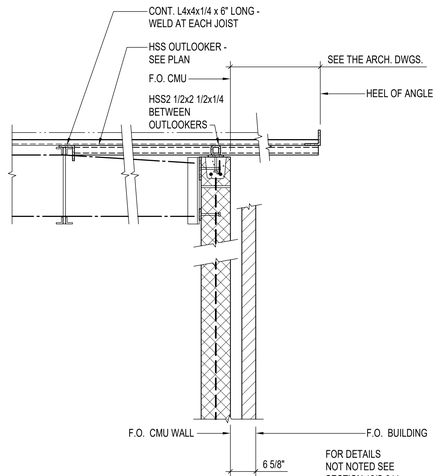
FOR DETAILS NOT NOTED SEE SECTION 10/S-311

11 S-311 **SECTION**
3/4" = 1'-0"



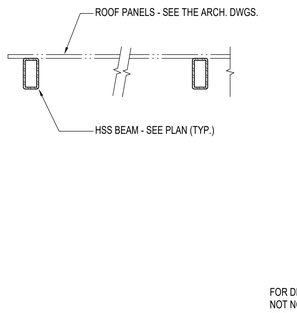
FOR DETAILS NOT NOTED SEE SECTION 11/S-311

12 S-311 **SECTION**
3/4" = 1'-0"



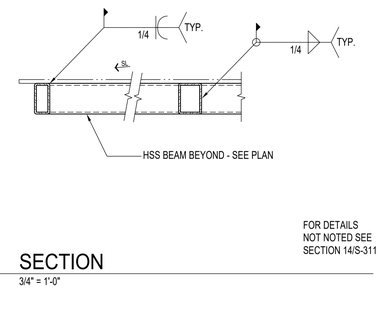
FOR DETAILS NOT NOTED SEE SECTION 12/S-311

13 S-311 **SECTION**
3/4" = 1'-0"



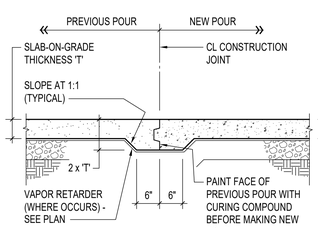
FOR DETAILS NOT NOTED SEE SECTION 13/S-311

14 S-311 **SECTION**
3/4" = 1'-0"

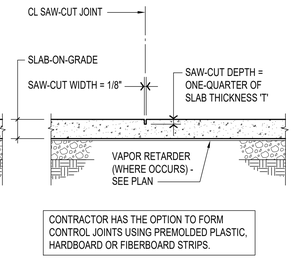


FOR DETAILS NOT NOTED SEE SECTION 14/S-311

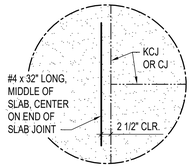
15 S-311 **SECTION**
3/4" = 1'-0"



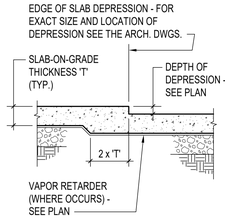
KEYED CONSTRUCTION JOINT (KCJ)



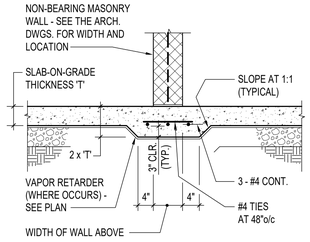
CONTROL JOINT (CJ)



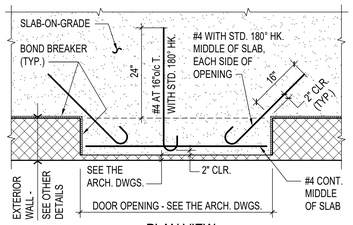
PLAN AT DISCONTINUOUS SLAB JOINT



DEPRESSION

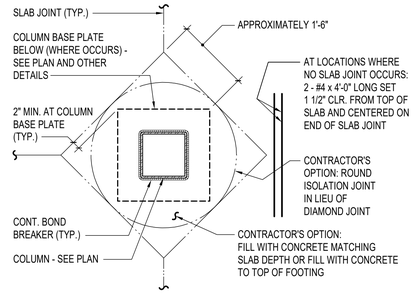


THICKENED SLAB AT NON-BEARING CMU PARTITION (TS)



PLAN VIEW

ADDED SLAB REINFORCING AT EXTERIOR DOORS



HSS COLUMNS

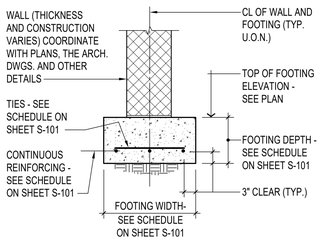
GENERAL CONTRACTOR NOTE :
COLUMN ISOLATION JOINTS ARE OPTIONAL WHEN STRUCTURAL STEEL ERECTION IS COMPLETED PRIOR TO SLAB-ON-GRADE PLACEMENT.

TYPICAL FIBER REINFORCED SLAB-ON-GRADE DETAILS

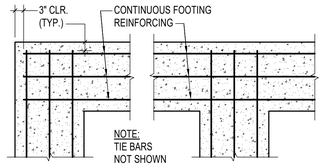
NOT TO SCALE

TYPICAL COLUMN ISOLATION JOINT DETAIL

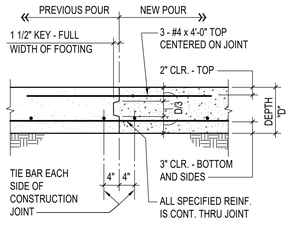
NOT TO SCALE



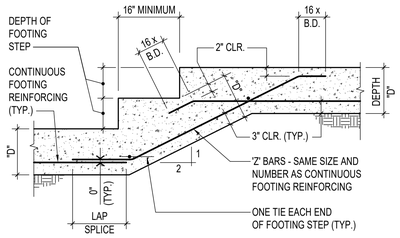
TYPICAL SECTION



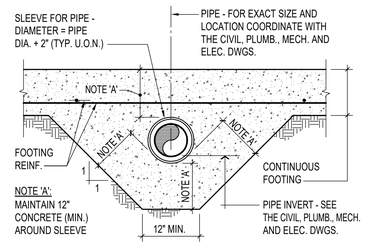
CORNERS AND INTERSECTIONS



CONSTRUCTION JOINT (BOTTOM STEEL ONLY)



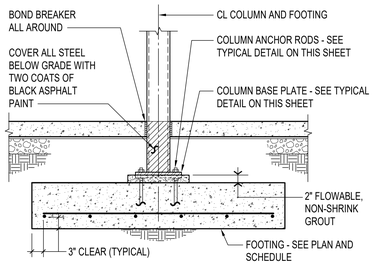
STEPPED FOOTING (BOTTOM STEEL ONLY)



PIPE SLEEVE UNDER CONTINUOUS FOOTING

TYPICAL WALL FOOTING DETAILS

NOT TO SCALE



TYPICAL COLUMN AND FOOTING DETAIL

NOT TO SCALE

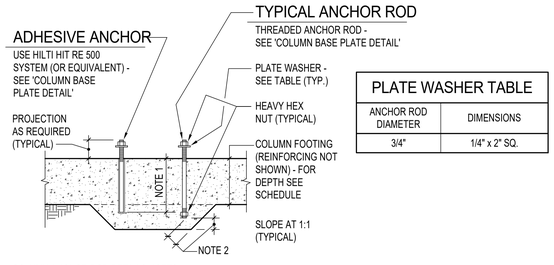
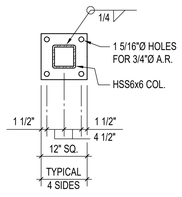


PLATE WASHER TABLE	
ANCHOR ROD DIAMETER	DIMENSIONS
3/4"	1/4" x 2" SQ.

COLUMN ANCHOR ROD DETAILS NOTES:
1. EMBEDMENT - SEE COLUMN BASE PLATE DETAIL
2. DEEPEN FOOTING AS INDICATED AT ANCHOR RODS TO PROVIDE 3" MINIMUM COVERAGE

TYPICAL COLUMN ANCHOR ROD DETAIL

NOT TO SCALE

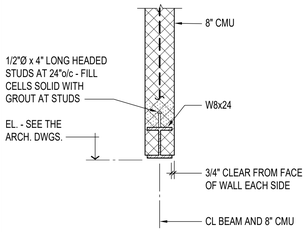


CBP-1

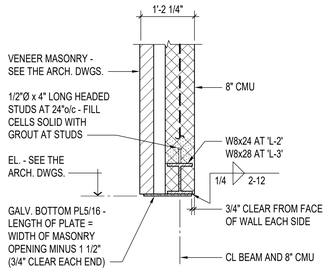
PL3/4x12x12 WITH 4 - 3/4"Ø ANCHOR RODS (9" EMB.)

COLUMN BASE PLATE DETAIL

NOT TO SCALE



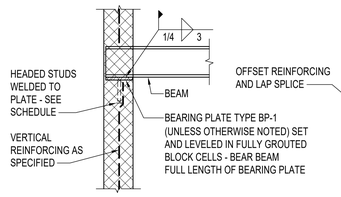
TYPE 'L-1'



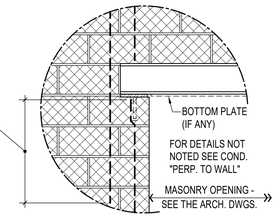
TYPES 'L-2' AND 'L-3'

TYPICAL STEEL BEAM LINTEL DETAILS

NOT TO SCALE

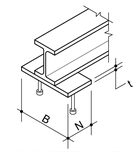


PERPENDICULAR TO WALL



PARALLEL TO WALL

STEEL BEAM BEARING PLATE SCHEDULE						
MARK	t	N	B	HEADED STUDS		
				QTY.	DIA.	LENGTH
BP-1	3/4"	7"	7"	2	3/4"	6"
BP-2	3/4"	16"	7"	4	3/4"	6"
BP-3	--	--	--	--	--	--



ISOMETRIC VIEW

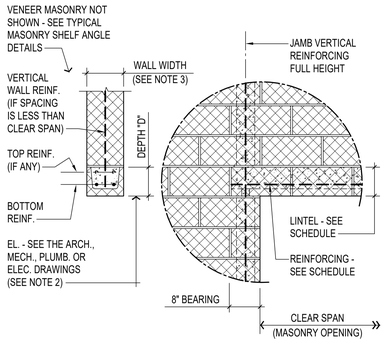
TYPICAL STEEL BEAM BEARING ON MASONRY DETAILS

NOT TO SCALE

BOND BEAM LINTEL SCHEDULE				
CLEAR SPAN	DEPTH "D"	REINFORCING		
		6" WIDE	8" AND 10" WIDE	12" WIDE
0 TO 3'-4"	8"	1 - #4 BOTTOM	2 - #4 BOTTOM	2 - #5 BOTTOM
3'-5" TO 5'-4"	8"	1 - #5 BOTTOM	2 - #5 BOTTOM	2 - #5 BOTTOM
5'-5" TO 6'-8"	16"	1 - #5 BOTTOM	2 - #5 BOTTOM	2 - #5 BOTTOM
6'-9" TO 10'-6"	16"	1 - #5 TOP AND BOTTOM	2 - #5 TOP AND BOTTOM	2 - #5 TOP AND BOTTOM
10'-7" TO 12'-0"	24"	1 - #5 TOP AND BOTTOM	2 - #5 TOP, MID. AND BOTTOM	2 - #5 TOP, MID. AND BOTTOM

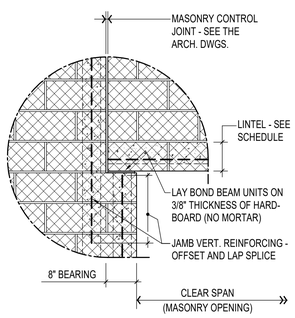
BOND BEAM LINTEL SCHEDULE NOTES:

1. PROVIDE 8" CMU BEARING EACH END OF LINTEL.
2. FOR EXACT SIZE AND LOCATION OF ALL WALL OPENINGS COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
3. SEE THE ARCHITECTURAL DRAWINGS FOR WIDTH OF WALL AND REQUIRED WIDTH OF LINTEL, IF DIFFERENT FROM WIDTH OF WALL.
4. BOND BEAM LINTEL SCHEDULE APPLIES ONLY TO LINTELS NOT OTHERWISE SHOWN ON THE DRAWINGS.



TYPICAL SECTION

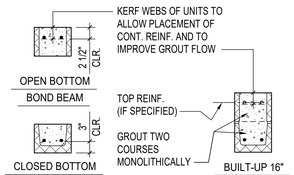
TYPICAL JAMB ELEVATION



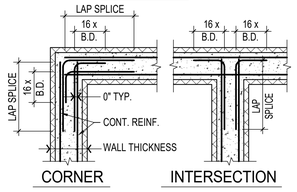
JAMB ELEVATION AT MASONRY CONTROL JOINT

TYPICAL BOND BEAM LINTEL DETAILS

NOT TO SCALE



SECTIONS



CORNER

INTERSECTION

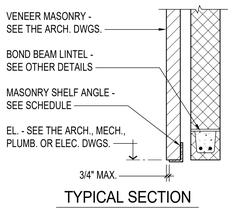
TYPICAL BOND BEAM REINFORCING DETAILS

NOT TO SCALE

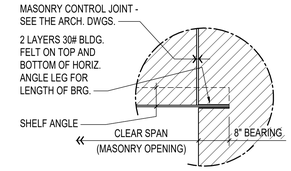
MASONRY SHELF ANGLE SCHEDULE	
CLEAR SPAN	ANGLE SIZE
0 TO 3'-4"	L 3 1/2 x 3 1/2 x 1/4
3'-5" TO 5'-4"	L 5 x 3 1/2 x 1/4 (LLV)
5'-5" TO 6'-8"	L 6 x 4 x 5/16 (LLV)
6'-9" TO 8'-0"	BENT PL 5/16 x 8 x 6 (LLV)

MASONRY SHELF ANGLE NOTES:

1. PROVIDE 8" BEARING EACH END OF ANGLE.
2. FOR EXACT SIZE AND LOCATION OF ALL WALL OPENINGS SEE THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
3. MASONRY SHELF ANGLE SCHEDULE APPLIES ONLY TO MASONRY SHELF ANGLES NOT OTHERWISE SHOWN ON THE DRAWINGS.
4. MASONRY SHELF ANGLES IN EXTERIOR WALLS SHALL BE HOT-DIP GALVANIZED.



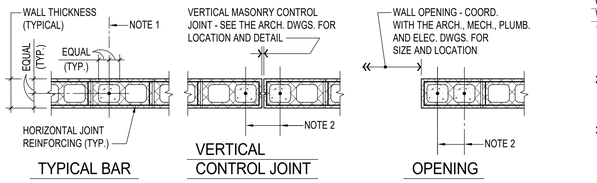
TYPICAL SECTION



ELEVATION AT MASONRY CONTROL JOINT

TYPICAL MASONRY SHELF ANGLE DETAILS

NOT TO SCALE



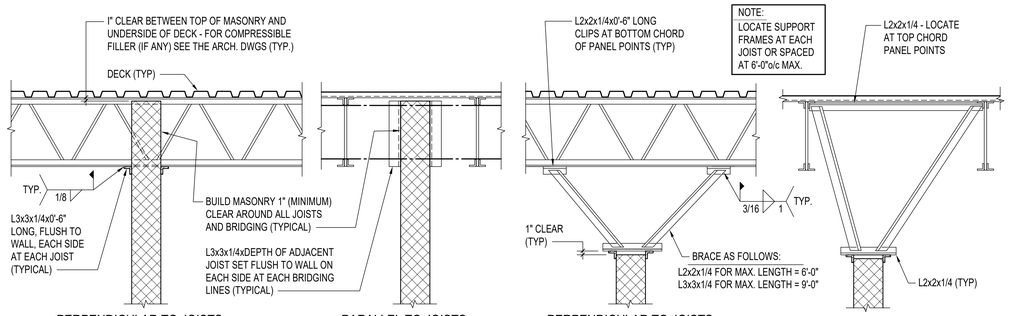
TYPICAL BAR | VERTICAL CONTROL JOINT | OPENING | CORNER | INTERSECTION | BEAM BEARING PERPENDICULAR | BEAM BEARING AT END OR CORNER

CONCRETE MASONRY VERTICAL WALL REINFORCING DETAIL NOTES:

1. VERTICAL WALL REINFORCING BAR AS SPECIFIED. SEE OTHER DETAILS AND SECTIONS FOR SIZE AND SPACING.
2. VERTICAL WALL REINFORCING BAR AS SPECIFIED (#4 BAR WHERE NOT OTHERWISE SPECIFIED).
3. CENTERLINE OF BEAM/GIRDER ABOVE. SEE PLAN(S) FOR EXACT LOCATION.

TYPICAL CONCRETE MASONRY VERTICAL WALL REINFORCING DETAILS

NOT TO SCALE



PERPENDICULAR TO JOISTS | PARALLEL TO JOISTS

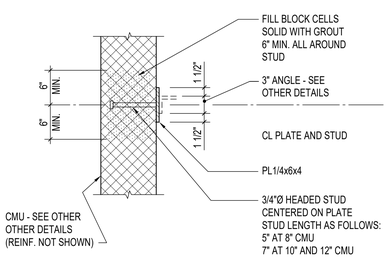
PARTITIONS TO UNDERSIDE OF DECK

PERPENDICULAR TO JOISTS | PARALLEL TO JOISTS

PARTITIONS STOPPING BELOW JOISTS

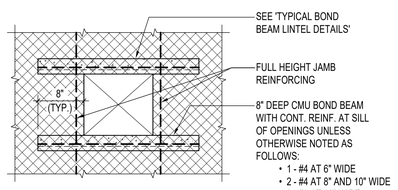
TYPICAL NON-BEARING MASONRY PARTITION DETAILS

NOT TO SCALE



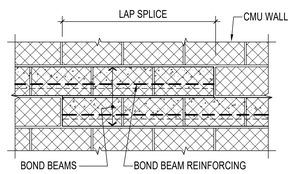
TYPICAL EMBED PLATE DETAIL FOR STEEL ANGLE CONNECTION TO MASONRY WALL

NOT TO SCALE



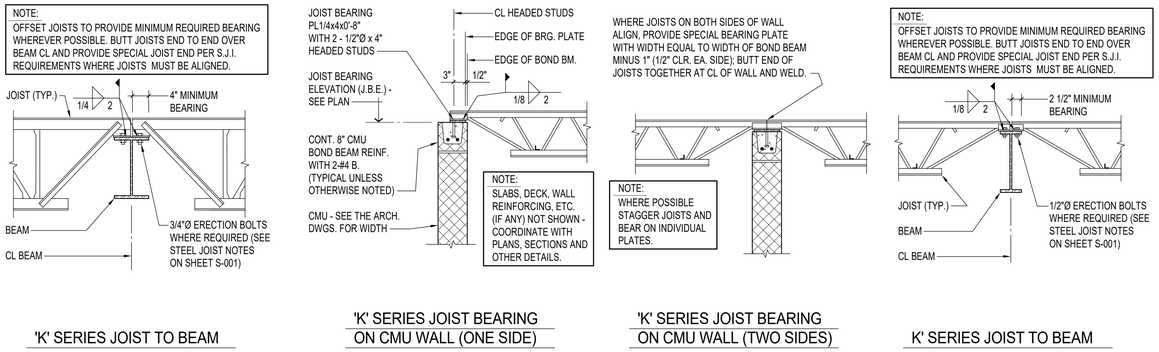
TYPICAL REINFORCING AT MASONRY WALL OPENING DETAIL

NOT TO SCALE



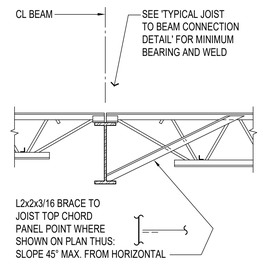
TYPICAL STEPPED BOND BEAM DETAIL

NOT TO SCALE



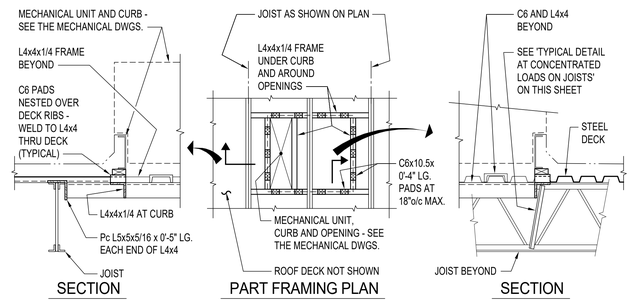
TYPICAL JOIST CONECTION DETAILS

NOT TO SCALE



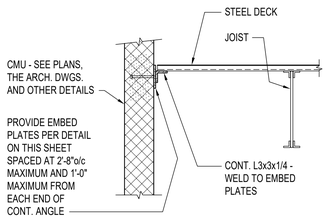
TYPICAL BEAM BOTTOM FLANGE BRACE DETAIL

NOT TO SCALE



TYPICAL ROOF TOP MECHANICAL UNIT SUPPORT DETAILS

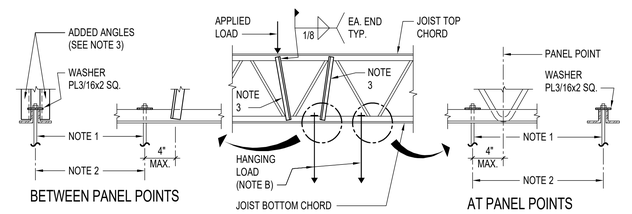
NOT TO SCALE



NOTE:
WALL REINFORCING, BOND BEAMS, MULTIPLE-WYTHE WALLS, JOIST BRIDGING AND VENEER MASONRY NOT SHOWN. COORDINATE WITH PLANS, OTHER DETAILS AND ARCHITECTURAL DRAWINGS.

TYPICAL DECK SUPPORT DETAILS

NOT TO SCALE

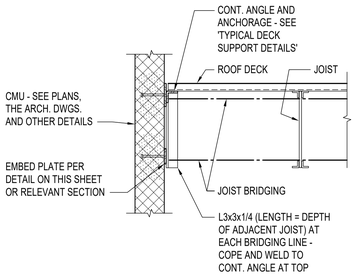


NOTES:

1. HANGER RODS - SEE THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. POSITION HANGER RODS ON JOIST CENTERLINE BETWEEN BOTTOM CHORD ANGLES. "C" CLAMP CONNECTIONS ARE NOT ALLOWED.
3. WHERE CONCENTRATED LOADS ARE APPLIED TO TOP CHORDS OR HUNG FROM BOTTOM CHORDS BETWEEN PANEL POINTS REINFORCE JOIST WITH DOUBLE ANGLES AS INDICATED. AT "K" SERIES PROVIDE DBL. L1x1x1/8.

TYPICAL DETAIL AT CONCENTRATED LOADS ON JOISTS

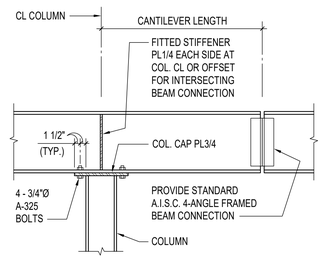
NOT TO SCALE — NOTE: THIS DETAIL IS FOR ALL LOADS WHICH EXCEED 50 POUNDS



NOTE:
WALL REINFORCING, BOND BEAMS, MULTIPLE-WYTHE WALLS, AND VENEER MASONRY NOT SHOWN. COORDINATE WITH PLANS, OTHER DETAILS AND THE ARCHITECTURAL DRAWINGS.

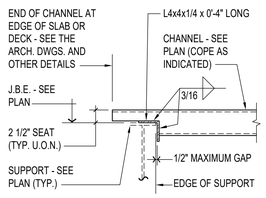
TYPICAL JOIST BRIDGING DETAILS

NOT TO SCALE



TYPICAL CANTILEVER BEAM TO COLUMN CONNECTION DETAIL

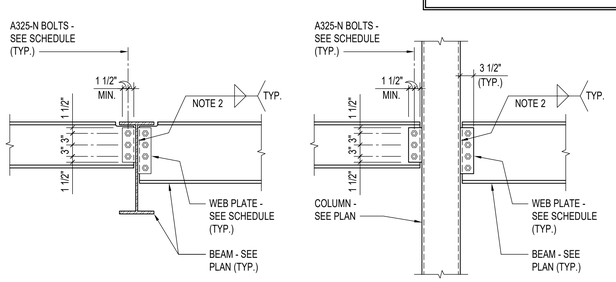
NOT TO SCALE



TYPICAL CHANNEL JOIST SUBSTITUTE DETAIL

NOT TO SCALE

IF ALTERNATE CONNECTIONS (DEVIATING FROM DETAILS ON THIS SHEET) ARE SUBMITTED THEY SHALL BE ACCOMPANIED BY CALCULATIONS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF VIRGINIA. CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR LOADING AND DESIGN REQUIREMENTS.



TYPICAL BOLTED WEB PLATE CONNECTION DETAILS

NOT TO SCALE

WEB PLATE CONNECTION SCHEDULE

MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	WEB PLATE THICKNESS	A325-N BOLTS	
		QUANTITY	SIZE
W10	3/8"	2	3/4"Ø
W12	3/8"	3	3/4"Ø
W14	3/8"	3	3/4"Ø
W16	3/8"	4	3/4"Ø

WEB PLATE CONNECTION NOTES:

1. BOLT EDGE DISTANCE SHALL BE 1 1/2" MIN. AT ALL EDGES. BOLT SPACING SHALL BE 3" MIN.
2. FILLET WELDS SHALL BE 3/4 OF THE PLATE THICKNESS (1/4" MIN.) EACH SIDE.
3. THICKNESS EQUALS FLANGE THICKNESS OF BEAM FRAMING INTO COLUMN WEB (3/8" MIN.).

GENERAL NOTES:

1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES FOR ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.

2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION, AS ADOPTED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2018 EDITION.

3. THE WORK UNDER THE FOLLOWING SPECIFICATION SECTIONS IS SUBJECT TO SPECIAL INSPECTIONS AND TESTS AS DESCRIBED IN SECTION 1704 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION:
   - A. 312000 - EARTH MOVING
   - B. 032000 - CONCRETE REINFORCING
   - C. 033000 - CAST-IN-PLACE CONCRETE
   - D. 042000 - UNIT MASONRY
   - E. 051200 - STRUCTURAL STEEL

4. THE CONTRACTOR MUST BE RESPONSIBLE FOR TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.

5. THE PROJECT SPECIFICATIONS ARE NOT SUPERSEDED BY THE STRUCTURAL NOTES BUT ARE INTENDED TO BE COMPLEMENTARY TO THEM. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS IN EACH SECTION.

6. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS MUST TAKE PRECEDENCE OVER STRUCTURAL NOTES AND TYPICAL DETAILS.

7. CONSULTANTS' DRAWINGS, INCLUDING STRUCTURAL DRAWINGS, ARE CONSIDERED SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. ANY OMISSIONS OR CONFLICTS, INCLUDING DIMENSIONS, BETWEEN VARIOUS ELEMENTS OF THE CONSULTANTS' DRAWINGS AND/OR SPECIFICATIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

8. THE DOCUMENTS DEFINING THE STRUCTURE ARE INSTRUMENTS OF SERVICE PREPARED BY SPEIGHT, MARSHALL AND FRANCIS. P.L.L.C. FOR ONE USE ONLY. THE STRUCTURAL DOCUMENTS MUST NOT BE REPRODUCED, OR COPIED IN WHOLE OR IN PART BY THE CONTRACTOR OR SUBCONTRACTORS FOR PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.

9. LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:

   A. LIVE LOADS:

1.	SLAB-ON-GRADE	100 PSF
2.	ROOF	20 PSF

   B. SNOW DESIGN DATA:

1.	GROUND SNOW LOAD	20 PSF
2.	EXPOSURE FACTOR	1.0
3.	SNOW IMPORTANCE FACTOR	1.0
4.	THERMAL FACTOR	1.0
5.	FLAT ROOF SNOW LOAD	14 PSF
6.	RAIN-ON-SNOW SURCHARGE LOAD	5 PSF

   C. WIND DESIGN DATA:

1.	ULTIMATE DESIGN WIND SPEED	120 MPH
2.	NOMINAL DESIGN WIND SPEED	90 MPH
3.	RISK CATEGORY	II
4.	WIND EXPOSURE	B
5.	INTERNAL PRESSURE COEFFICIENT	±0.18
6.	COMPONENTS AND CLADDING DESIGN PRESSURES	
	A. ZONE 1 WITH 10 SF TRIBUTARY AREA	33.6 PSF
	B. ZONE 4 WITH 10 SF TRIBUTARY AREA	20.9 PSF

   D. SEISMIC DESIGN DATA:

1.	RISK CATEGORY	II
2.	SEISMIC IMPORTANCE FACTOR	1.0
3.	SS	0.184g
4.	S1	0.062g
5.	SITE CLASS	D
6.	SDS	0.196g
7.	SD1	0.100g
8.	SEISMIC DESIGN CATEGORY	B
9.	DESIGN BASE SHEAR	
	A. BARN BUILDING	1.9 KIPS
10.	SEISMIC RESPONSE COEFFICIENT	
	A. BARN BUILDING	0.0302
11.	RESPONSE MODIFICATION FACTOR	
	A. BARN BUILDING	6.5
12.	ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
13.	BASIC SEISMIC-FORCE-RESISTING SYSTEM IS LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE	

10. MECHANICAL UNIT WEIGHTS AND LOCATIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY LOCATIONS AND WEIGHTS SHOWN AND REPORT DISCREPANCIES TO THE ARCHITECT.

FOUNDATION NOTES:

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL EXPLORATION REPORT PREPARED BY SCHNABEL ENGINEERING DATED JANUARY 5, 2021.

2. FOUNDATIONS HAVE BEEN DESIGNED FOR A BEARING PRESSURE OF 3,000 PSF.

3. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO EXPLORE THE EXTENT OF LOOSE, SOFT OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. THE GEOTECHNICAL ENGINEER WILL PROVIDE DIRECTION FOR CORRECTIVE ACTION WHERE REQUIRED.

4. NO UNBALANCED BACKFILLING MAY BE DONE AGAINST WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION.

5. FROST LINE DEPTH IS 18" BELOW GRADE. BOTTOM OF ALL EXTERIOR FOUNDATIONS MUST BE A MINIMUM OF 36" BELOW EXTERIOR FINISHED GRADE ELEVATION.

CAST-IN-PLACE CONCRETE NOTES:

1. CAST-IN-PLACE CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14) AND COMMENTARY (ACI 318R-14)".

2. CONCRETE MUST BE NORMAL WEIGHT AND MUST OBTAIN 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
   - A. SLAB-ON-GRADE 3,500 PSI
   - B. CONCRETE NOT OTHERWISE NOTED 3,000 PSI

3. REINFORCING MATERIALS MUST BE AS FOLLOWS:
   - A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED
   - B. FIBER REINFORCING:
     1. SYNTHETIC - ASTM C1116, TYPE III

4. ALL REINFORCING STEEL AND EMBEDDED ITEMS MUST BE ACCURATELY PLACED IN THE POSITIONS SHOWN AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS INDICATED ON THE DRAWINGS MUST GOVERN WHEN IN CONFLICT WITH ACI 318-14.

6. UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS:
   - A. LAP SPLICE LENGTHS MUST COMPLY WITH 'CAST-IN-PLACE CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE' ON SHEET SB-002
   - B. USE TENSION BAR LAP SPLICE LENGTHS
   - C. SPLICES MAY BE MADE WITH MECHANICAL SPLICES (AT CONTRACTOR'S OPTION). MECHANICAL SPLICES MUST BE:
     1. CAPABLE OF RESISTING 125% OF THE TENSION CAPACITY OF THE SPLICED BAR
     2. POSITIVE-CONNECTING TYPE COUPLERS
     3. SUBMITTED FOR REVIEW
     4. STAGGERED A MINIMUM OF 24" ALONG THE LONGITUDINAL AXIS OF ADJACENT BARS

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530-13 / ASCE 5-13 / TMS 402-13.

2. CONCRETE MASONRY CONSTRUCTION MUST CONFORM TO THE "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1-13 / ASCE 6-13 / TMS 602-13.

3. CONCRETE MASONRY UNITS MUST CONFORM TO ASTM C90 AND BE MADE WITH LIGHTWEIGHT AGGREGATE. THE COMPRESSIVE STRENGTH OF MASONRY, F'm, EXPRESSED AS FORCE PER UNIT OF NET CROSS-SECTIONAL AREA, MUST BE 2,000 PSI AT 28 DAYS.

4. REINFORCING STEEL MUST COMPLY WITH ASTM A615, GRADE 60. SHOP FABRICATE REINFORCING BARS SHOWN TO BE BENT OR HOOKED.

5. GROUT MUST COMPLY WITH ASTM C476, AND MUST BE PROPORTIONED TO OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI.

6. MORTAR MUST COMPLY WITH ASTM C270, TYPE S OR M. AGGREGATE FOR MORTAR MUST COMPLY WITH ASTM C144. AGGREGATE FAILING TO COMPLY WITH ASTM C144 GRADATION REQUIREMENTS MAY BE USED PROVIDED THE MORTAR CAN BE PREPARED TO COMPLY WITH THE AGGREGATE RATIO, WATER RETENTION AND COMPRESSIVE STRENGTH REQUIREMENTS OF THE PROPERTY SPECIFICATIONS OF ASTM C270. USE TYPE M BELOW GRADE AND TYPE S ABOVE GRADE (UNLESS CELLS ARE GROUTED SOLID).

7. VERTICAL REINFORCING BARS MUST BE THE GIVEN SIZE AND SPACING SHOWN. LAP REINFORCING AT ALL SPLICES AS FOLLOWS:
   - #3 - 19" D. #6 - 52" G. #9 - 119"
   - #4 - 25" E. #7 - 67" H. #10 OR LARGER - MECHANICALLY SPLICED'
   - #5 - 31" F. #8 - 93"

8. REBAR DOWELS MUST BE THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM FOUNDATION. DOWELS MUST HAVE STANDARD ACI HOOKS.

9. DISCONTINUE ALL HORIZONTAL REINFORCING AT CONTROL JOINTS EXCEPT FOR THE BOND BEAMS AT JOIST BEARING ELEVATIONS. HORIZONTAL BOND BEAMS MUST HAVE CONTINUOUS REINFORCING AS SHOWN IN THE SECTIONS AND DETAILS.

10. HORIZONTAL JOINT REINFORCING MUST BE STANDARD 9 GAGE LADDER TYPE IN CMU WALLS AT 16" ON-CENTER. JOINT REINFORCING MUST COMPLY WITH ASTM A951 AND MUST BE HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153, CLASS B.

11. GROUT ALL CELLS SOLID BELOW FINISHED FIRST FLOOR.

12. VERTICAL REINFORCING MUST HAVE BAR POSITIONERS AT SPACING NOT TO EXCEED 200 BAR DIAMETERS, AT GROUT LIFT HEIGHTS OR BAR SPLICE LOCATIONS, WHICHEVER IS LESS.

ROUGH CARPENTRY NOTES:

1. ROUGH CARPENTRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA) "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION".

2. UNLESS OTHERWISE NOTED, ALL NAILING MUST CONFORM TO THE "FASTENING SCHEDULE" SHOWN IN TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION.

3. WOOD FRAMING MEMBERS MUST COMPLY WITH PS 20" AMERICAN SOFTWOOD LUMBER STANDARD" AND THE FOLLOWING REQUIREMENTS:
   - A. MOISTURE CONTENT - SEASONED WITH 19 PERCENT MAXIMUM MOISTURE CONTENT
   - B. GRADE - NO. 2
   - C. SPECIES - SOUTHERN PINE GRADED UNDER SPIB RULES

4. CONSTRUCTION PANELS MUST COMPLY WITH PS 1 "U.S. PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" FOR PLYWOOD CONSTRUCTION PANELS AND THE FOLLOWING REQUIREMENTS:
   - A. EXTERIOR WALL AND SHEARWALL WALL SHEATHING: 1/2" APA RATED SHEATHING WITH AN EXTERIOR EXPOSURE DURABILITY CLASSIFICATION
   - B. ROOF SHEATHING: 1/2" APA RATED SHEATHING WITH AN EXTERIOR EXPOSURE DURABILITY CLASSIFICATION

5. WOOD FRAMING MEMBERS PERMANENTLY EXPOSED TO THE WEATHER AND SILL PLATES AROUND THE BUILDING PERIMETER MUST BE PRESERVATIVE-TREATED IN ACCORDANCE WITH THE SPECIFICATIONS. WOOD FRAMING MEMBERS IN DIRECT CONTACT WITH CONCRETE, MASONRY OR GROUT MUST BE PRESERVATIVE-TREATED IN ACCORDANCE WITH THE SPECIFICATIONS.

6. STEEL PLATE CONNECTORS MUST COMPLY WITH ASTM A36 SPECIFICATIONS (Fy=36 KSI). BOLTS CONNECTING WOOD MEMBERS MUST COMPLY WITH ASTM A325 STEEL BOLTS AND MUST BE 3/4" DIAMETER, UNLESS OTHERWISE SPECIFIED.

7. METAL FRAMING ANCHORS MUST COMPLY WITH ASTM A653 GRADE A (STRUCTURAL QUALITY).

8. CROSS BRIDGING OR FULL-DEPTH BLOCKING IS REQUIRED AT ROOF RAFTERS NOT RECEIVING CEILING SHEATHING AND AT WALL STUDS NOT RECEIVING SHEATHING ON BOTH FACES. UNLESS OTHERWISE INDICATED, CROSS BRIDGING MUST BE SIMPSON TB (OR EQUIVALENT). MAXIMUM BRIDGING/BLOCKING SPACING MUST BE 6'-0" o/c OR AT 1/3 POINTS OF MEMBER SPANS, WHICHEVER IS LESS. COORDINATE EXTENTS OF WALL AND CEILING SHEATHING WITH THE ARCHITECTURAL DRAWINGS.

9. HEADERS MUST BE OF THE SAME CROSS SECTION AS RAFTERS TO FRAME AROUND ALL OPENINGS TO SUPPORT SHEATHING, UNLESS OTHERWISE NOTED.

10. WHERE MULTIPLE FRAMING MEMBERS ARE INDICATED, SCAB CONTINGENT MEMBERS TOGETHER WITH 16d NAILS AT 12" ON-CENTER ALTERNATING AT 2 INCHES FROM EACH EDGE, UNLESS OTHERWISE INDICATED.

PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSS NOTES:

1. PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES MUST BE DESIGNED IN ACCORDANCE WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND THE TRUSS PLATE INSTITUTE (TPI) "DESIGN SPECIFICATION FOR METAL-PLATE-CONNECTED WOOD TRUSSES".

2. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA FOR THE DESIGN OF PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES, INCLUDING DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE. SECONDARY BENDING STRESSES IN TRUSS TOP AND BOTTOM CHORDS MUST BE CONSIDERED IN THE DESIGN.

3. WOOD TRUSS FRAMING MEMBERS MUST COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND THE FOLLOWING REQUIREMENTS:
   - A. MOISTURE CONTENT - SEASONED WITH 19 PERCENT MAXIMUM MOISTURE CONTENT
   - B. GRADE - NO. 2
   - C. SPECIES -SOUTHERN PINE GRADED UNDER SPIB RULES

4. METAL CONNECTOR PLATES MUST COMPLY WITH ASTM A653, GRADE A.

5. METAL FRAMING ANCHORS MUST COMPLY WITH ASTM A653 GRADE A (STRUCTURAL QUALITY).

6. WOOD ROOF TRUSS DESIGN LOADS MUST BE AS FOLLOWS:
   - A. TOP CHORD LOADING:
     1. LIVE LOAD = AS INDICATED IN "GENERAL NOTES"
     2. DEAD LOAD = 10 PSF (PLUS ADDITIONAL 5 PSF AT SUPERIMPOSED ROOF FRAMING AREAS)
     3. WIND LOAD = AS INDICATED IN "GENERAL NOTES"
   - B. BOTTOM CHORD LOADING:
     1. LIVE LOAD = 10 PSF PER IBC TABLE 1607.1
     2. DEAD LOAD = 10 PSF

7. WHERE MULTIPLE TRUSS PLIES ARE INDICATED, FASTEN TOGETHER AS SPECIFIED BY THE TRUSS MANUFACTURER.

8. IN ADDITION TO ANY TRUSS BRACING SHOWN, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND PERMANENT BRACING REQUIRED FOR SAFE ERECTION OF THE TRUSSES OR AS RECOMMENDED BY THE MANUFACTURER. THE GUIDELINES SET FORTH IN THE TRUSS PLATE INSTITUTE PUBLICATION "BRACING WOOD TRUSSES, COMMENTARY AND RECOMMENDATIONS" MUST BE CONSIDERED MINIMUM REQUIREMENTS.

9. TRUSS MANUFACTURER MUST DESIGN AND SPECIFY BOTTOM CHORD BRACING WHERE CEILING SHEATHING DOES NOT ATTACH DIRECTLY TO TRUSS BOTTOM CHORD. COORDINATE EXTENTS OF CEILING SHEATHING WITH ARCHITECTURAL DRAWINGS.

10. TRUSS MANUFACTURER MAY USE ALTERNATIVE TRUSS WEB CONFIGURATIONS SUBJECT TO APPROVAL OF THE ARCHITECT.

11. TRUSSES MUST BE DESIGNED USING 'PIN' CONNECTION AT ONE SUPPORT AND 'ROLLER' CONNECTION AT OTHER SUPPORT LOCATIONS. 'PIN' DEFINED AS A SUPPORT RESISTING VERTICAL AND HORIZONTAL LOADS. 'ROLLER' DEFINED AS RESISTING ONLY VERTICAL LOADS.

POST-INSTALLED ANCHOR NOTES:

1. POST-INSTALLED ANCHORS MUST BE CAPABLE OF WITHSTANDING DESIGN LOADS INDICATED ON THE DRAWINGS. APPLICABLE POST-INSTALLED ANCHOR TYPE(S) ARE AS FOLLOWS:
   - A. ANCHORAGE TO CRACKED AND/OR UNCRACKED CONCRETE:
     1. ADHESIVE ANCHORS:
        HY 200 WITH HIT-Z ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK-BOLT TZ IS MECHANCIAL BASIS-OF-DESIGN
   - B. REBAR DOWELING INTO CRACKED AND/OR UNCRACKED CONCRETE:
     1. ADHESIVE ANCHORS:
        HY 200 IS BASIS-OF-DESIGN
   - C. ANCHORAGE TO SOLID GROUTED MASONRY:
     1. ADHESIVE ANCHORS:
        HY 270 WITH HAS-E ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK BOLT 3 AND KWIK-HUS EZ SCREW ARE MECHANICAL BASES OF DESIGN
   - D. ANCHORAGE TO HOLLOW OR MULTI-WYTHE MASONRY:
     1. ADHESIVE ANCHORS:
        HY 270 WITH HAS-E ROD IS ADHESIVE BASIS-OF-DESIGN, KWIK-CON II+ SCREW IS MECHANICAL BASIS OF DESIGN

2. ANCHOR CAPACITY MUST BE BASED ON TECHNICAL DATA PUBLISHED BY THE ANCHOR MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. CONTRACTOR MUST PROVIDE CALCULATIONS DEMONSTRATING THE CHOSEN ANCHOR IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES INDICATED. PRODUCTS SUBMITTED WILL BE EVALUATED BY SHOWING ICC ESR COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS INCLUDED IN ANCHOR PACKAGING.

4. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING A PROPERLY TESTED AND APPROVED INSTALLATION METHOD.

5. THE CONTRACTOR MUST ARRANGE A REPRESENTATIVE OF THE ANCHOR MANUFACTURER TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL ANCHORING PRODUCTS. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

7. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS OTHERWISE NOTED, THE REINFORCING BARS CANNOT BE CUT. THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURAL DRAWINGS AND MUST LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS BY GPR X-RAY, CHIPPING OR OTHER MEANS.

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS MUST BE COMPLETED FOR THE FOLLOWING ELEMENTS ACCORDING TO IBC SECTION 1704 AND 1705.12.

2. EARTHWORK MUST BE SPECIAL INSPECTED AS FOLLOWS:
   - A. PRIOR TO PLACEMENT OF PREPARED FILL, QUALITY ASSURANCE AGENT MUST DETERMINE THE SITE HAS BEEN PREPARED ACCORDING TO THE GEOTECHNICAL REPORT.
   - B. QUALITY ASSURANCE AGENT MUST DETERMINE FILL MATERIAL AND LIFT THICKNESSES COMPLY WITH GEOTECHNICAL REPORT.

3. CONCRETE AND ELEMENTS EMBEDDED IN CONCRETE MUST BE SPECIAL INSPECTED PRIOR TO AND DURING PLACEMENT OF CONCRETE. SPECIAL INSPECTIONS MUST INCLUDE THE FOLLOWING:
   - A. PERIODIC INSPECTION:
     1. REINFORCING STEEL SIZE AND PLACEMENT
     2. VERIFY USE OF APPROVED MIX DESIGN
     3. AFTER PLACEMENT TO ENSURE ADEQUATE CURING AND WEATHER PROTECTION PROCEDURES
     4. SURFACE PREPARATION AND DETAILS AT COLD JOINTS, INCLUDING PLACEMENT OF KEYWAYS
   - B. CONTINUOUS INSPECTION:
     1. BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE
     2. DURING PLACEMENT OF CONCRETE

4. STRUCTURAL MASONRY MUST BE SPECIAL INSPECTED ACCORDING TO THE FOLLOWING:
   - A. PERIODIC INSPECTION:
     1. PROPORTIONS OF SITE-PREPARED MORTAR
     2. CONSTRUCTION OF MORTAR JOINTS
     3. SPECIFIED SIZE, LOCATION, GRADE AND TYPE OF REINFORCEMENT
     4. SIZE AND LOCATION OF STRUCTURAL ELEMENTS
     5. TYPE, SIZE AND LOCATION OF ANCHORS INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO PRIMARY STRUCTURAL SYSTEM
     6. CLEANLINESS OF GROUT SPACE
     7. PROTECTION OF MASONRY DURING HOT AND COLD WEATHER PLACEMENT
   - B. CONTINUOUS INSPECTION:
     1. PREPARATION OF ANY GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS
     2. GROUT PLACEMENT MUST BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS

5. WOOD FRAMING (TRUSSES, ROOF RAFTERS, LOAD-BEARING WALLS, SHEARWALLS) MUST BE SPECIAL INSPECTED AS FOLLOWS:
   - A. PERIODIC INSPECTION:
     1. SIZE, GRADE, SPECIES AND LAYOUT OF FRAMING MEMBERS
     2. CONNECTION DETAILS SUCH AS NAILING, SCREWING, BOLTING, ANCHORING, BRACING AND HOLD DOWNS

6. POST-INSTALLED ANCHORS INCLUDING BUT NOT LIMITED TO EXPANSION ANCHORS, ADHESIVE ANCHORS AND LOW VELOCITY FASTENERS MUST BE SPECIAL INSPECTED ACCORDING TO THE RELEVANT ANCHOR CODE EVALUATION REPORTS.
   - A. CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING THE INSTALLATION OF POST-INSTALLED ANCHORS. SPECIAL INSPECTOR MUST VERIFY THE FOLLOWING:
     1. ANCHOR SIZE AND STEEL GRADE
     2. HOLE DIAMETER, LOCATION AND TYPE OF DRILL BIT
     3. COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS INCLUDING HOLE AND ANCHOR CLEANLINESS AND ADHESIVE APPLICATION
     4. ANCHOR EMBEDMENT DEPTH

STRUCTURAL TESTING:

1. THE FOLLOWING MATERIALS MUST BE TESTED ACCORDING TO IBC SECTIONS 1705 AND 1705.13. ANY ITEMS FOUND TO BE DEFICIENT MUST BE CORRECTED AND RE-TESTED AT NO ADDITIONAL COST TO THE OWNER.

2. EARTHWORK: THE IN-PLACE DRY DENSITY OF COMPACTED FILL MUST BE TESTED FOR COMPLIANCE WITH THE GEOTECHNICAL REPORT. SEE THE GEOTECHNICAL REPORT AND SPECIFICATIONS FOR THE FREQUENCY OF TESTING.

3. CONCRETE STRENGTH VERIFICATION AND TESTING: ALL CONCRETE MUST BE TESTED TO VERIFY STRENGTH, SLUMP, UNIT WEIGHT, AIR CONTENT AND TEMPERATURE. SEE THE SPECIFICATIONS FOR TESTING CRITERIA, FREQUENCY AND ACCEPTABILITY CRITERIA.

4. STRUCTURAL MASONRY STRENGTH VERIFICATION AND TESTING: MASONRY STRENGTH, F'm MUST BE VERIFIED USING THE 'UNIT STRENGTH METHOD' PER IBC CHAPTER 2105 AND AS FOLLOWS:
   - A. PRIOR TO CONSTRUCTION MASONRY UNITS AND GROUT MUST BE TESTED FOR COMPRESSIVE STRENGTH
   - B. CERTIFICATES OF COMPLIANCE WITH STRENGTH REQUIREMENTS OF MASONRY UNITS AND GROUT MUST BE SUBMITTED BY THE MASONRY AND GROUT SUPPLIERS
   - C. DURING CONSTRUCTION MASONRY UNITS AND GROUT MUST BE TESTED FOR EVERY 5,000 SQUARE FEET OF MASONRY CONSTRUCTED
   - D. PROPORTIONS OF MATERIALS IN MORTAR AND GROUT DELIVERED TO THE SITE MUST BE VERIFIED

5. POST-INSTALLED ANCHORS INCLUDING, BUT NOT LIMITED TO EXPANSION ANCHORS, ADHESIVE ANCHORS AND LOW VELOCITY FASTENERS, MUST BE TESTED ACCORDING TO THE RELEVANT ANCHOR CODE EVALUATION REPORTS.

STRUCTURAL ABBREVIATION LIST:

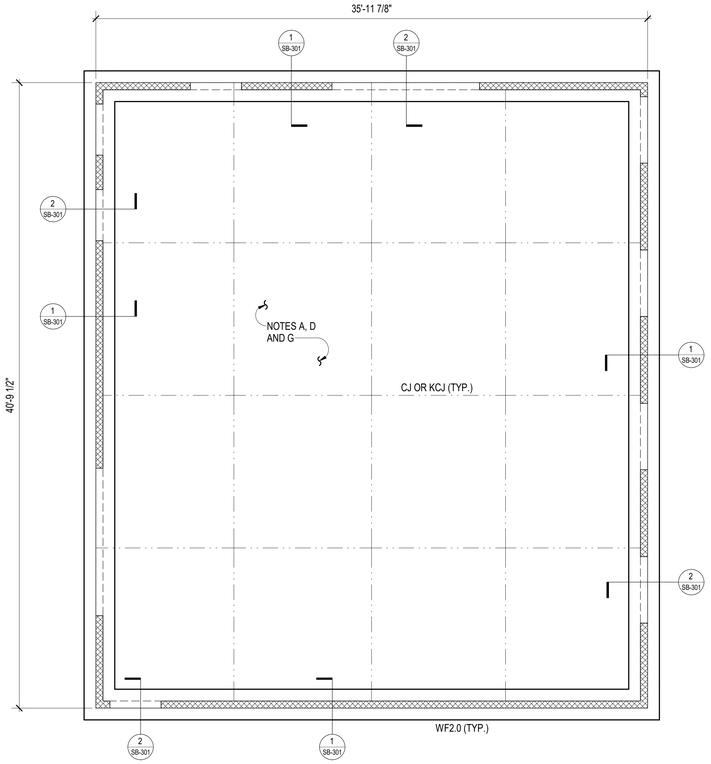
w/	WITH	K	KIPS
±	PLUS/MINUS	K.S.F.	KIPS PER SQUARE FOOT
∅	DIAMETER	K.S.I.	KIPS PER SQUARE INCH
CL	CENTERLINE		
o/c	ON CENTER	LG.	LONG
		LLH	LONG LEG HORIZONTAL
A.B.	ANCHOR BOLT	LLO	LONG LEG OUTSTANDING
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LLV	LONG LEG VERTICAL
		LSH	LONG SIDE HORIZONTAL
ACI	AMERICAN CONCRETE INSTITUTE	LSV	LONG SIDE VERTICAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	M.O.S.	MIDDLE OF SLAB
		M.O.W.	MIDDLE OF WALL
A.R.	ANCHOR ROD	MANUF.	MANUFACTURER or MANUFACTURER'S
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS		
		MAS.	MASONRY
ADJ.	ADJACENT	MATL.	MATERIAL
ARCH.	ARCHITECT or ARCHITECTURAL	MAX.	MAXIMUM
		MECH.	MECHANICAL
B.	BOTTOM	MIN.	MINIMUM
B.E.J.	BUILDING EXPANSION JOINT	MTL.	METAL
B.D.	BAR DIAMETER		
BLDG.	BUILDING	N.T.S.	NOT TO SCALE
BM.	BEAM		
BRCG.	BRACING	OSB	ORIENTED STRAND BOARD
BRDG.	BRIDGING	OPP.	OPPOSITE
BRG.	BEARING		
BTWN.	BETWEEN	P/T	POST-TENSIONED
		PAF	POWDER ACTUATED FASTENER
C.G.	CENTER OF GRAVITY	P.C.	PRECAST
C.I.P.	CAST IN PLACE	PEB	PRE-ENGINEERED BUILDING
C.J.P.	COMPLETE JOINT PENETRATION	PLF	POUNDS PER LINEAR FOOT
CANT.	CANTILEVER	P.S.	PRE-STRESSED
CLR.	CLEAR	PSF	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
COL.	COLUMN	P.T.	PRESSURE TREATED
CONC.	CONCRETE	Pc	PIECE
CONN.	CONNECT or CONNECTION	PLUMB.	PLUMBING
CONT.	CONTINUOUS	PROJ.	PROJECTION
COORD.	COORDINATE		
		R.	RADIUS
D.	DEEP or DEPTH	REF.	REFERENCE
DBL.	DOUBLE	REINF.	REINFORCED or REINFORCING
DET.	DETAIL	REQD.	REQUIRED
DIA.	DIAMETER	REV.	REVISION
DIAG.	DIAGONAL		
DWG.	DRAWING	SLO	SHORT LEG OUTSTANDING
DWL.	DOWEL	S.D.I.	STEEL DECK INSTITUTE
		S.E.J.	SEISMIC EXPANSION JOINT
E.F.	EACH FACE	S.J.I.	STEEL JOIST INSTITUTE
E.O.	EDGE OF	S.O.G.	SLAB-ON-GRADE
E.W.	EACH WAY	S.F.	STEPPED FOOTING
EA.	EACH	SCHED.	SCHEDULE
EL.	ELEVATION	SECT.	SECTION
ELEC.	ELECTRICAL	SHT.	SHEET
ELEV.	ELEVATOR or ELEVATION	SIM.	SIMILAR
EMB.	EMBED or EMBEDMENT	S.I.R.D.A.	SLOPED INTEGRAL ROOF DECK ASSEMBLY
ENG.	ENGINEER		
EQ.	EQUAL	SL	SLOPE
EQUIV.	EQUIVALENT	SPA.	SPACE
EXIST.	EXISTING	STD.	STANDARD
EXP.	EXPANSION	STIFF.	STIFFENER
		STIR.	STIRRUP
F.L.	FULL LENGTH	STL.	STEEL
F.O.	FACE OF	STRUCT.	STRUCTURAL
F.R.	FIRST RISER	SQ.	SQUARE
FIN.	FINISH or FINISHED		
FLR.	FLOOR	T.	TOP
FTG.	FOOTING	T.O.S.	TOP OF STEEL
		TEMP.	TEMPERATURE
G.C.	GENERAL CONTRACTOR	TYP.	TYPICAL
ga	GAGE		
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
GD.	GRADE		
		VERT.	VERTICAL
H.C.	HOLLOW CORE		
HK.	HOOK	W.	WIDE or WIDTH
HORIZ.	HORIZONTAL	W.P.	WORKING POINT
		W.W.F.	WELDED WIRE FABRIC
J.B.E.	JOIST BEARING ELEVATION		
JT.	JOINT		

CAST-IN-PLACE CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE Fy = 60 KSI	TENSION BARS																COMPRESSION BARS
	f'c = 3,000 PSI				f'c = 3,500 PSI				f'c = 4,000 PSI				f'c = 5,000 PSI				f'c = ALL
	REGULAR		TOP		REGULAR		TOP		REGULAR		TOP		REGULAR		TOP		
	CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
#3	17"	22"	22"	28"	16"	21"	21"	26"	15"	19"	19"	25"	13"	17"	17"	22"	12"
#4	22"	29"	29"	38"	21"	27"	27"	36"	19"	25"	25"	33"	17"	23"	23"	29"	15"
#5	28"	36"	36"	47"	26"	34"	34"	44"	24"	31"	31"	41"	22"	28"	28"	36"	19"
#6	33"	43"	43"	56"	31"	40"	40"	52"	29"	37"	37"	49"	26"	34"	34"	44"	23"
#7	48"	63"	63"	81"	45"	59"	59"	75"	42"	54"	54"	71"	38"	49"	49"	63"	27"
#8	55"	72"	72"	93"	51"	67"	67"	87"	48"	62"	62"	81"	43"	56"	56"	72"	30"
#9	62"	81"	81"	105"	58"	75"	75"	98"	54"	70"	70"	91"	48"	63"	63"	81"	34"
#10	70"	91"	91"	118"	65"	85"	85"	110"	61"	79"	79"	102"	54"	71"	71"	92"	39"
#11	78"	101"	101"	131"	73"	94"	94"	122"	67"	87"	87"	114"	60"	78"	78"	102"	43"

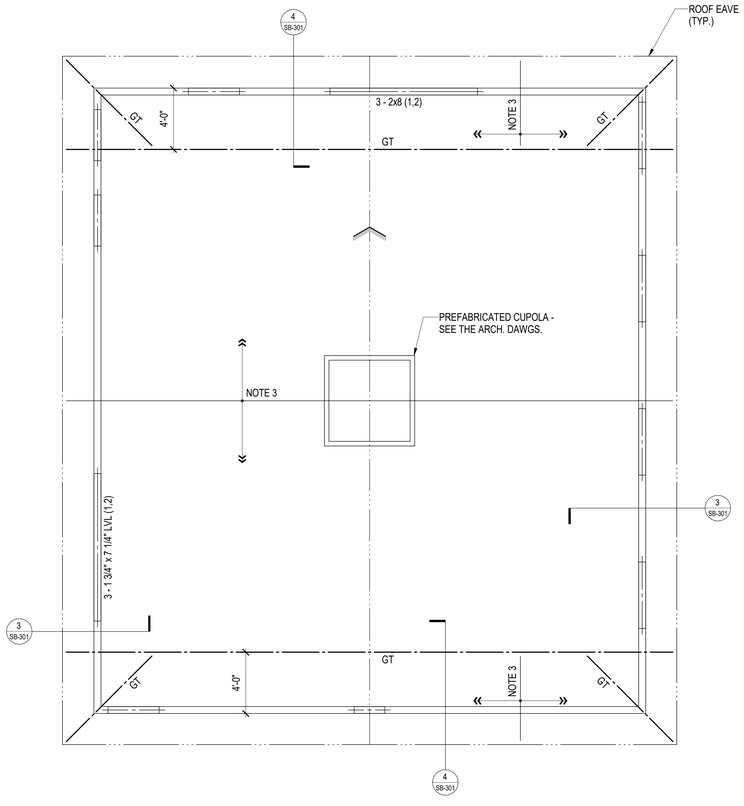
NOTES (THESE NOTES SHALL BE USED FOR ALL SPLICES UNLESS NOTED OTHERWISE ON DRAWINGS):

1. TOP BARS ARE HORIZONTAL BARS, SPLICED SO THAT 12" OR MORE OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCING BAR.
2. CLASS A SPLICES MAY BE USED ONLY WHEN 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
3. CLASS B SPLICES SHALL BE USED FOR ALL SPLICES IN SLABS, BEAMS, JOISTS, WALLS, MOMENT RESISTING COLUMNS, AND JAMB COLUMNS, UNLESS THEY MEET THE REQUIREMENTS OF NOTE #2 ABOVE.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED UNLESS APPROVED BY THE ENGINEER OF RECORD. ROUND COLUMN TIES MAY BE SPLICED USING CLASS A LAPS.
5. FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.
6. THE BAR LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.5 WHEN EITHER OF THE FOLLOWING IS TRUE:
   A. CLEAR SPACING OF BARS BEING DEVELOPED IS LESS THAN ONE BAR DIAMETER, CLEAR COVER IS LESS THAN ONE BAR DIAMETER AND STIRRUPS OR TIES ALONG THE LENGTH OF THE SPLICE ARE LESS THAN THE CODE MINIMUM.
   B. CLEAR SPACING OF BARS BEING DEVELOPED IS LESS THAN 2 BAR DIAMETERS AND CLEAR COVER IS LESS THAN ONE BAR DIAMETER.



BARN FOUNDATION PLAN

1/4" = 1'-0"



BARN ROOF FRAMING PLAN

1/4" = 1'-0"

BARN FOUNDATION PLAN NOTES :

A. SEE THE CIVIL DRAWINGS FOR ACTUAL FINISHED FLOOR ELEVATION. TOP OF SLAB EQUALS FINISHED FLOOR ELEVATION AND MUST SERVE AS THE REFERENCE ELEVATION 0'-0".

B. FOR THE STRUCTURAL NOTES AND ABBREVIATIONS SEE SHEETS SB-001 AND SB-002.

C. SEE THE DIMENSION PLAN ON THIS SHEET AND THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS.

D. FIRST FLOOR MUST BE A 4" THICK FIBRILLATED SYNTHETIC FIBER REINFORCED CONCRETE SLAB-ON-GRADE, OVER 10 MIL. VAPOR RETARDER MINIMUM (SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION), OVER 4" DEPTH OF POROUS FILL. FIBERS MUST BE FIBERMESH 300 AS MANUFACTURED BY PROPEX AT A DOSAGE RATE OF 1 1/2 POUNDS PER CUBIC YARD.

E. TOP OF ALL FOOTINGS MUST BE 2'-0" BELOW REFERENCE ELEVATION 0'-0", UNLESS OTHERWISE NOTED.

F. WALL FOOTINGS MUST BE CENTERED ON TOTAL WIDTH OF THE FOUNDATION WALL, UNLESS OTHERWISE NOTED.

G. PRIOR TO PLACING THE SLAB-ON-GRADE, INSTALL GROUDING WIRE BELOW SLAB PER THE ELECTRICAL DRAWINGS. SEE SHEETS E1.2 AND E7.0.

BARN FOUNDATION PLAN LEGEND :

KCJ = SLAB-ON-GRADE KEYED CONSTRUCTION JOINT - SEE TYPICAL DETAIL ON SHEET SB-501

CJ = SLAB-ON-GRADE CONTROL JOINT - SEE TYPICAL DETAIL ON SHEET SB-501

= SLAB-ON-GRADE JOINT (CONTROL JOINT UNLESS OTHERWISE REQUIRED)

WFX.X = WALL FOOTING MARK - SEE SCHEDULE ON THIS SHEET

SF = STEPPED FOOTING - SEE TYPICAL DETAIL ON SHEET SB-501

(+'-X") = TOP OF FOOTING ELEVATION - MEASURED FROM REFERENCE ELEVATION 0'-0"

= SANITARY OR STORM SEWER PIPING BELOW SLAB - SEE THE PLUMB. DWGS. (PIPING PARTIALLY SHOWN) - SEE THE PLUMB. DWGS. FOR ADDITIONAL PIPING NOT SHOWN)

FD FD = FLOOR DRAIN - SEE THE ARCH. AND PLUMB. DWGS.

WALL FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCING (BOTTOM)	
	WIDTH	DEPTH	CONTINUOUS	TIES
WF2.0	2'-0"	1'-0"	3 - #4	#4 AT 4'-0"o/c

BARN ROOF FRAMING PLAN NOTES :

1. SEE THE DIMENSION PLAN ON THIS SHEET AND THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS.

2. FOR THE STRUCTURAL NOTES AND ABBREVIATIONS SEE SHEETS SB-001 AND SB-002.

3. PREFABRICATED WOOD ROOF TRUSSES SPACED AT 24" ON-CENTER MAXIMUM SPACING. PROVIDE COMPLETE STRUCTURAL SYSTEM UTILIZING BEARING WALLS AND BEAMS INDICATED ON PLAN. INCLUDE REQUIREMENTS FOR SIZE AND TYPE OF HANGERS, HURRICANE ANCHORS, AND ALL OTHER CONNECTIONS. CLEARLY INDICATE ON SHOP DRAWINGS AREAS THAT WILL REQUIRE SUPPLEMENTAL STICK FRAMING. COORDINATE REQUIREMENTS FOR ADDITIONAL BEAMS OR SUPPORTS WITH THE STRUCTURAL ENGINEER.

BARN ROOF FRAMING PLAN LEGEND :

+XX'-XX" = TRUSS BEARING ELEVATION (T.B.E.) - MEASURED FROM REFERENCE ELEVATION 0'-0"

DT = DOUBLE TRUSS

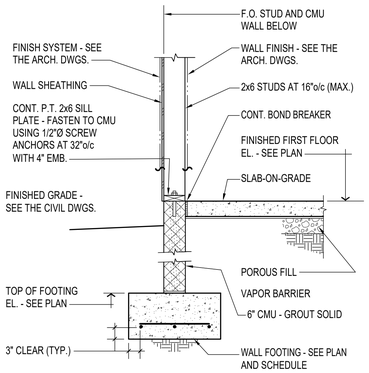
= SEE TYPICAL WOOD HEADER DETAIL ON SHEET SB-502; (3 - 2x6 (1,1) - TYPICAL U.O.N.)
x_ (X,X)
(NUMBER OF JACK STUDS, NUMBER OF FULL HEIGHT STUDS)
HEADER COMPOSITION

SW-X (XX'-XX") = SHEARWALL MARK (WITH MINIMUM LENGTH) - SEE TYPICAL ELEVATION ON SHEET SB-502 FOR ADDITIONAL INFORMATION

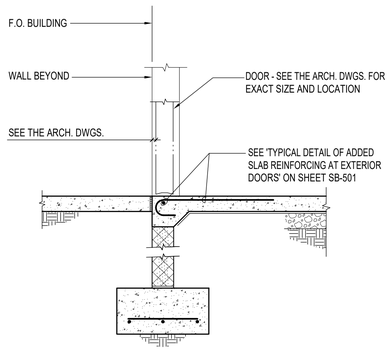
= BUILT-UP ROOF FRAMING OVER MAIN ROOF FRAMING - SEE TYPICAL DETAILS ON SHEET SB-502

= ROOF LINE (RIDGE, HIP, VALLEY, ETC.)

= CHANGE IN ROOF SLOPE

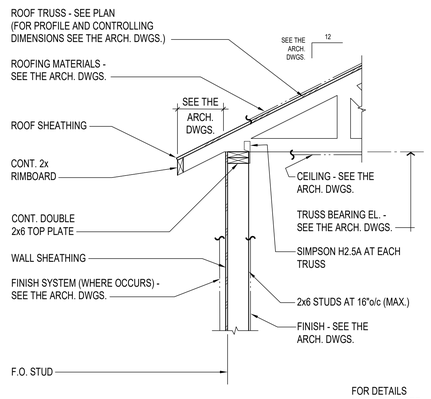


1 SB-301 **SECTION**
3/4" = 1'-0"



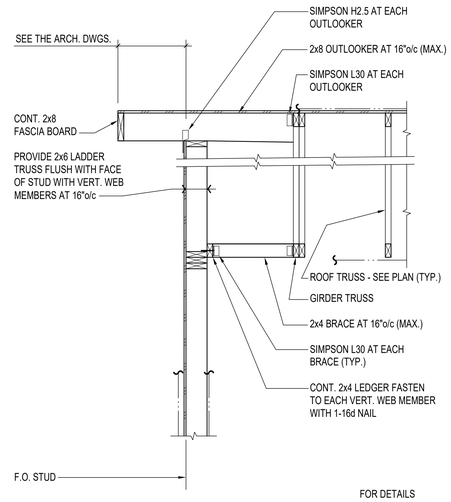
FOR DETAILS NOT NOTED SEE SECTION 1/SB-301

2 SB-301 **SECTION**
3/4" = 1'-0"



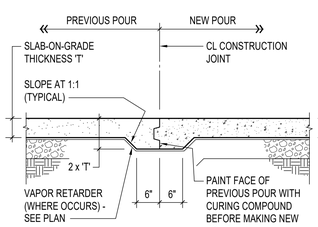
FOR DETAILS NOT NOTED SEE SECTION 1/SB-301

3 SB-301 **SECTION**
3/4" = 1'-0"

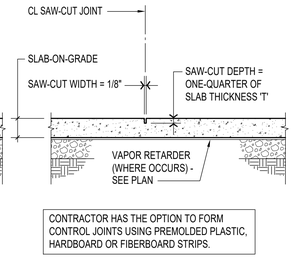


FOR DETAILS NOT NOTED SEE SECTION 3/SB-301

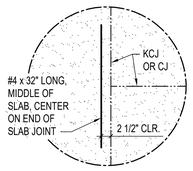
4 SB-301 **SECTION**
3/4" = 1'-0"



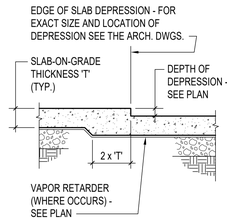
KEYED CONSTRUCTION JOINT (KCJ)



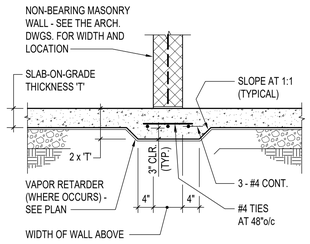
CONTROL JOINT (CJ)



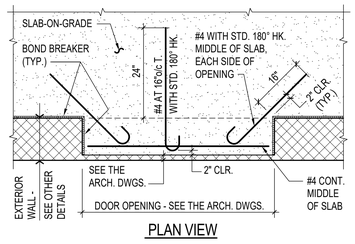
PLAN AT DISCONTINUOUS SLAB JOINT



DEPRESSION



THICKENED SLAB AT NON-BEARING CMU PARTITION (TS)

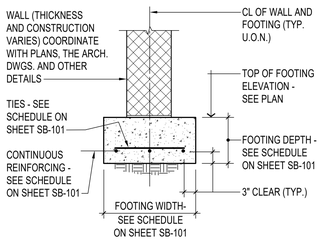


PLAN VIEW

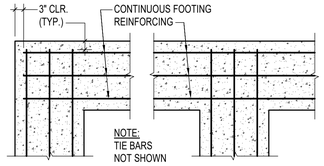
ADDED SLAB REINFORCING AT EXTERIOR DOORS

TYPICAL FIBER REINFORCED SLAB-ON-GRADE DETAILS

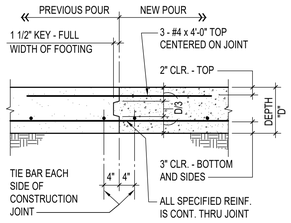
NOT TO SCALE



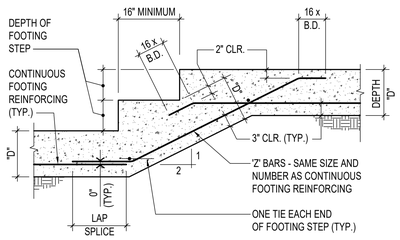
TYPICAL SECTION



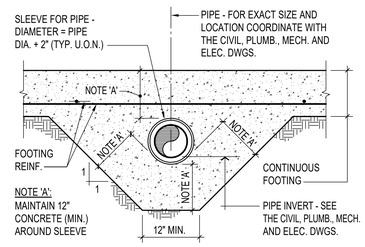
CORNERS AND INTERSECTIONS



CONSTRUCTION JOINT (BOTTOM STEEL ONLY)



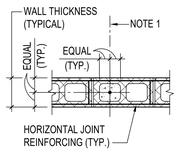
STEPPED FOOTING (BOTTOM STEEL ONLY)



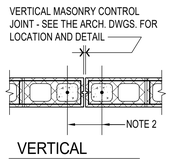
PIPE SLEEVE UNDER CONTINUOUS FOOTING

TYPICAL WALL FOOTING DETAILS

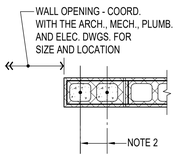
NOT TO SCALE



TYPICAL BAR



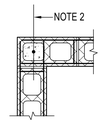
VERTICAL CONTROL JOINT



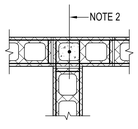
OPENING

CONCRETE MASONRY VERTICAL WALL REINFORCING DETAIL NOTES:

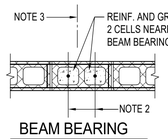
1. VERTICAL WALL REINFORCING BAR AS SPECIFIED. SEE OTHER DETAILS AND SECTIONS FOR SIZE AND SPACING.
2. VERTICAL WALL REINFORCING BAR AS SPECIFIED (#4 BAR WHERE NOT OTHERWISE SPECIFIED).
3. CENTERLINE OF BEAM/GIRDER ABOVE. SEE PLAN(S) FOR EXACT LOCATION.



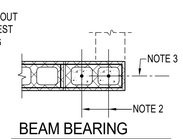
CORNER



INTERSECTION



BEAM BEARING PERPENDICULAR

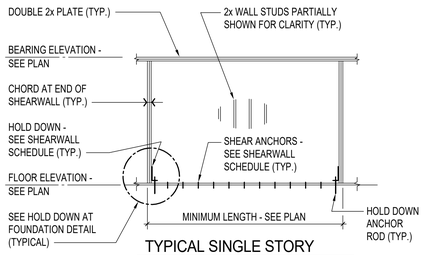


BEAM BEARING AT END OR CORNER

TYPICAL CONCRETE MASONRY VERTICAL WALL REINFORCING DETAILS

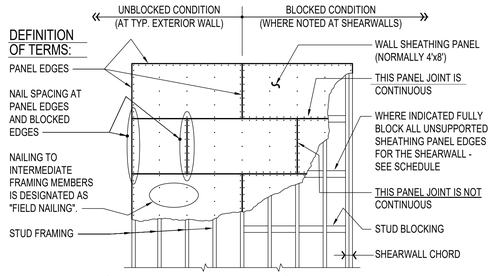
NOT TO SCALE

NOTE:
SEE THE SHEARWALL SCHEDULE AND NOTES FOR ADDITIONAL INFORMATION. CMU FOUNDATION WALL AND WALL FOOTING NOT SHOWN FOR CLARITY.



TYPICAL SINGLE STORY SHEARWALL ELEVATION

NOTE:
NAIL SHEARWALL SHEATHING AS INDICATED IN THE SHEARWALL SCHEDULE AND NOTES. TYPICAL WALL SHEATHING SHALL BE NAILED WITH 8d NAILS AT 6"o/c AT PANEL EDGES AND 12"o/c IN FIELD.



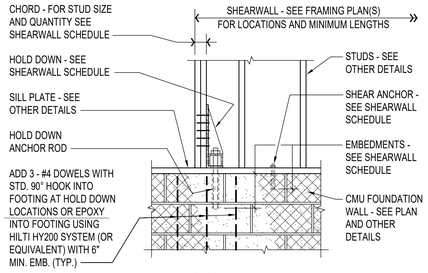
SHEARWALL AND EXTERIOR WALL SHEATHING NAILING DETAILS

SHEARWALL SCHEDULE

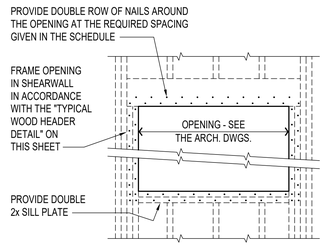
LEVEL	MARK	SHEATHING PANEL TYPE(S)	BLOCKED PANEL EDGES	FASTENERS AT PANEL EDGES	HOLD DOWN (SEE NOTES 5 AND 6)		CHORD STUDS (MINIMUM NUMBER AND SIZE)	SHEAR ANCHORS			REMARKS
					TYPE	MIN. ANCHOR ROD EMB.		SHEAR ANCHORS		MIN. EMB.	
								AT WOOD	CONCRETE/CMU		
1ST-ROOF	SW-1	5/8" PW, SS	YES	6d AT 4"o/c	HDU2-SDS2.5	10 1/2"	2 - 2x6	----	1/2" DIA. ANCHOR AT 3'-0"o/c	4"	----

SHEARWALL SCHEDULE NOTES:

1. SEE FRAMING PLAN(S) FOR SHEARWALL LOCATIONS AND MINIMUM LENGTHS.
2. SEE "TYPICAL DETAILS" ON THIS SHEET FOR ADDITIONAL INFORMATION.
3. SS = SHEARWALL SHEATHING REQUIRED ON ONE SIDE OF WALL
   PW = PLYWOOD - SEE ROUGH CARPENTRY NOTES ON SHEET S001 FOR SHEARWALL SHEATHING
4. SHEATHING PANELS CAN BE INSTALLED WITH LONG DIMENSION EITHER PARALLEL OR PERPENDICULAR TO STUDS. FIELD NAILING SHALL BE AT 12"o/c.
5. SHEAR ANCHORS SHALL BE 'STRONG-DRIVE' OR 'TITEN' (AS APPLICABLE) MANUFACTURED BY 'SIMPSON STRONG-TIE COMPANY', EXCEPT WHERE NAILS ARE NOTED.
6. ANCHOR RODS SHALL BE EPOXIED USING HILTI HIT HY200 SYSTEM OR EQUIVALENT. ANCHOR ROD DIAMETER SHALL BE IN ACCORDANCE WITH THE SPECIFIED HOLD DOWN TYPE.
7. FRAMING AT VERTICAL PANEL EDGES SHALL BE 2 WALL STUDS. SEE APPLICABLE FRAMING SECTIONS FOR STUD SIZES. REFERENCE THE 'SHEARWALL AND EXTERIOR SHEATHING NAILING DETAILS' ON THIS SHEET FOR VERTICAL PANEL EDGE DEFINITION.
8. SHEARWALL LENGTH INDICATED ON PLAN IS THE MINIMUM LENGTH FOR WHICH THE FASTENER SIZE AND SPACING SPECIFIED IN THE SHEARWALL SCHEDULE IS REQUIRED. SEE THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS WHERE SHEARWALL SHEATHING IS EXTENDED DUE TO ARCHITECTURAL REQUIREMENTS.
9. HOLD-DOWN ANCHOR TYPES ARE BY SIMPSON. EQUIVALENT SYSTEMS WILL BE CONSIDERED AT CONTRACTOR'S REQUEST.



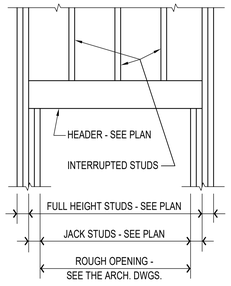
HOLD DOWN AT FOUNDATION DETAIL



TYPICAL SHEARWALL OPENING DETAIL

TYPICAL WOOD SHEARWALL DETAILS

NOT TO SCALE



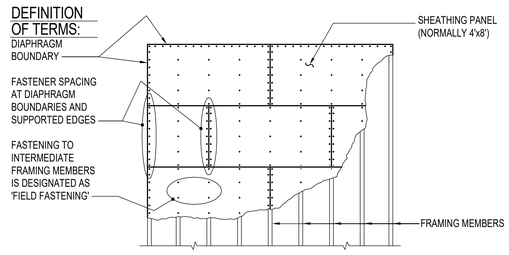
WOOD HEADER NOTES:

1. SPECIFIED JACK STUDS AND FULL HEIGHT STUDS OCCUR AT EACH JAMB OF OPENING.
2. FOR EXACT SIZE AND LOCATION OF ALL WALL OPENINGS COORDINATE WITH THE ARCHITECTURAL DRAWINGS.

TYPICAL WOOD HEADER DETAIL

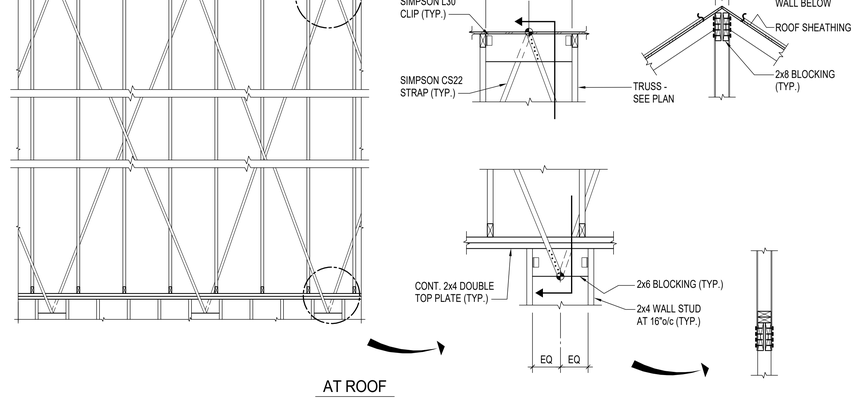
NOT TO SCALE

DIAPHRAGM FASTENING SCHEDULE: EXCEPT WHERE OTHERWISE NOTED OR DETAILED, SHEATHING PANELS SHALL BE FASTENED WITH 8d NAILS AT 6"o/c AT PANEL EDGES, 12"o/c FIELD.



TYPICAL FLOOR AND ROOF SHEATHING FASTENING DETAIL

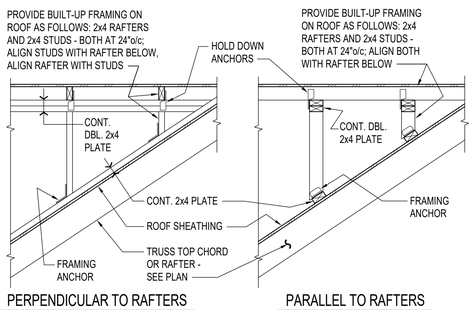
NOT TO SCALE



AT ROOF

TYPICAL BLOCKING PANEL DETAILS

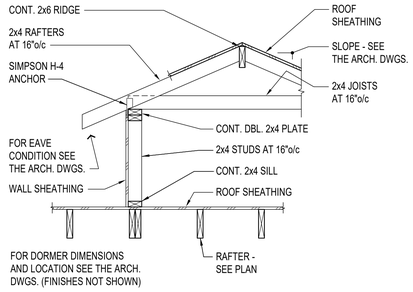
NOT TO SCALE



PERPENDICULAR TO RAFTERS PARALLEL TO RAFTERS

TYPICAL BUILT-UP ROOF FRAMING DETAILS

NOT TO SCALE



TYPICAL FALSE DORMER FRAMING DETAIL

NOT TO SCALE