GENERAL STRUCTURAL NOTES

GENERAL REQUIREMENTS:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER PROJECT DRAWINGS BY OTHER DISCIPLINES. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODES LISTED BELOW.
2. THE GENERAL CONTRACTOR SHALL COMPARE AND COORDINATE THE CONSTRUCTION DOCUMENTS OF ALL DISCIPLINES PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR BEGINNING CONSTRUCTION IN THE AFFECTED AREAS. THIS COMPARISON/COORDINATION SHALL INCLUDE, BUT NOT BE LIMITED TO, DIMENSIONS, EVALUATIONS, EMBEDDED ITEMS, ANCHORED OR OTHERWISE SUPPORTED ITEMS, FLOOR, ROOF, AND WALL OPENINGS, ETC. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES ALONG WITH THE APPLICABLE DOCUMENT REFERENCES.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONDITIONS BY MAKING FIELD SURVEYS AND MEASUREMENTS PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION.
4. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION METHODS USED WILL NOT CAUSE DAMAGE TO ADJACENT BUILDINGS, UTILITIES, OR OTHER PROPERTY. THIS REQUIREMENT IS PARTICULARLY IMPORTANT DURING FOUNDATION INSTALLATION.
5. THE GENERAL CONTRACTOR IS ADVISED TO CONSIDER PERFORMING PHOTOGRAPHIC SURVEYS AND OTHER DOCUMENTATION OF THE CONDITION OF ADJACENT BUILDINGS AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION.
6. THE GENERAL CONTRACTOR SHALL OBTAIN COPIES OF THE LATEST CONTRACT DOCUMENTS, INCLUDING ALL ADDENDA, AND PROVIDE THE RELEVANT PORTIONS TO ALL SUB-CONTRACTORS AND SUPPLIERS PRIOR TO PREPARATION AND SUBMITTAL OF SHOP DRAWINGS AND FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
7. PARTIAL PLANS, ELEVATIONS, SECTIONS, DETAILS, AND SCHEDULES LABELED "TYPICAL" SHALL APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SEE DETAIL TITLES FOR APPLICABILITY OF A PARTICULAR PARTIAL PLAN, ELEVATION, SECTION OR DETAIL. TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE SPECIFICALLY REFERENCED AT EACH LOCATION. THE STRUCTURAL ENGINEER OF RECORD SHALL HAVE FINAL AUTHORITY TO DETERMINE APPLICABILITY OF TYPICAL DETAILS.
8. WHERE CONFLICTS EXIST BETWEEN STRUCTURAL DOCUMENTS THE STRICTEST REQUIREMENTS, AS INDICATED BY THE STRUCTURAL ENGINEER, SHALL GOVERN.
9. DELEGATED ENGINEER REQUIREMENTS: THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS HAS ISSUED STATEMENTS ON RESPONSIBILITIES OF PROFESSIONAL ENGINEERS, PURSUANT TO CHAPTERS 61G15-30 AND 61G15-31 OF THE FLORIDA ADMINISTRATIVE CODE. CERTAIN COMPONENTS OF THE STRUCTURE REQUIRE THE WORK OF DELEGATED ENGINEERS FOR THE DESIGN OF THOSE COMPONENTS. ALL RELEVANT PROCEDURES PRESENTED IN THE FLORIDA ADMINISTRATIVE CODE SHALL APPLY TO THIS PROJECT.
10. DESIGN OF PRE-ENGINEERED METAL BUILDING SYSTEM, COLD FORMED STEEL FRAMING (CFS) OR THEIR SPECIALTY ENGINEERED ITEMS NOT FULLY DETAILED OR PROVIDED FOR IN THE CONSTRUCTION DOCUMENTS SHALL BE DESIGNED, DETAILED, FURNISHED AND INSTALLED WITH ALL THE PROVISIONS OF THE CONSTRUCTION DOCUMENTS SPECIFIED HERE AND ELSEWHERE.
11. THE STRUCTURAL ENGINEER OF RECORD (SER) SHALL REVIEW AND RESPOND TO STRUCTURAL REQUESTS FOR INFORMATION (RFI'S) AS REQUIRED DURING THE COURSE OF THE PROJECT. ANY RESPONSE BY THE SER SHALL NOT BE AN AUTHORIZATION TO PROCEED IF THE RESPONSE REQUIRES ADDITIONAL COST OR TIME. PROCEEDING WITH THE WORK IS ACKNOWLEDGEMENT THERE WILL BE NO CHANGE IN COST OR TIME. IF ANY RFI RESPONSE REQUIRES A CHANGE IN COST OR TIME, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL SUCH TIME AS THE CHANGE IS DOCUMENTED AND APPROVED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
12. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

CONSTRUCTION RESPONSIBILITY:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE, AND ARE NOT INTENDED TO INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES, AND FOR JOB SAFETY.
2. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. PERIODIC SITE OBSERVATION VISITS MAY BE PROVIDED BY THE STRUCTURAL ENGINEER. THE SOLE PURPOSE OF THESE OBSERVATIONS IS TO REVIEW THE GENERAL CONFORMANCE OF THE CONSTRUCTION WITH THE STRUCTURAL CONTRACT DOCUMENTS. THESE LIMITED OBSERVATIONS SHOULD NOT BE CONSTRUED AS CONTINUOUS OR EXHAUSTIVE TO VERIFY THAT ALL CONSTRUCTION IS IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL WORK IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.

PRIMARY CODES AND SPECIFICATIONS:

1. GENERAL BUILDING CODE:
   A. FLORIDA BUILDING CODE - BUILDING, EIGHTH EDITION, 2023.
2. DESIGN LOADS:
   A. ASCE 7-22 MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES.
3. CONCRETE CODES:
   A. ACI 318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
   B. ACI 301-16 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
   C. CRSI MANUAL OF STANDARD PRACTICE.
4. MASONRY CONSTRUCTION:
   A. TMS 402-16 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
   B. TMS 602-16 SPECIFICATIONS FOR MASONRY STRUCTURES.
5. STRUCTURAL STEEL CODES:
   A. AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
   B. AISC 303-16 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
6. COLD FORMED STEEL FRAMING:
   A. AISI S100-16 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS (SUPPLEMENT 2 - 2020).
   B. AISI S202-20 CODE OF STANDARD PRACTICE FOR COLD FORMED STEEL FRAMING.
   C. AISI S240-20 NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL STRUCTURAL FRAMING.

DESIGN LOADS:

1. SUPERIMPOSED DEAD LOADS:
   A. ROOFS:
      MINIMUM (COMBINED w/ WIND UPLIFT LOADINGS)..... 1 PSF
      MAXIMUM ALLOWANCE ..... 10 PSF
      SEE ROOF PLANS FOR OTHER CONCENTRATED LOADS
2. LIVE LOADS:
   A. ROOF LIVE LOADS:
      UNIFORMLY DISTRIBUTED LIVE LOAD ON HORIZONTAL PROJECTION..... 20 PSF
   B. UNIFORMLY DISTRIBUTED FLOOR LIVE LOADS:
      SLAB ON GRADE..... 100 PSF
3. WIND LOADS:
   A. ULTIMATE DESIGN WIND SPEED, 3 SECOND GUST, Vult..... 133 MPH
      NOMINAL DESIGN WIND SPEED, 3 SECOND GUST, Vasd..... 103 MPH
      TORNADO DESIGN WIND SPEED, Vt:..... 50 MPH
      HURRICANE PRONE REGION..... YES
      WINDBORNE DEBRIS REGION..... NO
      EFFECTIVE WIND AREA (Aa)..... 3,600 SQ FT
      BUILDING RISK CATEGORY..... IV
      WIND EXPOSURE CATEGORY..... C
      WIND TOPOGRAPHIC FACTOR (Kzt)..... 1.0
      ENCLOSURE CATEGORY..... ENCLOSED
      INTERNAL PRESSURE COEFFICIENT..... +/- 0.18
      MEAN ROOF HEIGHT..... 12 FEET
      WIND DIRECTIONALITY FACTOR, Kd..... 0.85
      VELOCITY PRESSURE COEFFICIENT (Kh)..... 0.85
      ULTIMATE VELOCITY PRESSURE (qh[ult])..... 38 PSF
      NOMINAL VELOCITY PRESSURE (qh[nom])..... 23 PSF
   B. SEE LOADING NOTES, TABLES AND DIAGRAMS FOR DESIGN FORCES FOR COMPONENTS DESIGNED BY DELEGATED ENGINEERS.
4. SEISMIC: EXEMPT PER EXCEPTION 2 OF FLORIDA BUILDING CODE SECTION 101.2.
5. GROUND SNOW LOADS: EXEMPT PER EXCEPTION 2 OF FLORIDA BUILDING CODE SECTION 101.2.
6. RAIN LOADS:
   RAIN LOAD..... N/A PSF (SLOPED, FREE DRAINING)
   RAIN INTENSITY - 100 YEAR PER NOAA..... 5.0 INCHES / HOUR (PRIMARY)
   RAIN INTENSITY - 100 YEAR PER NOAA..... 10.0 INCHES / 15 MINUTES (SECONDARY)
   DEPTH TO SECONDARY DRAIN, d_s..... N/A INCHES
   OVERFLOW DIAMETER..... N/A INCHES
   DESIGN HEAD OVER SECONDARY, d_s..... N/A INCHES
   OVERFLOW RATE..... N/A GALLONS PER MINUTE

FUTURE BUILDING GROWTH:

1. THE BUILDING HAS NOT BEEN DESIGNED FOR ANY FUTURE VERTICAL OR HORIZONTAL GROWTH.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT:
   NUMBER: 24-00254-01
   BY: CAL-TECH TESTING, INC.
   AND DATED: JUNE 12, 2024.
   THE GENERAL CONTRACTOR MAY REVIEW A COPY OF THE GEOTECHNICAL REPORT AT THE OFFICE OF THE ARCHITECT.
2. ALL VEGETATION, TOPSOILS, ROOTS AND ORGANIC ZONES SHALL BE STRIPPED AND REMOVED FROM THE CONSTRUCTION AREA FOR A DISTANCE OF AT LEAST 5 FEET BEYOND THE EXTERIOR OF BUILDING FOUNDATION LIMITS. THE DEPTH OF STRIPPING SHALL BE THAT REQUIRED TO REMOVE SIGNIFICANT ROOT ZONES, SMALL TREE STUMPS AND OTHER UNACCEPTABLE MATERIALS, BUT IN NO CASE LESS THAN 6 INCHES.
3. EXCAVATIONS FOR LARGE STUMPS, ABANDONED UTILITIES, UNDERGROUND TANKS, ETC. SHALL BE BACKFILLED IN LAYERS WITH COMPACTION AND TESTING OF EACH LAYER AS DESCRIBED FOR PLACEMENT AND COMPACTION OF FILL MATERIAL. USE LOOSE BACKFILL LAYER THICKNESS APPROPRIATE FOR THE SIZE OF COMPACTOR BEING USED.
4. AFTER THE SITE HAS BEEN CLEARED, THE SITE SHALL BE PROOF-ROLLED UNDER THE DIRECT OBSERVATION OF THE PROJECT GEOTECHNICAL REPRESENTATIVE. PROVIDE A MINIMUM OF 8 OVERLAPPING COVERAGES IN EACH DIRECTION (16 TOTAL) WITH A MINIMUM OF 30% OVERLAP. REMOVE AND REPLACE ALL UNSUITABLE MATERIALS TO A DEPTH OF AT LEAST 4'-0" BELOW THE BOTTOM OF THE FOUNDATIONS AND THE SLAB-ON-GRADE.
5. AFTER THE SITE HAS BEEN CLEARED AND PROOF-ROLLED, THE EXPOSED SOILS AT THE STRIPPED SURFACE WITHIN AND TO A POINT 10 FEET OUTSIDE THE BUILDING CONSTRUCTION AREA SHALL BE COMPACTED TO DENSITIES OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) SHALL BE UNIFORMLY OBTAINED TO A DEPTH OF AT LEAST 12 INCHES BELOW THE COMPACTED SURFACE. REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF EIGHT COMPLETE COVERAGES SHALL BE MADE WITHIN THE BUILDING AREA. THE COVERAGES SHALL BE DIVIDED EVENLY INTO TWO PERPENDICULAR DIRECTIONS. THE CONTRACTOR IS ADVISED NOT TO USE THE VIBRATORY MODE OF COMPACTORS IN CLOSE PROXIMITY TO EXISTING STRUCTURES. THE CONTRACTOR SHALL COORDINATE COMPACTION EFFORTS AND FOUNDATION INSTALLATIONS TO INSURE THAT NO DAMAGE OCCURS TO ADJACENT STRUCTURES.
6. AFTER COMPLETION OF DENSIFICATION OF EXISTING SOILS, STRUCTURAL FILL SHALL THEN BE PLACED IN LIFTS NOT EXCEEDING 12 INCHES IN LOOSE THICKNESS WHEN USING THE ROLLER PREVIOUSLY DESCRIBED. EACH LIFT SHALL BE THOROUGHLY COMPACTED WITH THE VIBRATORY ROLLER UNTIL DENSITIES EQUIVALENT TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY ARE UNIFORMLY OBTAINED. STRUCTURAL FILL SHALL CONSIST OF AN INORGANIC, NON-PLASTIC, GRANULAR SOIL CONTAINING LESS THAN 10 PERCENT MATERIAL PASSING THE NO. 200 MESH SIEVE, A RELATIVELY CLEAN SAND WITH A UNIFIED SOIL CLASSIFICATION OF SP OR SP-SM.
7. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 1200 PSF. THE UPPER 12 INCHES OF SANDY BEARING SOILS IN THE FOOTING EXCAVATION BOTTOMS SHALL BE COMPACTED TO DENSITIES EQUIVALENT TO 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. COMPACTION, OR RECOMPACTION OF THE FOOTING EXCAVATION BEARING LEVEL SOILS LOOSENED BY THE EXCAVATION PROCESS, SHALL BE ACHIEVED BY MAKING SEVERAL PASSES WITH A RELATIVELY LIGHTWEIGHT, WALK-BEHIND VIBRATORY SLED OR ROLLER COMPACTOR.
8. UNLESS NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER COLUMNS, PIERS AND WALLS.
9. SLAB-ON-GRADE CONSTRUCTION SHALL BE SUPPORTED ON SUBGRADE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) TO A DEPTH OF AT LEAST 12 INCHES. INTERIOR SLABS-ON-GRADE SHALL BE CAST OVER A VAPOR RETARDER. SEE SPECIFICATIONS.
10. SEE SPECIFICATIONS FOR SURFACE AND GROUND WATER CONTROL.

CAST-IN-PLACE CONCRETE:

1. THE LATEST EDITION OF THE FOLLOWING ACI STANDARDS APPLY:

ACI 304 (PLACING)	ACI 306 (WINTER CONCRETING)
ACI 315 (DETAILING)	ACI 305 (HOT WEATHER CONCRETING)
ACI 347 (FORMWORK)	ACI 211.1 (MIX PROPORTIONING)
ACI 301 (SPECIFICATIONS)	

2. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF), WITH MIXES DESIGNED TO MEET THE FOLLOWING CRITERIA FOR USE IN VARIOUS ELEMENTS OF THE STRUCTURE AS FOLLOWS:

STRUCTURAL ELEMENT	28-DAY COMPRESSIVE STRENGTH (PSI)	MAX. SIZE AGGREGATE	MAX. W/C RATIO	SLUMP RANGE (IN)
FOOTINGS & SLAB-ON-GRADE	3500	3/4"	0.50	2-4

3. CONCRETE SLUMP IS TAKEN AT POINT OF PLACEMENT INTO STRUCTURE.
4. WATER REDUCING AND AIR ENTRAINING AGENTS SHALL BE INCLUDED IN DESIGN MIXES. SUPERPLASTICIZERS MAY BE USED AT THE CONTRACTOR'S OPTION.
5. A CONCRETE MIX DESIGN FOR EACH UNIQUE COMBINATION OF STRENGTH, COARSE AGGREGATE GRADATION AND WATER CEMENT RATIO SPECIFIED SHALL BE PREPARED BY THE SUPPLIER OR AN INDEPENDENT TESTING LABORATORY AND BE SUBMITTED FOR REVIEW PRIOR TO CASTING ANY CONCRETE. MIXES THAT WILL BE TRANSPORTED AT THE PROJECT SITE BY PUMPING SHALL BE SPECIFICALLY DESIGNED FOR PUMPING.
6. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. SLABS ON GRADE: UNLESS NOTED OTHERWISE, CONCRETE SLABS ON GRADE SHALL BE A MINIMUM OF 4" THICK, REINFORCED WITH 6x6 W1.4/w1.4 WWF PLACED 1-1/2" CLEAR FROM THE TOP OF THE SLAB. SLABS SHALL BE PLACED OVER PROPERLY COMPACTED EARTH.

REINFORCING STEEL:

1. REINFORCING STEEL: ASTM A615, GRADE 60.
2. REINFORCING STEEL TO BE WELDED: ASTM A706 (DBA's, EMBEDS)
3. WELDED WIRE FABRIC: ASTM A1064, FLAT SHEETS.
4. MINIMUM REINFORCING STEEL CLEAR COVER (U.N.O.):
   A. CONCRETE CAST DIRECTLY AGAINST EARTH .....3"
   B. FOUNDATION AND EXTERIOR WALLS.....2"
   C. SLABS ON GRADE .....1-1/2" FROM TOP
5. WHERE REINFORCING BARS ARE NOTED AS CONTINUOUS THE TERMINATION OF ALL CONTINUOUS REINFORCING BAR RUNS SHALL BE A STANDARD HOOK UNLESS NOTED OTHERWISE.
6. WHERE SPLICE LENGTHS ARE NOT SPECIFIED, USE 48 BAR DIAMETERS.
7. REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON.
8. LAP ALL WELDED WIRE FABRIC A MINIMUM OF ONE CROSS WIRE SPACING PLUS 2 INCHES.
9. ALL REINFORCING STEEL SHALL BE SUPPORTED ON STANDARD ACCESSORIES, HELD RIGIDLY AND ACCURATELY IN PLACE, AND PROTECTED AGAINST DISPLACEMENT BEFORE AND DURING PLACEMENT OF CONCRETE. SUPPORTING ACCESSORY LEGS THAT REST ON CONCRETE SURFACES THAT WILL BE EXPOSED IN THE FINISHED STRUCTURE SHALL BE FABRICATED OF STAINLESS STEEL.
10. DOWELS AND OTHER MISCELLANEOUS STEEL EMBEDDED ITEMS SHALL BE LOCATED AND HELD IN SPECIFIED POSITION PRIOR TO PLACEMENT OF CONCRETE AND SHALL NOT BE PUSHED INTO CONCRETE FOLLOWING CONCRETE PLACEMENT.
11. FOUNDATION, GRADE BEAM AND SLAB ON GRADE REINFORCING SHALL BE SUPPORTED ON PRECAST BLOCKS OR 3000 PSI CONCRETE BRICK OF THE PROPER THICKNESS.
12. SOFT METRIC BAR SIZES VS. INCH POUND BAR SIZES:

METRIC	INCH-POUND
#10	#3
#13	#4
#16	#5
#19	#6
#22	#7
#25	#8

CONCRETE FORMWORK:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. ALL FORMWORK SHALL BE DESIGNED, ERECTED, SUPPORTED, BRACED, AND MAINTAINED ACCORDING TO ACI 347, RECOMMENDED STANDARD PRACTICE FOR CONCRETE FORMWORK.
3. RESPONSIBILITY: THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL FORMS, SHORES, BACKSHORES, FALSEWORK, BRACING, AND OTHER TEMPORARY SUPPORTS SHALL BE ENGINEERED TO SUPPORT ALL LOADS IMPOSED INCLUDING THE WET WEIGHT OF CONCRETE, CONSTRUCTION EQUIPMENT, LIVE LOADS, LATERAL LOADS DUE TO WIND AND WET CONCRETE IMBALANCE. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS.
4. TOLERANCES: UNLESS SPECIFIED OTHERWISE, ALL TOLERANCES FOR CONCRETE FORMWORK SHALL CONFORM TO ACI STANDARD 117, STANDARD TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS. THE CONTRACTOR SHALL ENGAGE A LICENSED SURVEYOR TO VERIFY THAT WORK IS WITHIN SPECIFIED TOLERANCES UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM THE ARCHITECT TO PROVIDE TOLERANCE CONTROL USING THE CONTRACTOR'S OWN FORCES PRIOR TO BEGINNING WORK.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED WHERE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
6. PLUMBING SLEEVE SPACING SHALL BE THE LARGER OF THREE (3) DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE, OR 6" CLEAR BETWEEN SLEEVES. SUBMIT SLEEVE LOCATIONS AND SIZES TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
7. PENETRATIONS SHALL NOT BE PERMITTED IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS WITHOUT THE WRITTEN REVIEW OF THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW INDICATING ANY CONCENTRATION OF PIPES, OPENINGS OR PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE PLACEMENT.

STRUCTURAL DRAWING INDEX

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Mark A Miller
STATE OF FLORIDA
PROFESSIONAL ENGINEER
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MARK A. MILLER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
MARK A. MILLER, P.E.
FLORIDA P.E. #45319

Revisions:

GENERAL STRUCTURAL NOTES & STRUCTURAL DRAWING INDEX

CONSTRUCTION DOCUMENTS

DATE: 9/12/2024

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GENERAL STRUCTURAL NOTES

CONCRETE MASONRY:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. CONCRETE MASONRY UNITS SHALL BE LOAD BEARING TYPE CONFORMING TO ASTM C-90 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI (NET AREA).
3. MORTAR SHALL CONFORM TO ASTM C-270 TYPE S.
4. PLAIN END TWO CELLED UNITS SHALL BE USED FOR BLOCKS THAT ARE TO HAVE CELLS REINFORCED AND FILLED. WEB SHELLS ADJACENT TO CELLS THAT ARE TO BE FILLED ARE TO BE BEDDED IN MORTAR.
5. FILL CELLS AS NOTED ON DRAWINGS WITH 3000 PSI GROUT, OR GROUT CONFORMING TO ASTM C-476, SPECIFICALLY DESIGNED FOR FILLING OF CELLS.
6. IN SPLICING VERTICAL BARS, LAP ENDS, PLACE IN CONTACT AND WIRE-TIE TOGETHER OR USE BAR POSITIONERS. LAP BARS SIDE BY SIDE IN THE PLANE OF THE WALL TO MAINTAIN PROPER COVER.
7. SEE PRIMARY CODES, SPECIFICATIONS AND DRAWINGS FOR GROUTING PROCEDURES.
8. INSTALLATION OF CONCRETE MASONRY SHALL BE COMPATIBLE WITH ALL APPLIED FINISHES SUCH AS STUCCO OR PAINT. DO NOT SPONGE WALLS WITHOUT PROPER CLEANING COMPATIBLE WITH FINISHES.
9. PROVIDE GALVANIZED WIRE TYPE HORIZONTAL JOINT REINFORCING AT 16" O.C. (MAX) AND AS INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE HOT DIP GALVANIZED HJR ON ALL EXTERIOR WALLS. IN ADDITION TO SCHEDULED OR DETAILED LINTEL AND SILL REINFORCING, PROVIDE TWO LAYERS OF HJR AT 8 INCHES ON CENTER ABOVE AND BELOW ALL LINTELS AND SILLS WHICH SPAN MORE THAN 12 INCHES. EXTEND ADDED HJR 24 INCHES BEYOND THE OPENING JAMBS EXCEPT AT WCJ.
10. MASONRY BOND BEAMS AND CONCRETE TIE BEAMS CAST ON MASONRY WALLS SHALL BE CONSTRUCTED SO AS TO KEY AND BOND INTO BLOCK CELLS. THE USE OF BUILDING PAPER OR SHEET PLASTIC TO CLOSE VOIDS BELOW BEAMS IS NOT ALLOWED DUE TO BREAKAGE OF MORTAR BOND.
11. SEE ARCHITECT'S DRAWINGS FOR THE EXTENT AND EXACT LOCATION OF MASONRY WALLS.
12. WALL CONTROL JOINTS (WCJ):
    A. WALL CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION AT LOCATIONS INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS BUT UNLESS NOTED OTHERWISE AT A SPACING NOT GREATER THAN 24' O.C.
    B. HORIZONTAL JOINT REINFORCING SHALL BE INTERRUPTED EACH SIDE OF WALL CONTROL JOINTS.
    C. WALL CONTROL JOINTS SHALL NOT BE PLACED OVER OPENINGS OR WITHIN AN OPENING JAMB WIDTH. SEE PLANS AND/OR JAMB REINFORCING SCHEDULE FOR MINIMUM JAMB WIDTHS.
    D. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT WALL CONTROL JOINTS.
    E. SEE THESE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
13. MASONRY WALLS SHALL BE BRACED EITHER BY OTHER INTERSECTING WALLS OR BY ANCHORAGE OR BRACING TO THE STRUCTURE ABOVE, OR TO ADJACENT WALLS, AS DETAILED ON THE STRUCTURAL DRAWINGS.
14. BLOCK LINTELS SHALL BE SPECIALLY FORMED U-SHAPED LINTEL OR LOW WEB LINTEL UNITS WITH REINFORCING BARS, OR PRECAST UNITS DESIGNED FOR THE WEIGHT OF MASONRY ABOVE AND OTHER APPLIED LOADS.
15. ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY BRACE THE WALLS FOR VERTICAL AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF LATERAL SUPPORT BY CONNECTIONS AT FLOORS OR ROOF FRAMING LEVELS.
16. QUALITY ASSURANCE: ALL REINFORCED MASONRY SHALL BE TESTED/INSPECTED IN CONFORMANCE WITH THE REFERENCED ACI 530/ASCE 5/TMS 402 CODES AND THE PROJECT SPECIFICATIONS. QUALITY ASSURANCES SHALL MEET THE REQUIREMENTS OF SECTION 1.6, TABLE 4 LEVEL B, UNLESS MORE RESTRICTIVE REQUIREMENTS ARE SPECIFIED ELSEWHERE IN THESE DOCUMENTS
17. TYPICAL SCHEDULED VERTICAL WALL REINFORCING SIZE AND SPACING SHALL ALSO BE CONTINUED ABOVE AND BELOW ALL OPENINGS.

STRUCTURAL STEEL:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. MATERIALS:

   C-SHAPES & MC-SHAPES.....ASTM A36
   ANGLES & PLATES.....ASTM A36
   STEEL PIPE.....ASTM A53, GRADE B
   HSS SHAPES.....ASTM A1085, GRADE A OR ASTM A500, GRADE C
   HIGH STRENGTH BOLTS.....GROUP A - ASTM F3125, GRADE A325 OR F1852, UNO
   ANCHOR RODS.....ASTM F1554, GRADE 55 TYPE S1(UNO)
   MACHINE BOLTS.....ASTM A307, GRADE A
   WELDED HEADED STUDS.....ASTM A108
   DEFORMED BAR ANCHORS.....ASTM A496
   WELDING ELECTRODES.....AWS D1.1, E70 SERIES

3. SUBMIT FOR REVIEW SHOP DRAWINGS OF STEEL DETAILS PRIOR TO FABRICATING STRUCTURAL STEEL.
4. NON-SHRINK, NON-METALLIC GROUT WITH A MINIMUM 28 DAY STRENGTH OF 5000 PSI SHALL BE USED UNDER BASE PLATES AND SHALL CONFORM TO CORPS OF ENGINEERS CRD-C621, FACTORY PREMIX GROUT. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS.
5. ENGINEER SHALL BE CONTACTED FOR APPROVAL OF ANY FIELD MODIFICATIONS OF ANCHOR BOLTS OR RODS AND COLUMN BASE PLATES (PER OSHA).
6. TEMPORARY BRACING OF STRUCTURAL STEEL ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURAL STABILITY SHALL BE MAINTAINED AT ALL TIMES DURING THE ERECTION PROCESS.

   CONTRACTOR MUST PROVIDE NOTIFICATION TO THE ERECTOR THAT, BY TESTING, THE FOUNDATION AND SUPPORTING WALLS HAVE ATTAINED SUFFICIENT STRENGTH TO SUPPORT THE STEEL TO BE ERECTED BEFORE ERECTING STRUCTURAL STEEL.
7. PROVIDE ONE SHOP COAT OF PRIMER (TT-P-636) ON ALL STEEL EXCEPT FOR ITEMS TO BE HOT DIPPED GALVANIZED OR SPRAY FIREPROOFED. DO NOT PAINT PORTIONS EMBEDDED IN CONCRETE.
8. ALL WELD OPERATORS SHALL BE CURRENTLY AWS QUALIFIED.
9. DURING THE ERECTION OF STEEL BEAMS AND DIAGONAL BRACING, ALL BOLTING AND FIELD WELDING SHALL BE COMPLETE BEFORE RELEASING HOISTING CABLES.
10. STEEL COLUMNS, BASE PLATES AND ALL STEEL BELOW GRADE SHALL HAVE A MINIMUM 3" CONCRETE COVER PROTECTION.
11. MEMBERS NOTED AS "CONTINUOUS" SHALL BE FULLY WELDED AT ALL BUTT SPLICES OR CONNECTIONS SHALL BE DETAILED TO PROVIDE CONTINUITY.

PRE-ENGINEERED BUILDING:

1. THE BUILDING SHALL BE A STANDARD PREFABRICATED METAL STRUCTURE OF THE APPROXIMATE INSIDE AREA SHOWN, WITH FRAMES SPACED AS SHOWN. MINIMUM WEB THICKNESS OF RIGID FRAMES SHALL BE 3/16" AND MINIMUM FLANGE THICKNESS SHALL BE 1/4". RIGID FRAMES SHALL BE DESIGNED FOR PINNED CONDITIONS AT COLUMN BASES.
2. THE COMPLETE BUILDING SHALL BE DESIGNED AND FABRICATED ACCORDING TO AISC, MBMA, ASI LATEST SPECIFICATIONS, THE PROJECT CONTRACT DOCUMENTS, AND COMPLY WITH PROVISIONS OF THE APPLICABLE BUILDING CODE. WHERE REFERENCED SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY. THE DIMENSIONAL TOLERANCES OUTLINED IN THE AWS CODE AND THE AISC CODE SHALL BE COMPLIED WITH IN THE FABRICATION OF THE STEEL BUILDING FRAMES. THE CONTRACTOR [CONSTRUCTION MANAGER] SHALL BE RESPONSIBLE TO PROVIDE ALL MANUFACTURERS PROPOSING TO SUPPLY THE PRE-ENGINEERED BUILDING FOR THIS PROJECT A SET OF CONTRACT DOCUMENTS DEFINING REQUIREMENTS.
3. THE BUILDING FRAMES AND COMPONENTS SHALL BE DESIGNED TO LIMIT DEFLECTIONS AND LATERAL DRIFT TO THE FOLLOWING RATIOS UNDER CONTROLLING GRAVITY, WIND, AND SEISMIC LOADINGS AND COMBINED LOADINGS:

FRAME MAXIMUM VERTICAL DEFLECTION	L/240
FRAME LIVE LOAD VERTICAL DEFLECTION	L/360
FRAME LATERAL DRIFT (AT EAVE LINE)	H/360
ROOF PURLIN MAXIMUM DEFLECTION	L/180
ROOF PURLIN LIVE LOAD DEFLECTION	L/360
WALL GIRT MAXIMUM LATERAL DEFLECTION	L/180

4. A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR THE RIGID FRAMES, GIRTS, PURLINS AND X-BRACING FOR GRAVITY, WIND, AND SEISMIC LOADS AND A LAYOUT OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE DETAILS OF ALL MAIN MEMBERS, TYPICAL CONNECTIONS (SHOWING BOLT HOLES AND WELDS), ANCHOR BOLTS AND ERECTION DRAWINGS. ALL OF THE ABOVE ARE TO BE SUPPLIED BY BUILDING MANUFACTURER.
5. THE BUILDING SHALL BE DESIGNED TO SUPPORT ALL OVERHEAD DOORS, DOOR FRAMES AND MECHANICAL EQUIPMENT INCLUDING EXHAUST SYSTEMS, ETC. ADDITIONAL PURLINS OR GIRTS SHALL BE PLACED AT REQUIRED LOCATIONS FOR ATTACHMENT OF ALL MECHANICAL EQUIPMENT.
6. THE FOUNDATIONS SHOWN HAVE BEEN DESIGNED FOR ESTIMATED FOOTING LOADS TO ACCOMMODATE PINNED COLUMN BASES. FOUNDATIONS SHOWN ARE TO BE USED FOR ESTIMATING PURPOSES ONLY. FINAL COLUMN MAXIMUM HORIZONTAL AND VERTICAL LOADS SHALL BE VERIFIED AND FURNISHED FOR THIS PROJECT. THE CONTRACTOR OR CONSTRUCTION MANAGER SHALL ALLOW 3 WEEKS AFTER APPROVAL OF FINAL REACTIONS FOR DESIGN TO BE VERIFIED AND UPDATED AS REQUIRED.
7. THE CONTRACTOR / CONSTRUCTION MANAGER SHALL SUBMIT, AS A PART OF THE PROPOSAL OR BID TO THE OWNER, A CERTIFICATE FROM THE PRE-ENGINEERED BUILDING MANUFACTURER SELECTED TO FURNISH THE PRE-ENGINEERED PORTION OF THE WORK STATING THE FOLLOWING:

   "[MANUFACTURER'S NAME] CERTIFIES THAT STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS DESCRIBING THE GEOMETRY, LOADING CONDITIONS, DEFLECTION AND DRIFT LIMITATIONS, AND OTHER SPECIFIC REQUIREMENTS FOR THIS PROJECT HAVE BEEN EXAMINED IN DETAIL BY OUR PROJECT MANAGER AND DESIGN ENGINEER. WE ACKNOWLEDGE THAT SOME REQUIREMENTS DESCRIBED IN THE CONSTRUCTION DOCUMENTS MAY BE MORE STRINGENT THAN MBMA REQUIREMENTS AND OUR NORMAL DESIGN AND SHOP PRACTICE. WE CERTIFY THAT WE UNDERSTAND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THAT OUR PROPOSAL TO THE GENERAL CONTRACTOR [CONSTRUCTION MANAGER] FOR SUPPLYING THE PRE-ENGINEERED BUILDING AND ITS COMPONENTS WILL MEET OR EXCEED ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. "

   FAILURE OF THE MANUFACTURER TO PROVIDE THIS CERTIFICATE SHALL BE REGARDED AS NON-RESPONSIVE BY THE CONTRACTOR [CONSTRUCTION MANAGER] AND THE MANUFACTURER'S PROPOSAL SHALL BE CONSIDERED INVALID.

POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD (SER) PRIOR TO USING POST-INSTALLED ANCHORS OR ADHESIVE ANCHORING SYSTEM FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS AND/OR REINFORCING DOWELS.
2. ALL POST-INSTALLED ANCHOR INSTALLATION SHALL BE BY A QUALIFIED PERSONNEL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
3. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE SUBMITTED TO THE SER WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH SUBMITTAL PACKAGE. THE ACCEPTANCE OF THE PRODUCT WILL BE AT THE SER'S DISCRETION.
4. MINIMUM REQUIREMENTS FOR POST-INSTALLED ANCHORS AT TIME OF INSTALLATION:

   A. MINIMUM COMPRESSIVE STRENGTH OF BASE MATERIAL:
      GROUTED MASONRY.....1500 PSI
      NORMAL-WEIGHT CONCRETE.....2500 PSI

5. ANCHOR PRODUCTS APPROVED FOR USE ON THIS PROJECT ARE LISTED BELOW (UNO):

   A. MECHANICAL ANCHORS INTO CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI "KWIK BOLT-TZ2" EXPANSION ANCHOR (ICC-ES ESR-4266)
         B. HILTI "KWIK HUS EZ" SCREW ANCHOR (ICC-ES ESR-3027)
         C. SIMPSON STRONG-TIE "STRONG-BOLT 2" WEDGE ANCHOR (ICC-ES ESR-3037)
         D. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
      2. THE FOLLOWING HEAVY DUTY ANCHORS SHALL ONLY BE USED WHERE SPECIFICALLY REQUIRED ON THE CONSTRUCTION DOCUMENTS:
         A. HILTI "HDA" UNDERCUT ANCHOR (ICC-ES ESR-1546)
         B. HILTI "HSL-4" EXPANSION ANCHOR (ICC-ES ESR-4386)
         C. SIMPSON STRONG TIE "TORQ-CUT" UNDERCUT ANCHOR (ICC-ES ESR-2705)

   B. ADHESIVE ANCHORS INTO CONCRETE SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ANCHORS ARE ACCEPTABLE FOR USE WITH THE REQUIRED EMBEDMENT SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR BY THE SER:
         A. HILTI "HIT-HY 200 V3" ADHESIVE WITH HILTI HIT-Z STEEL ROD (ICC-ES ESR-4868)
         B. HILTI "HIT-HY 200 V3" ADHESIVE WITH HILTI HAS-E STEEL THREADED ROD (ICC-ES ESR-4868)
         C. HILTI "HIT-RE 500 V3" ADHESIVE WITH HILTI HAS-E STEEL THREADED ROD (ICC-ES ESR-3814)
         D. SIMPSON STRONG-TIE "SET-3G" EPOXY ADHESIVE ASTM A193 Gr B7 STEEL THREADED ROD.UNO (ICC-ES ESR-4057)

   C. STEEL REINFORCING BARS ANCHORED INTO CONCRETE WITH ADHESIVE ANCHORING SYSTEM SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE:
      1. THE FOLLOWING ADHESIVE ANCHORING SYSTEMS ARE ACCEPTABLE FOR USE ONLY WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS OR APPROVED BY THE SER:
         A. HILTI "HIT-HY 200 V3" ADHESIVE (ICC-ES ESR-4868)
         B. HILTI "HIT-RE 500 V3" ADHESIVE (ICC-ES ESR-3814)
         C. SIMPSON STRONG-TIE "SET-3G" EPOXY ADHESIVE (ICC-ES ESR-4057)

COLD FORMED STEEL (CFS) FRAMING:

1. SEE NOTES ON PRIMARY CODES AND SPECIFICATIONS.
2. ALL INTERIOR BEARING WALLS, LINTELS, BEAMS, ETC. SHALL BE DESIGNED, SIGNED AND SEALED BY THE SUPPLIER'S DELEGATED ENGINEER REGISTERED IN THE STATE OF FLORIDA.
3. ALL MEMBERS SHALL BE FORMED FROM HOT-DIPPED GALVANIZED STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A653 SQ GRADE 33 (Fy = 33,000 PSI). GALVANIZED COATING SHALL CONFORM TO ASTM A924 WITH COATING DESIGNATION G60.

AUTOMATIC FIRE PROTECTION SPRINKLERS:

1. THE AUTOMATIC SPRINKLER SYSTEM SHALL BE LAID OUT SO THAT LARGE DIAMETER MAIN FEEDER LINES OCCUR NEAR JOIST SUPPORTS IN ORDER TO PREVENT OVERLOADING JOISTS.
2. USE TWO JOISTS TO SUPPORT LINES LARGER THAN 3 INCHES IN DIAMETER AND RUNNING PARALLEL TO STEEL JOISTS.
3. IN ALL CASES, LOADS SUPPORTED FROM JOISTS AND/OR BEAMS SHALL BE APPLIED IN SUCH A MANNER SO AS NOT TO EXCEED A 3 PSF ALLOWANCE FOR SPRINKLER DEAD LOAD.
4. LOCATE SUSPENDED CONCENTRATED LOADS AT JOIST PANEL POINTS WHERE POSSIBLE. SEE DETAILS FOR METHODS OF SUPPORTING CONCENTRATED LOADS FROM JOIST CHORDS LOCATED BETWEEN PANEL POINTS

BUILDING DEFLECTIONS:

1. THE BUILDING HAS BEEN DESIGNED TO COMPLY WITH APPLICABLE BUILDING CODES AND VERTICAL DEFLECTION ALLOWANCES. THE CONTRACTOR SHOULD ANTICIPATE AND CONSIDER SOME VERTICAL MOVEMENT DURING PERFORMANCE OF HIS WORK.
2. ROOF BEAMS SHALL BE ASSUMED TO DEFLECT AN AMOUNT EQUAL TO THE SPAN LENGTH IN INCHES DIVIDED BY 360 (L/360), BUT NOT LESS THAN 3/8" AFTER SUPERIMPOSED LOADS ARE APPLIED.

BUILDING MAINTENANCE:

1. THE BUILDING OWNER SHALL BE AWARE THAT ALL BUILDINGS AND STRUCTURES REQUIRE ROUTINE AND PERIODIC MAINTENANCE. THIS MAINTENANCE IS ESPECIALLY IMPORTANT FOR ALL ELEMENTS EXPOSED TO THE ATMOSPHERE OR HARSH CHEMICALS. THE OWNER SHALL ESTABLISH A MAINTENANCE PROGRAM IN ORDER TO PREVENT DAMAGE TO THE STRUCTURE WHICH WILL SHORTEN THE LIFESPAN. ROUTINE MAINTENANCE ITEMS WOULD INCLUDE CLEANING, PAINTING, PRESSURE WASHING, SEALANT REPLACEMENT AND REPAIR OF ANY CRACKED OR SPALLED CONCRETE.

VIBRATION CHARACTERISTICS OF FLOORS:

1. FLOOR VIBRATION CHARACTERISTICS HAVE NOT BEEN CHECKED AS IT WAS OUTSIDE THE REQUESTED AND CONTRACTED STRUCTURAL SCOPE OF SERVICES.
2. SENSITIVE EQUIPMENT TO BE LOCATED WITHIN THE STRUCTURE SHALL BE ISOLATED WITH INDIVIDUAL VIBRATION ATTENUATING SUPPORTS.
3. ALL BUILDING MECHANICAL AND ELECTRICAL SYSTEM COMPONENTS LIKELY TO INDUCE OBJECTIONABLE VIBRATIONS WITHIN THE BUILDING SHALL BE ISOLATED FROM THE STRUCTURE WITH INDIVIDUAL VIBRATION ATTENUATING SUPPORTS.
4. VIBRATIONS ORIGINATING BEYOND THE LIMITS OF THE STRUCTURE THAT MAY BE TRANSMITTED TO THE STRUCTURE THROUGH FOUNDATIONS OR GROUND FLOOR SLAB ARE BEYOND THE SCOPE OF BASIC STRUCTURAL SERVICES AND HAVE NOT BEEN CONSIDERED OR EVALUATED.

SUBMITTALS:

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL. SUBMITTAL WITHOUT CONTRACTOR REVIEW WILL RESULT IN DELAYS. THE CONTRACTOR SHALL CONFIRM THAT SHOP DRAWINGS HAVE BEEN COMPLETED AND CHECKED BY THE SUPPLIER PRIOR TO SUBMISSION.
2. CONTRACTOR IS TO PROVIDE ELECTRONIC COPIES (PDF) OF CONTRACTOR REVIEWED AND STAMPED SHOP DRAWINGS FOR A/E REVIEW AND PROCESSING.
3. SHOP DRAWING SUBMITTAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL SPECIFICATIONS. CHANGES OR ADDITIONS MADE ON RESUBMITTED SHOP DRAWINGS SHALL BE CLEARLY INDICATED, AND THE PURPOSE OF THE RESUBMITTAL SHALL BE NOTED ON THE TRANSMITTAL. REVIEW OF RESUBMITTED SHOP DRAWINGS SHALL BE LIMITED SPECIFICALLY TO THE ITEMS NOTED FOR CORRECTION ON THE PREVIOUS SUBMITTAL.
4. THE GENERAL CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:

   CONCRETE MIX DESIGNS
   COLD FORMED STEEL FRAMING(a)
   PRE-ENGINEERED METAL BUILDING (a, b, c)
   REINFORCING STEEL

   THE NOTATIONS FOLLOWING SUBMITTAL ITEMS INDICATE THE FOLLOWING:

   (a) CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

   (b) INCLUDE A CERTIFICATE OF COMPLIANCE WITH CONTRACT DOCUMENTS SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA RESPONSIBLE FOR THE DESIGN.

   (c) SUBMIT ONE COPY FOR INFORMATION AND RECORD ONLY.

5. MANUFACTURER'S LITERATURE: SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
6. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS FOR GENERAL CONFORMANCE OF THE DESIGN CONCEPT. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTALS THAT IS ACCEPTABLE TO BOTH CONTRACTOR AND ENGINEER. AFTER THE CONTRACTOR HAS REVIEWED THE SHOP DRAWINGS, PROMPT REVIEW BY THE ENGINEER WILL BE MADE OF ALL SUBMITTALS. FOR LARGE SUBMITTALS, REASONABLE REVIEW TIME SHALL BE ALLOWED AND MAY EXCEED TWO WEEKS. THE CONCURRENT SUBMITTAL OF MULTIPLE SHOP DRAWINGS ("DUMPING") WILL FURTHER EXTEND THE REVIEW PROCESS AND TIME FRAME NECESSARY TO PROPERLY REVIEW EACH SUBMITTAL.
7. REPRODUCTION OF THESE CONTRACT DOCUMENTS BY ANYONE FOR USE IN SHOP DRAWINGS SHALL SIGNIFY THEIR ACCEPTANCE OF ALL INFORMATION SHOWN AS BEING CORRECT. MILLER ENGINEERING, LLC. SHALL BE INDEMNIFIED AND HELD HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES, EXPENSES OR LIABILITIES OF ANY KIND, INCLUDING ATTORNEYS FEES. THE CONTRACTOR IS RESPONSIBLE FOR PROPER CHECKING AND COORDINATING OF DETAILS, DIMENSIONS, SIZES AND QUANTITIES AS REQUIRED TO FACILITATE COMPLETE AND ACCURATE FABRICATION AND ERECTION.

kail partners ARCHITECTURE & INTERIORS
GAINESVILLE, FLORIDA 352-871-4935
AA 26002908

MARK A. MILLER LICENSE No. 45319 STATE OF FLORIDA PROFESSIONAL ENGINEER
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MARK A. MILLER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND SHOULD NOT BE VERIFIED ON ANY ELECTRONIC COPIES.
MARK A. MILLER, P.E.
FLORIDA P.E. #45319

Revisions:

GENERAL STRUCTURAL NOTES - CONTINUED

CONSTRUCTION DOCUMENTS

DATE: 9/12/2024

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Miller Engineering, LLC
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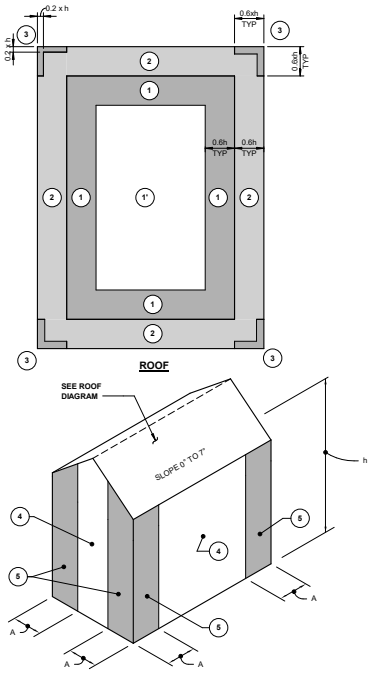
ABBREVIATIONS

A/E - ARCHITECT AND/OR ENGINEER
AB - ANCHOR BOLT
ACI - AMERICAN CONCRETE INSTITUTE
AFF - ABOVE FINISHED FLOOR
AHU - AIR HANDLING UNIT
AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI- AMERICAN IRON AND STEEL INSTITUTE
AITC - AMERICAN INSTITUTE FOR TIMBER CONSTRUCTION
ALT - ALTERNATE
ALUM- ALUMINUM
ANCH - "ANCHOR, ANCHORAGE"
ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX - APPROXIMATE
ARCH - "ARCHITECT, ARCHITECTURAL"
ASCE- AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD - ALLOWABLE STRESS DESIGN
ASTM- AMERICAN SOCIETY OF TESTING & MATERIALS
AVG - AVERAGE
AWS - AMERICAN WELDING SOCIETY
BLDG- BUILDING
BLK - BLOCK
BLKG - BLOCKING
BM - BEAM
BOTT- BOTTOM
BRG - BEARING
CANT- CANTILEVER
CAP - CAPACITY
CB - CORNER BAR
CC - CENTER TO CENTER
CF - "CUBIC FEET, COLUMN FOOTING"
CFS - COLD FORMED STEEL
CIP - CAST-IN-PLACE
CJ - CONSTRUCTION JOINT
CL - CENTERLINE
CLG - CEILING
CLR - "CLEARANCE, CLEAR"
CM - CONSTRUCTION MANAGER
CMU - CONCRETE MASONRY UNIT
COL - COLUMN
COMP - "COMPOSITE, COMPRESSOR, COMPRESSIVE"
CONC - CONCRETE
CONN - "CONNECTION, CONNECT"
CONSTR - CONSTRUCTION
CONT - CONTINUOUS
CONTR- CONTRACTOR
CRSI - CONCRETE REINFORCING STEEL INSTITUTE
CSK - COUNTERSINK
CTR - CENTER
CTRD- CENTERED
CY - CUBIC YARD
DBA - DEFORMED BAR ANCHOR
DBL - DOUBLE
DEMO - DEMOLITION
DET - DETAIL
DIA - DIAMETER
DIAG - DIAGONAL
DIM- DIMENSION
DL - DEAD LOAD
DN - DOWN
DWG - DRAWING
DWL - DOWEL
EA - EACH
EE - EACH END
EF - EACH FACE
EJ - EXPANSION JOINT
EL - ELEVATION
ENGR - ENGINEER
EOD - EDGE OF DECK
EOR - ENGINEER OF RECORD
EOS - EDGE OF SLAB
EQ - EQUAL
EQPT- EQUIPMENT
ES - EACH SIDE
EW - EACH WAY
EXIST - EXISTING
EXP - EXPANSION
EXP JT - EXPANSION JOINT
EXT - EXTERIOR
f'c - MINIMUM 28-DAY CONCRETE STRENGTH
f'm - SPECIFIED MASONRY STRENGTH
FBC - FLORIDA BUILDING CODE
FD - FLOOR DRAIN
FDN - FOUNDATION
FF - FINISHED FLOOR
FIN - "FINISH, FINISHED"
FLR - FLOOR
FOS - FACE OF STUD
FRT - FIRE RETARDANT
FS - FAR SIDE
FT - "FOOT, FEET"
FTG - FOOTING
Fy - YIELD STRENGTH OF MATERIAL
GA - GAGE
GALV - GALVANIZED
GC - GENERAL CONTRACTOR
GEN - GENERAL
GR - GRADE
GRND - GROUND
GWB - GYPSUM WALLBOARD
GYP - GYPSUM
HC - HOLLOW CORE
HCA - HEADED CONCRETE ANCHOR
HDG - HOT DIPPED GALVANIZED
HGR - HANGER
HGT - HEIGHT
HJR - HORIZONTAL JOINT REINFORCING
HK - HOOK
HORIZ - HORIZONTAL
HS - HIGH STRENGTH
HSK - HOUSEKEEPING
HSS - HOLLOW STRUCTURAL SECTION
IN - INCHES
INSUL - INSULATION
INT - INTERIOR
JST - JOIST
JT - JOINT
K - KIPS (1000 LBS.)
KB - KNEE BRACE
KSF - KIPS PER SQUARE FOOT
KSI - KIPS PER SQUARE INCH
LBS - POUNDS
LF - LINEAL FEET
LL - LIVE LOAD
LLBB - LONG LEG BACK TO BACK
LLH - LONG LEG HORIZONTAL
LLV - LONG LEG VERTICAL
LRFD - LOAD AND RESISTANCE FACTOR DESIGN
LSH - LONG SIDE HORIZONTAL
LSL - LONG SLOTTED
LSV - LONG SIDE VERTICAL
LT - LIGHT
LW - "LIGHTWEIGHT, LONG WAY"
MATL - MATERIAL
MAX - MAXIMUM
MBR - MEMBER
MECH - MECHANICAL
MFR - MANUFACTURER
MID- MIDDLE
MIN- MINIMUM
MISC - MISCELLANEOUS
MTL - "METAL, MATERIAL"
NIC - NOT IN CONTRACT
NTS - NOT TO SCALE
OA - OVERALL
OC - ON CENTER
OPNG - OPENING
OPP - OPPOSITE
OVS - OVERSIZED
PAF - POWDER ACTUATED FASTENER
PCF - POUNDS PER CUBIC FOOT
PE - PROFESSIONAL ENGINEER
PEMB - PRE-ENGINEERED METAL BUILDING
PERP- PERPENDICULAR
PL - PLATE
PLF- POUNDS PER LINEAL FOOT
PREFAB - PREFABRICATED
PRELIM- PRELIMINARY
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PT - PRESSURE TREATED
QA - QUALITY ASSURANCE
QC - QUALITY CONTROL
QTY - QUANTITY
R - "RISER, REACTION, RADIUS"
RD - "ROOF DECK MARK, ROOF DRAIN"
REF - REFERENCE
REINF - "REINFORCED, REINFORCING"
REM - REMAINDER
REQD - REQUIRED
RET - RETURN
REV - REVISION
RTU - ROOF TOP UNIT
SCHED - SCHEDULE
SDI - STEEL DECK INSTITUTE
SE - STRUCTURAL ENGINEER
SECT - SECTION
SER - STRUCTURAL ENGINEER OF RECORD
SF - SQUARE FEET
SHT - SHEET
SIM - SIMILAR
SJ - SAWED CONTROL JOINT
SJI - STEEL JOIST INSTITUTE
SOG - SLAB ON GRADE
SPA - "SPACED, SPACING, SPACES"
SPEC- SPECIFICATION
SQ - SQUARE
SS - STAINLESS STEEL
SSL - SHORT SLOTTED
STD - STANDARD
STIFF- STIFFENER
STL- STEEL
STRUCT - STRUCTURAL
SW - "SHORT WAY, SHEAR WALL"
SYM - SYMMETRICAL
SYP - SOUTHERN YELLOW PINE
SYS - SYSTEM
T&B - TOP & BOTTOM
T&G - TONGUE & GROOVE
TB - TIE BEAM
TEMP- "TEMPORARY, TEMPERATURE"
THRD- THREADED
TOC - TOP OF CONCRETE
TOF - TOP OF FOOTING
TOJ - TOP OF JOIST
TOM - TOP OF MASONRY
TOPL- TOP OF PLATE
TOS - TOP OF STEEL
TOSL- TOP OF SLAB
TOW - TOP OF WALL
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VERT - VERTICAL
VOL - VOLUME
W - "STEEL WIDE FLANGE SHAPE, WEST"
W/ - WITH
W/O - WITHOUT
WC- WALL COLUMN
WCJ - WALL CONTROL JOINT
WD- WOOD
WF - WALL FOOTING
WGT - WEIGHT
WL - WIND LOAD
WP- "WORKING POINT, WATERPROOF"
WWF - WELDED WIRE FABRIC
XS - EXTRA STRONG
XXS - DOUBLE EXTRA STRONG
YD - YARD

COMPONENT & CLADDING DESIGN WIND LOAD INFORMATION



WIND PRESSURE DIAGRAMS

COMPONENTS & CLADDING WIND LOAD PRESSURE SCHEDULE

COMPONENT	ZONE	EFFECTIVE WIND AREA (SF)	ULTIMATE (FACTORED) DESIGN PRESSURE (PSF) POSITIVE	NEGATIVE
ROOF ELEMENTS	1	10	+16.0	-61.6
		20	+16.0	-57.5
		50	+16.0	-52.2
		> 100	+16.0	-48.1
	1'	10	+16.0	-35.4
		20	+16.0	-35.4
		50	+16.0	-35.4
		> 100	+16.0	-35.4
	2	10	+16.0	-81.3
		20	+16.0	-76.0
		50	+16.0	-69.1
		> 100	+16.0	-63.9
	3	10	+16.0	-110.7
		20	+16.0	-100.3
		50	+16.0	-86.5
		> 100	+16.0	-76.0
EXTERIOR WALL ELEMENTS, WINDOWS, DOORS AND CURTAIN WALLS	4	10	+35.4	-38.3
		20	+33.8	-36.8
		50	+31.7	-34.7
		100	+30.2	-33.1
		> 500	+26.5	-29.5
	5	10	+35.4	-47.2
		20	+33.8	-44.0
		50	+31.7	-39.9
		100	+30.2	-36.8
		> 500	+26.5	-29.5

NOTES:
1. DESIGN WIND PRESSURES SHALL BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS COMPRISING THE BUILDING ENVELOPE.
2. REFER TO THE WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM EACH COMPONENT SURFACE.
4. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREAS MAY BE USED TO OBTAIN THE REQUIRED COMPONENT AND CLADDING DESIGN WIND PRESSURE.
5. DIMENSION A = 5'-0".
6. DIMENSION h = 12'-0".
7. MULTIPLY TABULAR 'ULTIMATE' PRESSURES BY 0.60 TO OBTAIN 'NOMINAL' PRESSURES.

SYMBOL LEGEND

VIEW REFERENCES

- # / S# — DETAIL NUMBER / SHEET WHERE DRAWN
- # / S# — SECTION NUMBER / SHEET WHERE DRAWN
- MATCHLINE / S# — SHEET TO MATCH
- NORTH ARROW
- COL — COLUMN LINE
- COL — EXISTING COLUMN LINE
- ELEVATION
- SPAN DIRECTION (SLAB, DECK, GRATING, ETC.)
- SLAB DEPRESSION
- FOOTING STEP
- KNEE-BRACE/KICKER BRACE

REFERENCE SYMBOLS & TAGS

- CLOUD INDICATES LIMITS OF REVISION
- A — REVISION NUMBER
- # — PLAN NOTE

SYMBOLS & TAGS FOR SCHEDULED FOUNDATION ELEMENTS: (CF5.0, CCF1, WF3.0, MF1)
- "CF#.#" DENOTES COLUMN FOOTING MARK
- "CCF#" DENOTES COMBINED COLUMN FOOTING MARK
- "WF#.#" DENOTES WALL FOOTING MARK
- "MF#" DENOTES MAT FOUNDATION MARK

SYMBOLS & TAGS FOR SCHEDULED WALL ELEMENTS: (CW2, MW3)
- "CW#" DENOTES CONCRETE WALL MARK
- "MW#" DENOTES MASONRY WALL MARK

SYMBOLS & TAGS FOR SCHEDULED COLUMN ELEMENTS: (P1, C2, WC4)
- "P#" DENOTES CONCRETE PIERPEDESTAL MARK
- "C#" DENOTES CONCRETE COLUMN MARK
- "MC#" DENOTES MASONRY COLUMN MARK
- "WC#" DENOTES CONCRETE WALL COLUMN MARK

SYMBOLS & TAGS FOR SCHEDULED SLAB & DECK ELEMENTS: (SOG1, S1, CS2, RFS4, RD5)
- "SOG#" DENOTES CONCRETE SLAB ON GRADE MARK
- "S#" DENOTES CONCRETE SLAB MARK
- "CS#" DENOTES COMPOSITE SLAB MARK
- "RD#" DENOTES ROOF DECK MARK
- "WFD#" DENOTES WOOD FLOOR DECK MARK
- "WRD#" DENOTES WOOD ROOF DECK MARK

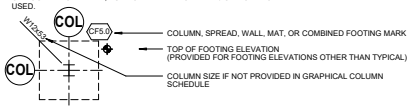
TAGS FOR SCHEDULED FRAMING ELEMENTS (UNO): (B1, TB2, LB3)
- "B#" DENOTES BEAM MARK
- "TB#" DENOTES TIE BEAM MARK
- "LB#" DENOTES LINTEL BEAM MARK

MATERIAL DESIGNATIONS

- CAST-IN-PLACE CONCRETE
- PRECAST CONCRETE OR PRECAST PRESTRESSED CONCRETE
- NON-SHRINK GROUT
- GROUT FILL
- BRICK
- STRUCTURAL STEEL
- COMPACTED EARTH
- CONCRETE MASONRY UNIT
- WOOD OR TIMBER IN SECTION
- LAMINATED WOOD MEMBER
- PLYWOOD

TYPICAL FOUNDATION PLAN ANNOTATION STYLES: (UNO)

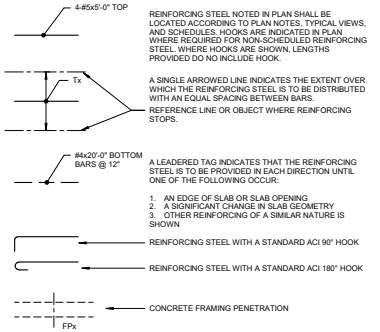
THE FOLLOWING EXAMPLES OF TYPICAL STRUCTURAL ANNOTATION MAY APPEAR ON FOUNDATION PLANS, BUT NOT ALL SYMBOLS AND / OR NOTATIONS MAY BE USED.



- COLUMN, SPREAD, WALL, MAT, OR COMBINED FOOTING MARK
- TOP OF FOOTING ELEMENT (PROVIDED FOR FOOTING ELEVATIONS OTHER THAN TYPICAL)
- COLUMN SIZE IF NOT PROVIDED IN GRAPHICAL COLUMN SCHEDULE

TYPICAL CONCRETE PLAN ANNOTATION STYLES (UNO)

THE FOLLOWING EXAMPLES OF TYPICAL STRUCTURAL ANNOTATIONS MAY APPEAR ON CONCRETE FRAMING PLANS, BUT NOT ALL SYMBOLS AND / OR NOTATIONS MAY BE USED.



- REINFORCING STEEL NOTED IN PLAN SHALL BE LOCATED ACCORDING TO PLAN NOTES, TYPICAL VIEWS, AND SCHEDULES. HOOKS ARE INDICATED IN PLAN WHERE REQUIRED FOR NON-SCHEDULED REINFORCING STEEL. WHERE HOOKS ARE SHOWN, LENGTHS PROVIDED DO NO INCLUDE HOOK.
- A SINGLE ARROWED LINE INDICATES THE EXTENT OVER WHICH THE REINFORCING STEEL IS TO BE DISTRIBUTED WITH AN EQUAL SPACING BETWEEN BARS.
- REFERENCE LINE OR OBJECT WHERE REINFORCING STOPS.
- A LEADERED TAG INDICATES THAT THE REINFORCING STEEL IS TO BE PROVIDED IN EACH DIRECTION UNTIL ONE OF THE FOLLOWING OCCUR:
  1. AN EDGE OF SLAB OR SLAB OPENING
  2. A SIGNIFICANT CHANGE IN SLAB GEOMETRY
  3. OTHER REINFORCING OF A SIMILAR NATURE IS SHOWN
- REINFORCING STEEL WITH A STANDARD ACI 90° HOOK
- REINFORCING STEEL WITH A STANDARD ACI 180° HOOK
- CONCRETE FRAMING PENETRATION

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Revisions:

ABBREVIATIONS, SYMBOL LEGEND AND WIND LOAD INFORMATION

CONSTRUCTION DOCUMENTS

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S0.3

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FOUNDATION & GROUND FLOOR PLAN NOTES

PLAN NOTES ARE TYPICAL FOR THIS DRAWING UNLESS SPECIFICALLY DESIGNATED OTHERWISE.

GENERAL INFORMATION:

1A REFER TO DRAWING S0.1 FOR GENERAL STRUCTURAL NOTES AND STRUCTURAL DRAWING INDEX.

1B ALL LEVELS AND ELEVATIONS ARE REFERENCED TO THE GROUND FLOOR TOP OF SLAB **(TOSL) ⌖ 0'-0"** (DATUM - SEE CIVIL DWGS).

1C CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS RELATING TO THE EXISTING STRUCTURE THAT INTERFACES WITH THE NEW CONSTRUCTION SHOWN ON THE CONSTRUCTION DOCUMENTS. NOTIFY THE SER WHEN EXISTING CONDITIONS VARY FROM THE PROJECT CONSTRUCTION DOCUMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.

1D REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, DETAILS AND LOCATIONS OF INTERIOR PARTITIONS, DOORS AND WINDOWS, AND TO VERIFY DEPTH AND EXTENT OF SLAB DEPRESSIONS.

1E VERIFY AND COORDINATE EDGE OF STRUCTURE WITH ARCHITECTURAL DRAWINGS TO SUIT EACH TYPE OF ARCHITECTURAL FINISH.

TYPICAL FOUNDATION CONSTRUCTION (UNO):

2A TYPICAL TOP OF FOOTING **(TOF) IS ⌖ -0'-0"** UNO.

2B CONCRETE FOUNDATIONS ARE DENOTED AND SCHEDULED BY MARK. REFER TO FOUNDATION SCHEDULES AND DETAILS FOR SPECIFIC SIZE AND REINFORCING. TYPICAL COLUMN FOUNDATIONS SHALL BE **CF3.0**, UNO.

TYPICAL WALL CONSTRUCTION (UNO):

3A WALLS ARE DENOTED AND SCHEDULED BY MARK, REFER TO WALL SCHEDULES AND DETAILS FOR SPECIFIC SIZE AND REINFORCING. TYPICAL 8" MASONRY WALLS SHALL BE **MW1**, UNO.

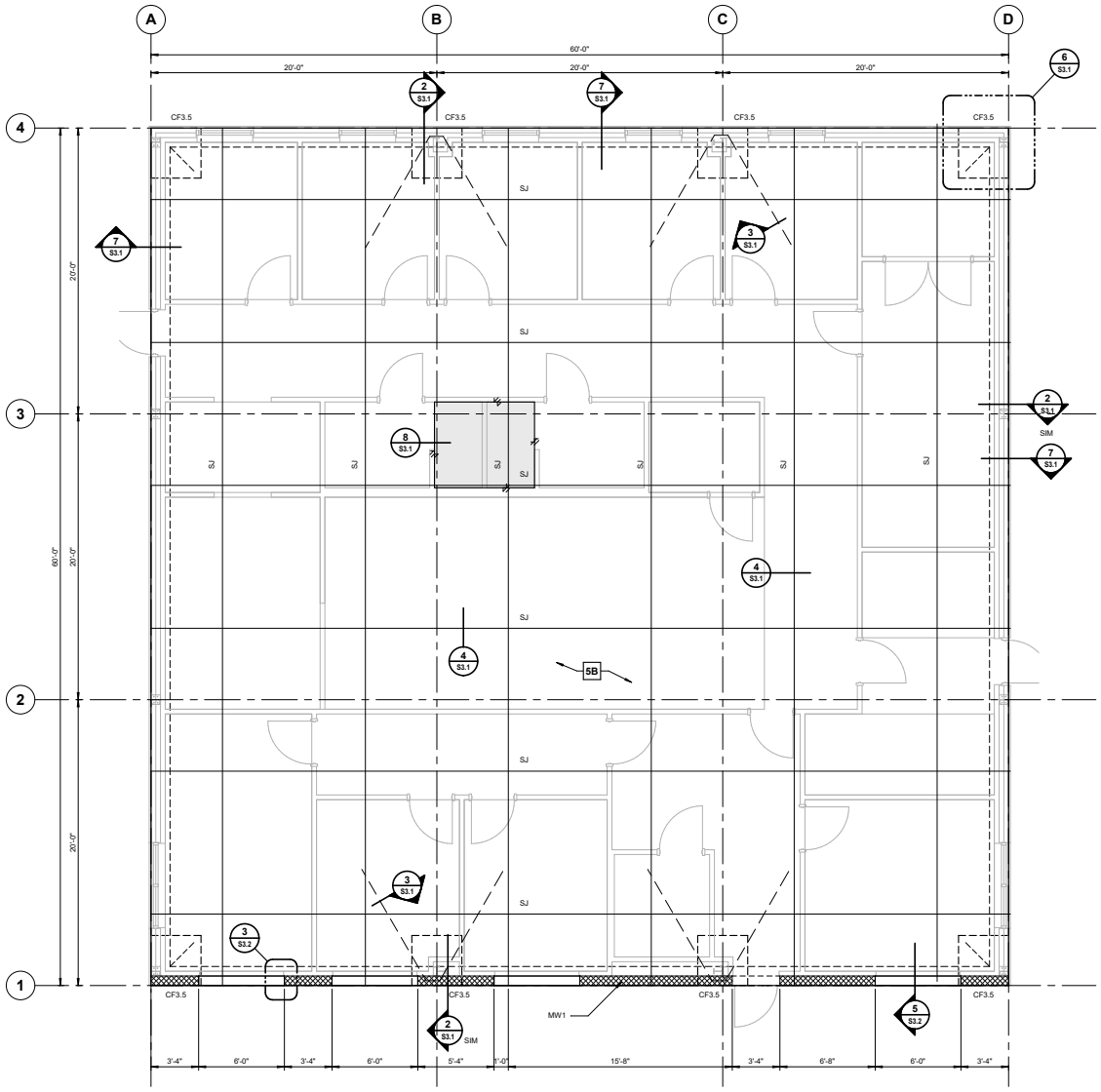
TYPICAL COLUMN CONSTRUCTION (UNO):

4A COLUMNS ARE BY PEMB DELEGATED DESIGNER. VERIFY ALL COLUMN AND ANCHOR BOLTS LOCATIONS AND SIZE WITH FINAL APPROVED PEMB SHOP DRAWINGS.

TYPICAL FLOOR SLAB CONSTRUCTION (UNO):

5A TYPICAL TOP OF SLAB **(TOSL)** IS **⌖ 0'-0"**, UNO.

5B 4" CONCRETE SLAB OVER VAPOR RETARDER AND COMPACTED EARTH; REINFORCE W/ 6x6-W1.4xW1.4 WWF, 1 1/2" CLEAR FROM TOP OF SLAB. ELEVATION TOP OF SLAB = **⌖ 0'-0"**.



FOUNDATION & GROUND FLOOR PLAN

1/4" = 1'-0"

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FOUNDATION & GROUND FLOOR PLAN

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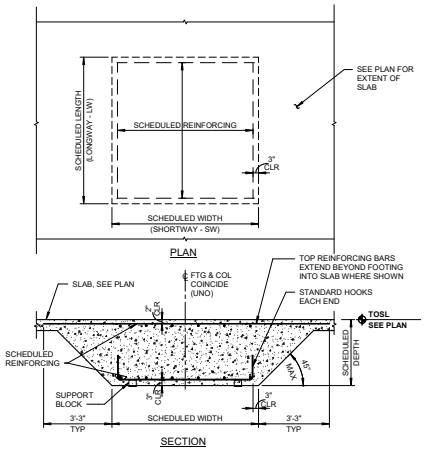
S1.1



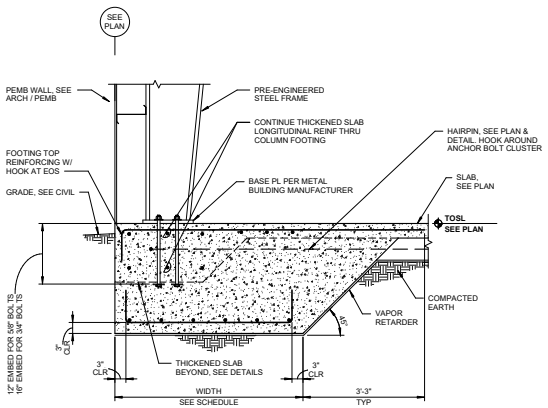
NOTE: FOOTINGS HAVE BEEN DESIGNED FOR MAXIMUM ALLOWABLE (ASD) LEVEL COMBINATION LOADS OF:

VERTICAL: +6.6k / -7.4k
HORIZONTAL: +2.7k / -2.8k.

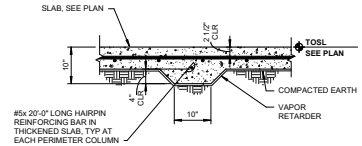
THESE SHALL BE VERIFIED UPON RECEIPT OF FINAL DESIGN REACTIONS.

MONOLITHIC COLUMN FOOTING SCHEDULE							
MARK	LENGTH	WIDTH	DEPTH	TOP BARS	BOTT BARS	REINF. DIRECTION	REMARKS
CF3.5	3'-6"	3'-6"	2'-0"	5-#5	5-#5	EW	

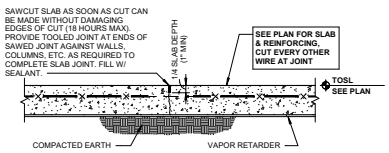
MONOLITHIC FOOTING SCHEDULE
S3.1 | NO SCALE



MAT FOUNDATION DETAIL
S3.1 | NO SCALE



HAIRPIN IN SLAB
S3.1 | NO SCALE

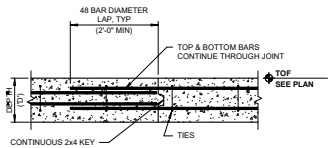


NOTES:

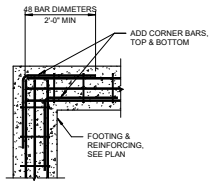
1. WHERE POSSIBLE, PLACE SAWED CONTROL JOINT (SJ) AT COLUMN CENTERLINES, UNO.
2. REFER TO ARCHITECTURAL/CIVIL SPECIFICATIONS FOR ALL EXTERIOR SLABS, ETC.
3. COORDINATE LOCATIONS W/ ARCHITECTURAL REQUIREMENTS.
4. MAXIMUM SPACING - 10'-0" OC, UNO.

NOTED AS 'SJ'

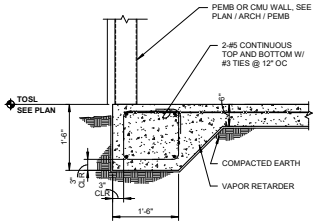
TYPICAL SLAB SAWED CONTROL JOINT
S3.1 | NO SCALE



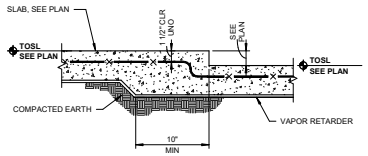
WALL FOOTING CONSTRUCTION JOINT
S3.1 | NO SCALE



CONTINUOUS FOOTING CORNER BARS
S3.1 | NO SCALE



PERIMETER TURN DOWN
S3.1 | NO SCALE



TYPICAL SLAB STEP DETAIL
S3.1 | NO SCALE

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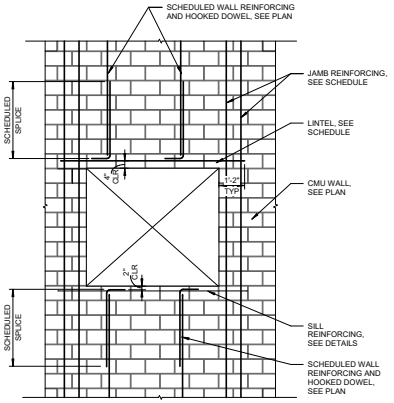
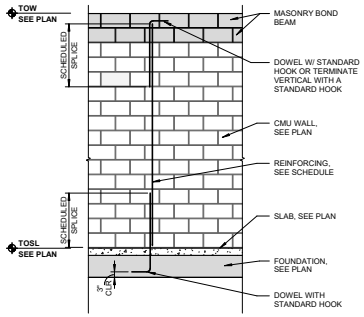


TYPICAL WINDOW OPENING IN CMU WALL (DOOR SIMILAR)



AT SINGLE STORY WALL

TYPICAL CMU WALL VERTICAL REINFORCING

NOTES:

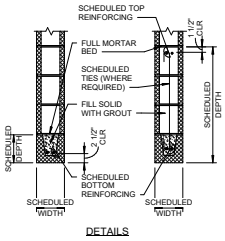
1. REFER TO PLANS AND SCHEDULES FOR SIZE, NUMBER AND LOCATION OF VERTICAL REINFORCING.
2. CLEAN-OUTS AND HJR NOT SHOWN BUT ARE REQUIRED, SEE SPECIFICATIONS.
3. SPLICE LOCATIONS ARE DIAGRAMMATIC. SPLICE AS REQUIRED.

☐ DIAGRAMMATIC MASONRY WALL CONSTRUCTION ELEVATIONS

S3.2 | NO SCALE

REINFORCED CMU LINTEL SCHEDULE

MASONRY OPENING WIDTH	NOMINAL CMU WIDTH 8"		MINIMUM END BEARING	STIRRUP SIZE & SPACING
	NOMINAL DEPTH	REINFORCING		
UP TO 4'-0"	8"	2-#4 B	8"	
UP TO 6'-0"	16"	2-#4 B & T	8"	



DETAILS

REINFORCED CMU LINTEL SCHEDULE NOTES:

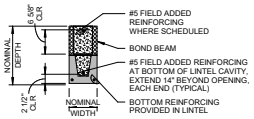
1. MASONRY DIMENSIONS INDICATED ARE NOMINAL RATHER THAN ACTUAL DIMENSIONS.
2. MINIMUM MASONRY STRENGTH f'm SHALL BE 2000 PSI (UNLESS NOTED OTHERWISE).
3. GROUT FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS OR MEET ASTM C476.
4. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATIONS OF OPENINGS IN MASONRY WALLS REQUIRING LINTELS.
5. TOP AND BOTTOM REINFORCING SHALL EXTEND A MINIMUM OF 14" OVER SUPPORT AT EACH END.
6. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS SHALL BE USED.
7. EXTEND VERTICAL REINFORCING THROUGH LINTEL AT BEARINGS WHERE END VERTICAL CELL IS REINFORCED.
8. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL AND HOOK OR LAP 48 BAR DIAMETERS, WHICHEVER IS LESS.
9. HORIZONTAL JOINT REINFORCING:
   A. PROVIDE STANDARD LADDER REINFORCING AT 16" OC IN LINTEL SPANS UP TO 6'.
10. FOR CONTINUOUS LINTEL REINFORCING WHERE SPLICES ARE REQUIRED, SPLICE TOP BARS AT MID-SPAN OF OPENINGS AND BOTTOM BARS AT PIERS OR SUPPORT LOCATIONS.
11. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL AT EACH END.
12. TYPICAL LINTELS SHOWN ARE TO BE USED WHERE NO SPECIFIC LINTEL OR CAST-IN-PLACE CONCRETE BEAM HAS BEEN DETAILED AND ARE FOR SUPPORT OF WALL LOADS ONLY (UNO).

REINFORCED CONCRETE MASONRY UNIT (CMU) LINTELS

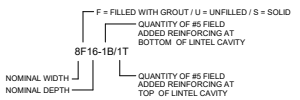
PRECAST CONCRETE LINTEL SCHEDULE

MASONRY OPENING WIDTH	NOMINAL CMU WIDTH 8"	MINIMUM END BEARING	STIRRUP SIZE & SPACING
UP TO 4'-0"	8F8-1B/0T	8"	
UP TO 8'-0"	8F16-1B/1T	8"	

EXAMPLES FOR 8" CMU



DETAIL

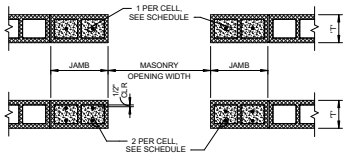


NOTE:
LINTELS SHALL BE "CAST-CRETE" OR APPROVED EQUAL.

PRECAST CONCRETE LINTELS

☐ 8" LINTEL SCHEDULE & DETAILS

S3.2 | NO SCALE

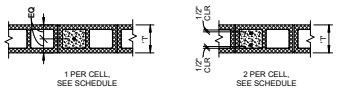


PLAN VIEW

JAMB REINFORCING SCHEDULE

MASONRY OPENING WIDTH	NUMBER OF REINFORCED CELLS PER JAMB		SPLICE LENGTH
	WALL THICKNESS 'T'	OPENING IN EXTERIOR WALL	
UP TO 4'-0"	8"	1-#5 PER CELL IN 2 CELLS	30"
UP TO 6'-0"	8"	1-#5 PER CELL IN 3 CELLS	30"

JAMB REINFORCING SCHEDULE & DETAIL



PLAN VIEW

NOTES:

1. VERTICAL REINFORCING SHALL RUN FROM FOOTING TO 4" CLEAR FROM TOP OF UPPERMOST SUPPORTED BEAM (ROOF BEAM OR OPENING LINTEL). VERTICALS MAY BE LAP SPLICED AS REQUIRED FOR EASE OF BLOCK INSTALLATION. PROVIDE HOOKED DOWEL FROM FOOTING OR SUPPORT BEAM AT EACH FILLED BLOCK CELL. PROVIDE HOOK AT TOP OF VERTICAL. EACH POUR OF GROUT SHALL BE STOPPED AT LEAST 1 1/2" BELOW THE TOP OF THE LAST COURSE OF BLOCK LAID (EXCEPT AT PRECAST LINTELS).
2. SEE TYPICAL DETAILS AND CODE REQUIREMENTS FOR CLEAN-OUTS.
3. SEE SEPARATE DETAILS / SCHEDULES FOR JAMB AND PIER REINFORCING.
4. SEE DIAGRAMMATIC MASONRY WALL ELEVATIONS FOR ADDITIONAL INFORMATION.

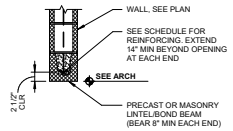
WALL REINFORCING SCHEDULE

WALL TYPE	WALL THICKNESS 'T'	REINFORCING	MAXIMUM SPACING OC	SPLICE LENGTH	REMARKS
MW1	8"	1-#5	48"	30"	TYP EXTERIOR UNO

TYPICAL WALL REINFORCING WITH 1 BAR OR 2 BARS PER FILLED CELL

☐ MASONRY WALL REINFORCING SCHEDULES & DETAILS

S3.2 | NO SCALE



☐ TYPICAL WINDOW/DOOR HEAD DETAIL

S3.2 | NO SCALE

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