CONCRETE

FOR SI: INCH = 25.4MM.

- SEE SPECIFIC DISCIPLINE DRAWINGS FOR ADDITIONAL DESIGNATED SEISMIC SYSTEMS REQUIRING SPECIAL INSPECTION WHICH ARE NOT CONTAINED IN THE STRUCTURAL DRAWINGS.
- 1. SPECIAL INSPECTION AND TESTING AS REQUIRED BY THE IBC SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER UNLESS WAIVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE REQUIRED INSPECTIONS/TESTS AS INDICATED BELOW, REFERRING TO THE IBC SECTION INDICATED AS APPROPRIATE
- SPECIAL INSPECTION REPORTS FROM THE INSPECTOR SHALL BE SENT TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. 2.1. BRING ANY DISCREPANCIES TO THE CONTRACTOR'S IMMEDIATE ATTENTION.
- 2.2. NOTIFY THE ENGINEER OF ANY NON-PASSING WORK THAT THE CONTRACTOR CANNOT READILY CORRECT
- 2.3. ANY UNCORRECTED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL PRIOR TO COMPLETION OF THAT PHASE OF THE WORK. 2.4. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTIONS OF ANY DISCREPANCIES SHALL BE PROVIDED.
- 3.1. SPECIAL INSPECTORS SHALL BE QUALIFIED PERSONS WHO SHALL DEMONSTRATE COMPETENCE. TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL

REQUIRED SPECIAL INSPECTION AND TESTS OF CONCRETE CONSTRUCTION TABLE 1705.3					
TYPE	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE	
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	
<ul> <li>2. REINFORCING BAR WELDING:</li> <li>a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;</li> <li>b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND</li> <li>c. INSPECT ALL OTHER WELDS</li> </ul>	- X	X X	AWS D1.4, ACI 318: 26.6.4	-	
3. INSPECT ANCHORS CAST IN CONCRETE	-	Х	ACI 318: 17.8.2	-	
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	х		ACI 318: 17.8.2.4	-	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a		X	ACI 318: 17.8.2.4	-	
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	Χ	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	х	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10	
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	х	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х	ACI 318: 26.5.3-26.5.5	1908.9	
9. INSPECT PRESTRESSED CONCRETE FOR; a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS.	X X	-	ACI 318: 26.10	-	
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	-	X	ACI 318: 26.9	-	
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST - TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	Х	ACI 318: 26.11.2	-	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	Х	ACI 318: 26.11.1.2(b)	-	

SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS A	RE NOT PROVIDED,					
SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE						
BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.						
	$\neg$					
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS TABLE 1705.6						
	<del></del>					

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED

a. WHERE APPLICABLE, SEE SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS TABLE 1705.6				
TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	x		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	Х		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	×	-		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х		

### GENERAL NOTES:

1. VISITS TO THE JOB SITE BY REPRESENTATIVES OF THE ENGINEER DO NOT SUBSTITUTE APPROVAL OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS AND ARE MERELY FOR THE PURPOSE OF OBSERVING THE WORK PERFORMED.

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- 2. CONTRACTOR SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN AND BE PERFORMED. 3. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND
- ELEVATIONS, ETC., AT THE SITE AND SHALL COORDINATE WORK PERFORMED BY ALL TRADES. SEE ARCHITECT'S PLANS FOR DIMENSIONS. DO NOT SCALE DRAWINGS
- 4. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER/ARCHITECT PRIOR TO FABRICATION OR ERECTION FOR ANY PREFABRICATED OR MANUFACTURER-DESIGNED COMPONENTS AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THIS STRUCTURE RESIDES.
- 5. SIZES, LOCATIONS, LOADS, AND ANCHORAGES OF EQUIPMENT SHALL BE VERIFIED IN THE FIELD WITH EQUIPMENT MANUFACTURERS (SUPPLIERS) PRIOR TO FABRICATION OR INSTALLATION OF SUPPORTING STRUCTURES.
- 6. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE INSTALLED.
- 7. DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN
- 8. CONTRACTOR AND ALL SUBCONTRACTORS SHALL PERFORM THEIR TRADES AND DUTIES IN A MANNER CONFORMING TO THE PROCEDURES AND REQUIREMENTS AS STATED IN THE 2021 INTERNATIONAL BUILDING CODE, (OR LATEST ACCEPTED CODE ADOPTED BY THE LOCAL BUILDING OFFICIALS).
- 9. ANY SPECIAL INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL OR THE INTERNATIONAL BUILDING CODE ARE THE RESPONSIBILITY OF THE OWNER. 10. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.

# FOOTINGS, FOUNDATIONS AND SLAB ON GRADE NOTES:

- 1. ALL FOOTING SIZES ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE AS SHOWN IN THE DESIGN CRITERIA. ANY SOIL CONDITION ENCOUNTERED DURING EXCAVATION THAT IS CONTRARY TO THOSE USED FOR DESIGN OF FOOTINGS AS OUTLINED IN WORKING DRAWINGS SHALL BE BROUGHT TO THE
- ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING. 2. SOIL PREPARATION UNDER FOOTINGS AND SLABS ON GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT. FOR PROJECTS WITHOUT A SOILS REPORT CONTRACTOR/OWNER IS TO VERIFY ADEQUATE SOIL CONDITIONS
- 3. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOIL OR ENGINEERED GRANULAR FILL COMPACTED TO 95% OF MAX. DENSITY, BASED ON ASTM D 1557 METHOD OF COMPACTION. FILL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES IN DEPTH AFTER COMPACTION AND SHALL EXTEND DOWN TO IN-SITU SOILS. FILL SHALL BE COMPACTED UNDER ALL CONCRETE WORK ON THE SITE.
- 4. NO FOOTINGS SHALL BE PLACED IN WATER, SNOW, FROZEN GROUND, OR UNSTABLE SOILS.
- 5. ALL EXCAVATIONS ADJACENT TO AND BELOW FOOTING ELEVATION FOR OTHER TRADES SHALL BE ACCOMPLISHED PRIOR TO POURING ANY FOOTINGS.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR LATERALLY SUPPORTING ALL RETAINING TYPE FOUNDATION WALLS WHILE COMPACTING BEHIND WALLS AND UNTIL ALL SUPPORTING MEMBERS HAVE BEEN PLACED (SUCH AS FLOOR).
- 7. ALL REINFORCEMENTS SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
- 8. PROVIDE DOWELS IN FOOTING AND FOUNDATIONS TO MATCH ALL VERTICAL BARS IN WALLS AND COLUMNS ABOVE, UNLESS NOTED OTHERWISE.
- 9. PROVIDE CONTROL JOINTS IN SLABS AT A MAX. OF 15 FT. O.C. EACH WAY AND AS SHOWN ON PLANS. AT EXTERIOR SLABS AND GARAGE FLOORS POUR SLABS BETWEEN CONTROL JOINTS SO THAT ADJACENT POURS ARE STAGGERED AT LEAST TWO DAYS APART.
- 10. ALL EXTERIOR FOOTINGS MUST BEAR AT OR BELOW FROST DEPTH, MEASURED FROM LOWEST ADJACENT FINAL GRADE.
- 11. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS TO BE CENTERED BELOW COLUMNS.
- 12. UNLESS NOTED OTHERWISE. ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS ( WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED "SOIL" FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON EACH SIDE.
- 13. SLABS ON GRADE SHALL BE 4 INCHES THICK CONCRETE UNDERLAIN BY FREE DRAINING MATERIAL.

## CONCRETE NOTES:

- 1. ALL COLUMNS, RETAINING WALLS AND ALL EXTERIOR FLATWORK, CURBS, GUTTERS, ETC., SHALL BE NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 4,000 LBS. PER SQUARE INCH WITHIN 28 DAYS AFTER POURING.
- 2. ALL SUSPENDED SLABS AND BEAMS SHALL BE NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 4,500 LBS. PER SQUARE INCH WITHIN 28 DAYS AFTER POURING
- SLABS ON DECK SHALL BE NORMAL WEIGHT CONCRETE WITH A WITHIN 28 DAYS AFTER POURING.
- 4. UNLESS OTHERWISE NOTED, ALL FOUNDATION WALL VERTICAL COLD JOINTS SHALL BE KEYED WITH A KEY 1-1/2" DEEP, A LENGTH 2" LESS THAN THE
- 5. ALL OPENINGS IN CONCRETE WALLS SHALL BE REINFORCED WITH (2) #5 BARS EXTENDING 2'-0" MIN. BEYOND THE EDGE OF THE OPENING AT EACH FACE OF OPENING.
- 6. ALL CONCRETE WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.
- PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC. RELATIVE TO WORK.
- LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS. 10.FOR STEPS IN FOUNDATION GREATER THAN 2 FEET, WRAP CORNER W/(2) #4 BARS EXTENDING 18" EACH DIRECTION.
- NO SPECIAL INSPECTIONS ARE REQUIRED PER IBC SECTION 1705.3.

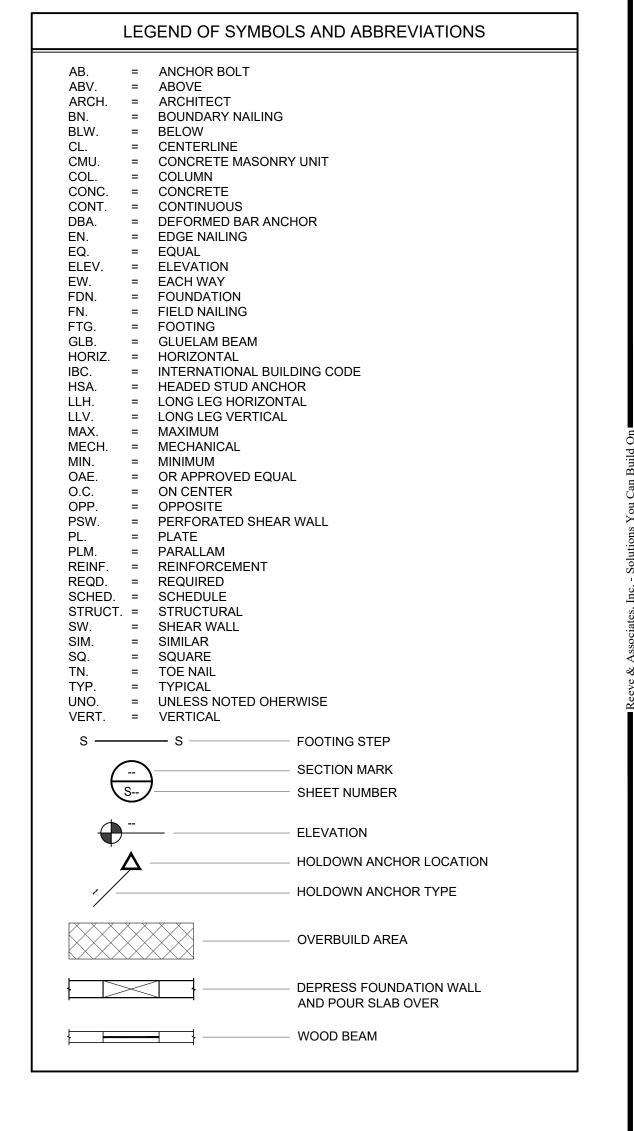
### REINFORCING STEEL NOTES:

- 1. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-185, SHALL BE SUPPLIED IN FLAT SHEETS AND SHALL HAVE A MIN. SIDE LAP OF 8 INCHES. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 315 TO MAINTAIN EXACT REQUIRED POSITION. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY
- 2. REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE: A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH B. EXPOSED TO EARTH OR WEATHER:
- #6 & LARGER #5 & SMALLER C. NOT EXPOSED TO WEATHER OR EARTH: SLABS, WALLS, JOISTS, #11 & SMALLER BEAMS, COLUMNS: MAIN REINFORCING OR TIES D. SLAB ON GRADE:
- 4. ALL VERTICAL REINFORCING SHALL BE DOWELED TO FOOTINGS OR STRUCTURE BELOW WITH DOWELS TO MATCH. SPLICE LENGTHS SHALL FOOTING, BUT NOT MORE THAN 20" INTO FOOTING.
- 5. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS. WHERE REINFORCING IS WELDED, USE ASTM A706 REINFORCING.

- 3. ALL FOOTINGS, FOUNDATIONS, INTERIOR SLABS ON GRADE, AND SUSPENDED COMPRESSIVE STRENGTH EQUAL TO A LEAST 3,000 LBS. PER SQUARE INCH
- MEMBER, AND A WIDTH 1/2 OF THE MEMBER. REINFORCING SHALL BE CONTINUOUS THRU JOINT.
- 7. BEFORE CONCRETE IS POURED CHECK WITH ALL TRADES TO INSURE
- CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND FORMWORK. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENT, CLIPS OR GROUNDS, REQUIRED TO BE ENCASED IN CONCRETE AND FLOOR
- 11.STRUCTURAL CONCRETE HAS BEEN DESIGNED AT 2,500 LBS. PER SQUARE
- INCH AND SPECIFIED AT A HIGHER STRENGTH CONCRETE AS STATED ABOVE.

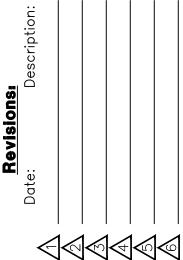
- PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
- 3. EXCEPT WHERE NOTED, CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MIN. STRESS BY LAPPING 44 BAR DIAMETERS IN CONCRETE AND 50 BAR DIAMETERS IN MASONRY
- COMPLY WITH NOTE 3. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE

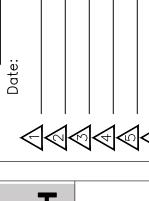
### BASIS OF DESIGN . GOVERNING CODE 2021 IBC 2. ROOF LOADS 2.A. LIVE 100 PSF 2.B. DEAD 150 PSF 2.C. SOIL H = 135 PSF. ROOF SNOW LOAD DATA 3.A. GROUND SNOW LOAD . EARTHQUAKE DESIGN DATA 4.A. RISK CATEGORY 4.B. SEISMIC IMPORTANCE FACTOR = 1.25 4.C. MAPPED SPECTRAL RESPONSE ACCELERATION PERAMETERS $S_{S} = 1.155g$ = 0.422g4.D. SITE CLASS D (ASSUMED) 4.E. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS $S_{DS} = 0.924q$ = 0.528g4.F. SEISMIC DESIGN CATEGORY 4.G. BASIC SEISMIC FORCE-RESISTING SYSTEM WOOD SHEAR WALL 4.H. DESIGN BASE SHEAR 4.I. SEISMIC RESPONSE COEFFICIENT CS = 0.6164.J. RESPONSE MODIFICATION COEFFICIENT R = 1.54.K. ANALYSIS PROCEDURE USED EQUIVALENT LATERAL FORCE PROCEDURE GEOTECHNICAL INFORMATION 5.A. SOIL REPORT BY: NA REPORT #: DATF: 5.A. FROST DEPTH 40" MIN. 5.B. SOIL BEARING PRESSURE 1500 PSF











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GUDMUNDSON 7914241 \*STRUCTURAL DRAWINGS ONLY\*

Project Info. Engineer: <u>J.M.G.</u> Drafter: <u>A.W.B.</u> Begin Date: NOVEMBER 6, 2023

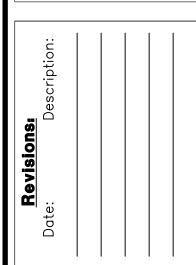
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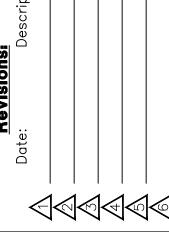
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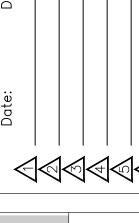
CONCRETE FOOTING NOTES:

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER, UNLESS NOTED OTHERWISE. 2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER. 3. IF FOOTINGS ARE EARTH FORMED, FOOTING WIDTH AND LENGTH SHALL BE 6" WIDER AND LONGER THAN SCHEDULED. 4. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.









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CONCRETE

GALLON

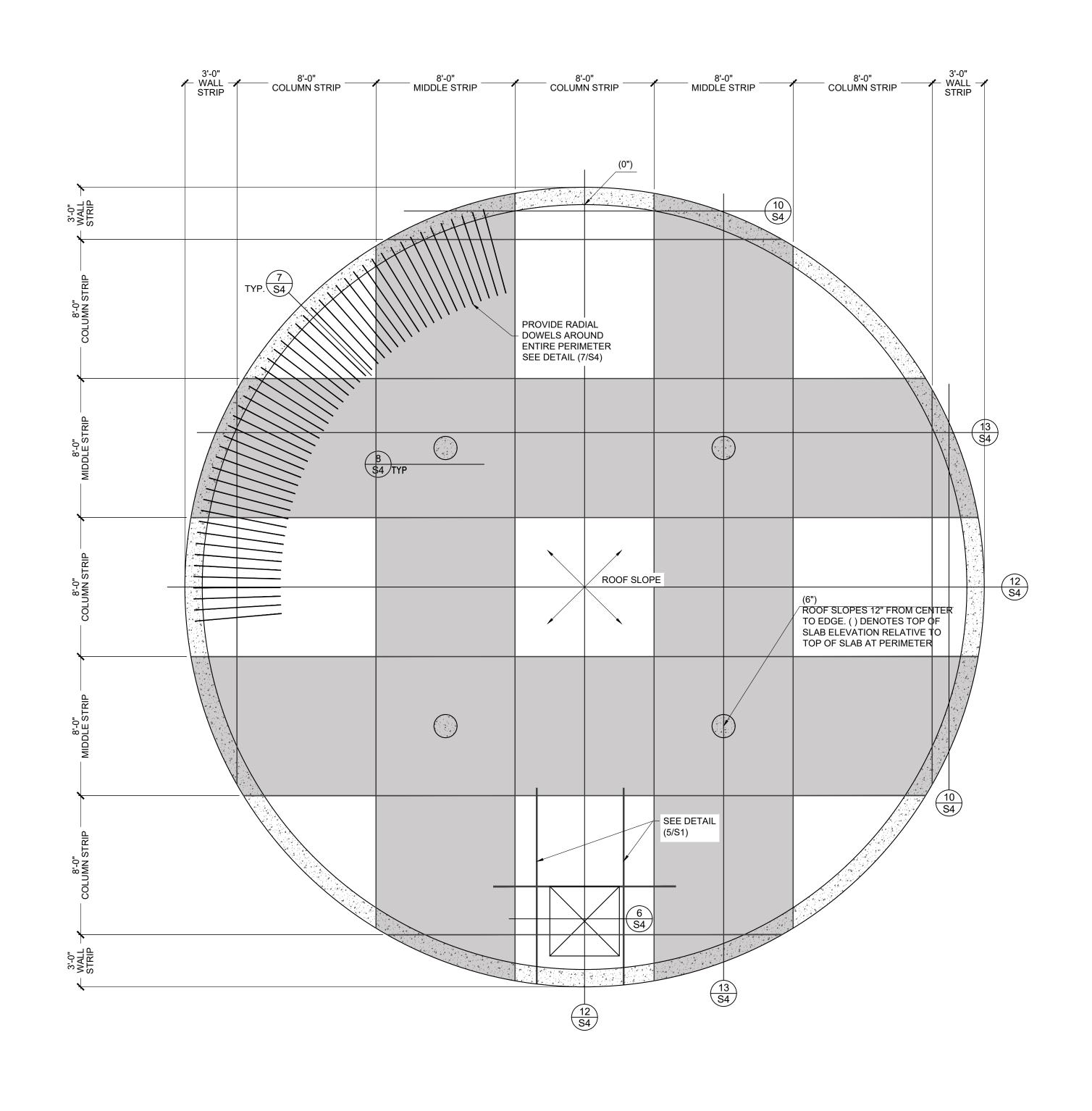
100,000 ARROWLEAF GUDMUNDSON \*STRUCTURAL DRAWINGS ONLY\*

<u>Project Info.</u> Engineer: <u>J.M.G.</u>

Drafter: <u>A.W.B.</u> Begin Date: NOVEMBER 6, 2023 Number: <u>7895-01</u>

FOOTING & FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



GALLON CONCRETE SUBDIVISION - 4665 N. 290 F FRAMING PLAN ROOF 100,000 ARROWLEAF

> JASON M. J GUDMUNDSON

\*STRUCTURAL DRAWINGS ONLY\*

Begin Date: NOVEMBER 6, 2023

S3 Sheets

Number: <u>7895-01</u>

Project Info.
Engineer: J.M.G.
Drafter: A.W.B.

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ROOF SLAB PLAN
SCALE: 1/4" = 1'-0"

