STRUCTURAL GENERAL NOTES:

MAJOR CODES AND STANDARDS

1. INTERNATIONAL RESIDENTIAL CODE (IRC 2015).
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE 7-10).
3. AMERICAN CONCRETE INSTITUTE (ACI 318-14).
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION).
5. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS 2012).

GENERAL

1. THESE NOTES ARE FOR INFORMATION ONLY. NOTIFY THE ENGINEER OF ANY CONFLICTS.
2. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
3. FIELD DIMENSIONS. IF STRUCTURAL DRAWINGS ARE USED FOR LAYING OUT COLUMN CENTERS AND WALL LINES, ALL DIMENSIONS SHALL FIRST BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS. LAYOUT SHALL BE CLOSED AND CHECKED BEFORE WORK IS BEGUN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ACCURATELY LOCATE ALL EXISTING COLUMNS, BEARING WALLS AND OTHER STRUCTURAL MEMBERS BEFORE BEGINNING WORK OR PREPARING SHOP DRAWINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIALS, SCHEDULE AND DIMENSIONS BETWEEN TRADES AND SUB-CONTRACTORS.
5. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ARCHITECT AND ENGINEER ANY DIMENSIONAL DISCREPANCIES IN THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH THE WORK.
6. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, BULKHEADS AND PROTECTION AS NECESSARY TO SUPPORT AND PROTECT THE EXISTING STRUCTURES AND ASSEMBLIES AS REQUIRED DURING THE COURSE OF THE WORK AND PROTECT AND OCCUPY USE OF SPACES.
7. IF CONDITIONS DISCLOSED DURING EXCAVATION AND DEMOLITION DO NOT AGREE WITH INFORMATION SHOWN ON CONTRACT DRAWINGS, CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER OF THESE DISCREPANCIES.
8. CONTRACTOR SHALL SUBMIT SCHEDULE AND PLAN OF OPERATION TO THE OWNER, ARCHITECT, AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. FOR LOCATION AND SIZE OF SLEEVES, CONDUITS, AND OTHER MINOR OPENINGS, SEE OTHER DRAWINGS IN THIS PROJECT.
10. SECTIONS AND DETAILS SHOWN, WHILE DRAWN FOR SPECIFIC LOCATIONS, ARE INTENDED TO ESTABLISH THE GENERAL TYPES OF DETAILS TO BE USED THROUGHOUT.
11. THE ENGINEER'S REVIEW OF A SHOP DRAWING SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO FOLLOW THE INTENT OF THE CONTRACT DRAWINGS.
12. CONTRACTOR SHALL USE ARCHITECTURAL AND OTHER PROJECT DRAWINGS IN CONJUNCTION WITH THE STRUCTURAL SET TO PROPERLY PERFORM THE WORK.
13. STRUCTURAL STABILITY IS ACHIEVED IN THE FINISHED CONSTRUCTION INSTALLED IN ENTIRETY. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINISHED STATE.
14. LOADINGS OF EQUIPMENT ARE BASED ON WEIGHTS OF ASSUMED EQUIPMENT, IN ADDITION TO WEIGHTS OF CONCRETE PADS WHERE INDICATED ON STRUCTURAL DRAWINGS, BUT NOT LESS THAN THE LOADS LISTED IN LIVE LOADS. CONTRACTOR SHALL REPORT ANY CHANGES IN TYPE, SIZE, LOCATION OR NUMBER OF PIECES OF EQUIPMENT TO ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO ANY ACTION.
15. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATORY EQUIPMENT, UNLESS NOTED OTHERWISE. PLACE VIBRATORY EQUIPMENT ON VIBRATION ISOLATORS.
16. TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. TYPICAL DETAILS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZES, PLATE SIZES, WELD SIZES, NUMBER OF BOLTS, OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY COMPLETED DESIGN.

CONTRACTOR RESPONSIBILITIES AND COORDINATION:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS FOR SUCCESSFUL COMPLETION OF THIS PROJECT.
2. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF ALL TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES AND ASSEMBLIES, AS NECESSARY TO COMPLETE THE PROJECT. ANY DESIGN TEAM REVIEW IS STRICTLY FOR LOADS IMPARTED ON THE STRUCTURE. NO PORTION OF THE PROJECT, WHILE UNDER CONSTRUCTION, IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY BRACES AND SUPPORTS. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT JURISDICTION TO DESIGN ALL TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS, NEW AND EXISTING, BY MEASUREMENTS AND SURVEYS AT THE JOB SITE, PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND FABRICATION OF STRUCTURAL ELEMENTS. THE CONTRACTOR SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY CONFORMANCE WITH THE DRAWINGS AND TO PERFORM THE WORK PROPERLY. AN ALLOWANCE FOR THE COST OF EXPOSING EXISTING STRUCTURAL MEMBERS TO VERIFY AND MEASURE THE EXISTING CONDITIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID IF REQUIRED.

PERFORMANCE ITEMS:

1. EMPLOY OR RETAIN A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT JURISDICTION TO DESIGN AND DETAIL THE FOLLOWING PERFORMANCE SPECIFIED STRUCTURAL COMPONENTS:

   CONCRETE MIX DESIGN[1]
   SHORING / SCAFFOLDING
   TEMPORARY EXCAVATION SUPPORT
   PLATE CONNECTED WOOD TRUSSES[1]

   PERFORMANCE ITEMS MARKED [1] REQUIRE SUBMITTAL

SUBMITTALS

1. PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT AND STRUCTURAL ENGINEER REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR PRIOR TO FINALIZING SCHEDULE. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER WILL HAVE TEN WORK DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING AND WILL INTEND ON RETURNING THE SHOP DRAWINGS WITHIN TEN DAYS.
2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER.
3. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE SUPPLIER, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE SUPPLIER'S ENGINEER. SUBMITTAL TO BE SIGNED AND SEALED BY SUPPLIER'S ENGINEER. CALCULATIONS SHALL BE PROVIDED AS REQUESTED BY ENGINEER OF RECORD.
4. FOR ALL PRODUCTS SUBMITTED AS "EQUIVALENT" TO SPECIFIED PRODUCT, CONTRACTOR SHALL PROVIDE ALL NECESSARY DOCUMENTATION INDICATING SUPPLIED PRODUCT IS EQUIVALENT OR BETTER AND MEETS THE DESIGN INTENT.

FOUNDATIONS

1. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2000 PSF. AT A DEPTH OF 2.5 FEET OR GREATER ON UNDISTURBED SOIL. ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING FOOTINGS. CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER BEFORE PLACING ANY FOOTINGS.
2. GEOTECHNICAL ENGINEER SHALL INSPECT AND REPORT ON ADEQUACY OF BEARING MATERIAL AND VERIFY THAT: EXISTING BEARING CAPACITIES MEET OR EXCEED THE DESIGN VALUES; ENGINEERED FILL IS INSTALLED PER RECOMMENDATIONS; AND INSTALLATION OF FOUNDATIONS AND SLAB ON GRADE IS AS RECOMMENDED IN THE REPORT.
3. IF EXISTING FILL OR OTHER UNSTABLE MATERIAL IS ENCOUNTERED IN THE FOOTING EXCAVATIONS, IT SHALL BE REMOVED AND REPLACED WITH CRUSHED ANGULAR GRAVEL AND PER GEOTECHNICAL RECOMMENDATIONS.
4. SOIL EXHIBITING SWELL GREATER THAN 3% BY VOLUME OR SWELL PRESSURES GREATER THAN 500 PSF SHALL BE UNDERCUT TO A MINIMUM OF 3 FEET BELOW THE FINISHED EXTERIOR GRADE ALONG ALL EXTERIOR FOOTINGS AND CONTRACTOR SHALL POUR LEAN CONCRETE BELOW THESE FOOTINGS.
5. FOOTINGS SHOULD BE CAST ON THE SAME DAY IN WHICH EXCAVATION FOR THEM IS COMPLETED. IF PLACING OF CONCRETE IS DELAYED, FOOTING BOTTOM SHALL BE TRIMMED TO FIRM MATERIAL IMMEDIATELY BEFORE CASTING.
6. LABELS
   A. ELEVATION OF TOP OF FOOTING SHOWN THUS T.F. (+0'-0"),
   B. TYPE OF FOOTING SHOWN BY NUMBER. SEE SCHEDULE.
   C. SIZE OF FOOTINGS GIVEN ON PLANS. SEE SCHEDULE FOR REINFORCEMENT.
7. PROVIDE DOWELS EQUAL IN SIZE AND NUMBER TO WALL REINFORCING STEEL IN FOOTINGS.
8. WHERE PIPES PASS UNDER WALL FOOTINGS, EXCAVATION BELOW BOTTOM OF FOOTING SHALL BE BACKFILLED WITH CONCRETE WHEN THE FOOTING IS POURED.
9. WHERE TRENCH BOTTOMS ARE DUG BELOW ADJACENT FOOTING BOTTOMS ON A SLOPE STEEPER THAN ONE VERTICAL TO TWO HORIZONTAL, THE TRENCH SHALL BE BACKFILLED WITH LEAN CONCRETE TO THE POINT WHERE THE STATED SLOPE CROSSES THE TRENCH.
10. ALL FOOTINGS SHALL BE FORMED UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
11. SUITABLE NATURAL BEARING SOILS SHALL BE IDENTIFIED AS SOILS HAVING A MINIMUM SPT N-VALUE OF 10 BPF.
12. FOR FOUNDATIONS BEARING ON SOIL, DYNAMIC CONE PENETRATION TESTING SHALL BE CONDUCTED EVERY 25 FEET ALONG STRIP FOOTINGS AND WITHIN ALL COLUMN FOOTINGS.
13. NEW ENGINEERED FILL (IF REQUIRED) SHALL BE IN ACCORDANCE WITH A GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
14. ISOLATED UNDERCUTS SHALL BE PERFORMED WHERE FOOTINGS TRANSITION FROM SOIL TO ROCK SUPPORT AT OR ABOVE DESIGN BEARING ELEVATIONS AND THE LENGTH OF THE ROCK SEAM IS GREATER THAN FOUR FEET. SOIL ON EITHER SIDE OF THE ROCK PINNACLE SHALL BE REMOVED AND REPLACED WITH COMPACTED STONE FOR A DISTANCE OF 4' ALONG THE TRENCH.
15. WHERE THE ROCK PINNACLE EXTENDS FOR A DISTANCE OF LESS THAN FOUR FEET ALONG THE TRENCH, THE ROCK PINNACLE SHOULD BE REMOVED TO A DEPTH OF 12 INCHES BELOW THE DESIGN BEARING LEVEL AND REPLACED WITH COMPACTED STONE.
16. REFER TO SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR WATERPROOFING DETAILS AND PROCEDURES. PROVIDE WATER STOP AT ALL JOINTS BELOW GRADE.
17. BACKFILLING:
   A. BEFORE BACKFILLING WALLS, GROUT AND/OR CONCRETE SHALL HAVE ATTAINED DESIGN STRENGTH, AND ALL SLABS AND BEAMS THAT ARE NECESSARY FOR THE STABILITY OF THE WALLS SHALL BE IN PLACE.
   B. BACKFILL SHALL BE CARRIED UP EVENLY ON BOTH SIDES OF WALL TO LOWER GRADE.
   C. BACKFILL SHALL BE PLACED IN MAXIMUM OF 8" LOOSE LIFT THICKNESS AND COMPACTED TO 95% OF STANDARD PROCTOR.
   D. TESTS SHALL BE PERFORMED FOR EACH LIFT AT A RATE OF TWO TESTS PER LIFT MINIMUM AND NOT LESS THAN ONE TEST PER 100' OF WALL LENGTH.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND SAFE DESIGN AND INSTALLATION OF ALL SHEETING AND SHORING EXCAVATION SUPPORT SYSTEMS.
19. PERMANENT OR ABANDONED TIMBER LAGGING MUST BE PRESERVATIVE TREATED PRIOR TO USE TO PREVENT INSECT INFESTATION.

WATER CONTROL DURING CONSTRUCTION

1. CONCRETE SHALL BE PLACED IN DRY EXCAVATIONS. CONTRACTOR SHALL NOTE SOIL AND WATER CONDITIONS AS SHOWN BY BORINGS AND DEPTHS OF FOOTINGS AS SHOWN ON FOUNDATION PLANS.
2. CONTRACTOR SHALL SUBMIT PLAN FOR DEWATERING IF ANY TO THE ARCHITECT FOR REVIEW.
   A. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A SERIES OF DITCHES AND SUMPS TO REMOVE GROUND WATER IF ANY FROM THE WORKING AREA.
3. PUMPED WATER SHALL BE DISCHARGED AS DIRECTED BY OWNER.
4. PRELIMINARY GRADING SHALL BE SUCH THAT SURFACE WATER IS DIVERTED AWAY FROM THE EXCAVATION.

REINFORCED CONCRETE

1. CONCRETE CONSTRUCTION SHALL FOLLOW REQUIREMENTS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE."
2. REINFORCING FOR CONCRETE SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE PROVISIONS SET FORTH BY THE AMERICAN CONCRETE INSTITUTE AND THE CRSI "MANUAL OF STANDARD PRACTICE."
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
   - CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING DESIGNATIONS:

DEFORMED BARS	ASTM A615, GRADE 60
DEFORMED BARS (WELDABLE)	ASTM A706
DEFORMED BARS (EPOXY-COATED)	ASTM A775 & A615, GRADE 60
WELDED WIRE MESH	ASTM A185

   - FABRICATE AND PROVIDE STANDARD SUPPORTING ACCESSORIES IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315.
   - UNLESS NOTED OTHERWISE, REINFORCING SHALL BE CONTINUOUS WITH CLASS B LAP SPLICES, HOOKS SHALL BE STANDARD HOOKS, AND WALL INTERSECTIONS SHALL HAVE CORNER/L-BARS. LAP WELD WIRE MESH SUCH THAT THE OVERLAP OF THE OUTERMOST CROSS-WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS-WIRES PLUS 2 IN., UNO. REFER TO TYPICAL DETAILS FOR ADDITIONAL DETAILING REQUIREMENTS.
   - ALL TOP REINFORCING STEEL AND STIRRUPS IN WEATHER-EXPOSED LOCATIONS SHALL BE EPOXY COATED. ALL REINFORCEMENT IN BELOW GRADE STRUCTURES SHALL BE EPOXY COATED.
4. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, NORMAL WEIGHT (UNLESS OTHERWISE NOTED) WITH COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

ALL CONCRETE COMPONENTS U.O.N.	F'C = 4,000 PSI
FOUNDATION WALLS	F'C = 3,000 PSI

5. CONCRETE SHALL CONTAIN A MINIMUM OF 5 1/2 BAGS OF CEMENT PER CUBIC YARD. PORTLAND CEMENT TO BE MINIMUM OF 75% OF TOTAL WEIGHT OF CEMENTITIOUS MATERIAL.
6. ALL CONCRETE SHALL BE PLACES WITH A SLUMP OF 4" ±1/2" EXCEPT THAT CONCRETE CONTAINING HRWR (SUPER PLASTICIZER) SHALL NOT EXCEED 7". ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE 6% AIR ENTRAINMENT AND A MAXIMUM WATER TO CEMENT RATIO OF 0.40.
7. UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, PROVIDE MINIMUM CONCRETE PROTECTION FOR REINFORCING, PER ACI 318, AS FOLLOWS:

CAST AGAINST EARTH	3"
EXPOSED TO WEATHER OR EARTH:	
#5 AND SMALLER BARS AND W.W.F.	1½"
#6 AND LARGE BARS	2"
NOT EXPOSED TO WEATHER OR EARTH:	
SLABS AND WALLS:	
#11 AND SMALLER BARS AND W.W.F.	¾"
BEAMS AND COLUMNS	1½"

   CONCRETE PROTECTION FOR REINFORCEMENT, SHALL BE PER ACI 318 MINIMUM CLEAR COVER UON.
8. REINFORCEMENT NOT SHOWN ON SECTIONS AND PLANS IS THE SAME AS THAT SHOWN IN SIMILAR SECTIONS AND AT SIMILAR LOCATIONS.
9. BETWEEN ALL SEPARATE CONCRETE POURS, PROVIDE DOWELS EQUAL IN SIZE AND NUMBER TO BARS IN THE DOWELED MEMBER.
10. WALL INTERSECTIONS: PROVIDE CORNER BARS EQUAL IN SIZE AND SPACING TO NORMAL WALL STEEL.
11. PROVIDE SHOP DRAWINGS SHOWING FULL INFORMATION FOR STEEL PLACEMENT.
   A. REINFORCING STEEL DETAILER SHALL USE THE SAME SECTIONS AND MARKS AS SHOWN ON THE DESIGN DRAWINGS OR SHALL ADEQUATELY CROSS REFERENCE TO THE SATISFACTION OF THE ENGINEER.
   B. REINFORCING STEEL DETAILER SHALL DEVELOP ALL WALL ELEVATIONS AND SECTIONS WITH PERTINENT ELEVATIONS GIVEN, TO CLEARLY INDICATE THE POSITION OF THE REINFORCEMENT AND CONSTRUCTION JOINTS, WITHOUT REPRODUCING SECTIONS, PLANS, OR ELEVATIONS FROM THE DESIGN DRAWINGS.
12. SLABS ON GRADE:
   A. UNLESS OTHERWISE NOTED, SLAB ON GRADE SHALL BE 5" THICK SLAB REINFORCED WITH WWF 6X6 W2.0 X W2.0, LAPPED 6" ON ALL SIDES, SET 1" CLEARANCE BELOW TOP OF SLAB, UNLESS NOTED OTHERWISE ON THE PLANS.
   B. ALL TOPSOIL AND ANY SOFT OR UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE AREA OF INTERIOR SLABS-ON-GRADE PRIOR TO FILL PLACEMENT OR SLAB CONSTRUCTION.
   C. SLAB SUBGRADES SHALL BE PREPARED IN ACCORDANCE WITH THE SOIL REPORT.
   D. CONTRACTOR SHALL SUBMIT A LAYOUT OF PROPOSED CONSTRUCTION JOINTS TO THE ARCHITECT FOR APPROVAL BEFORE MAKING ANY POURS. CONSTRUCTION JOINTS ARE TO BE LOCATED WITH RESPECT TO PARTITIONS, FLOOR FINISHES, DEPRESSIONS, ETC. PREFABRICATED KEYED SCREEDS MAY BE USED IN LIEU OF CONSTRUCTION JOINTS.
   E. UNLESS OTHERWISE NOTED, CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL BE KEYED AND MESH OR DOWELS SHALL PASS THROUGH THE JOINT.
   F. PROVIDE 1/2" PREMOLDED JOINT FILLER WHERE SLAB ABUTS VERTICAL SURFACE.
13. SEE OTHER DRAWINGS IN THIS PROJECT FOR SIZE AND LOCATION OF EQUIPMENT PADS, CURBS, INSERTS, EMBEDDED ITEMS.
14. CONTRACTOR SHALL NOTIFY OWNER'S INSPECTION AGENCY BEFORE PLACEMENT OF CONCRETE TO ALLOW INSPECTION OF REINFORCEMENT PRIOR TO CONCRETE PLACEMENT.
15. REFER TO SPECIAL INSPECTIONS TABLE AND PROJECT SPECIFICATIONS AND ACI 301 FOR TESTING REQUIREMENTS.
16. WHERE CONNECTION PLATE IS NOT SPECIFIED ON PLAN OR DETAIL, INSTALL CAST IN PLACE STEEL EMBED PLATE WITH WELDED HEADED STUDS BY THE CONTRACTOR THAT IS CAPABLE OF SUPPORTING LOAD(S) AND FORCE(S) ASSOCIATED WITH THE STEEL BEAM END REACTION.
17. OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PROVIDE TESTING OF CONCRETE TO INCLUDE COMPRESSIVE STRENGTH, TEMPERATURE, SLUMP AND AIR ENTRAINMENT. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC. YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQ. FT OF SURFACE AREA OF SLABS OR WALLS. EACH SAMPLE SHALL INCLUDE THE FOLLOWING:
   - (2) 7 DAY LAB CURED 6"X12" CYLINDER BREAKS
   - (2) 28 DAY LAB CURED 6"X12" CYLINDER BREAKS
   - (2) 28 DAY FIELD CURED 6"X12" CYLINDER BREAKS
   - CONTRACTOR SHALL OBTAIN ADDITIONAL FIELD CURED CYLINDERS AS NECESSARY TO MEET FORMWORK AND SHORING REMOVAL REQUIREMENTS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MATERIALS, ERECTION, CONNECTIONS, ETC. SHALL BE INSPECTED IN ACCORDANCE WITH IBC.
2. THE STRUCTURAL STEEL DETAILER SHALL DEVELOP ALL ELEVATIONS, PLANS, AND SECTIONS WITHOUT REPRODUCING SAME FROM THE DESIGN DRAWINGS. DETAILER SHALL USE THE SAME SECTIONS AND MARKS AS SHOWN ON THE DESIGN DRAWINGS OR ADEQUATELY CROSS REFERENCE TO THE SATISFACTION OF THE ENGINEER.
3. MATERIALS SHALL CONFORM TO THE FOLLOWING:

BARS, RODS AND PLATES	ASTM A36
ALL OTHER STRUCTURAL SHAPES	ASTM A36
HOLLOW STRUCTURAL SECTIONS	ASTM A500, GRADE B
HIGH STRENGTH BOLTS	ASTM A325
ANCHOR RODS	ASTM A1554
WELDING ELECTRODES	AWS A5.1 E70XX

DESIGN LOADS AND FACTORS

DESIGN CODE: IRC 2015

LIVE LOAD DATA		SNOW LOAD DATA		WIND LOAD DATA		EARTHQUAKE DESIGN DATA	
FLOOR OR ROOF AREA	LOAD (psf)	ROOF AREA	LOAD (psf)	FACTOR	VALUE	FACTOR	VALUE
DESIGN CAPACITY		BALANCED SNOW LOAD (PS)	16	BASIC WIND SPEED (MPH, 3-S GUST)	115	OCCUPANCY CATEGORY	II
RESIDENTIAL	40	MIN SNOW LOAD	30	BASIC WIND EXPOSURE CATEGORY	B	SEISMIC SITE CLASS	D
				WIND IMPORTANCE (I)	1.00	SEISMIC IMPORTANCE FACTOR, I	1.0
						ACCELERATION, SHORT PERIOD, Ss	0,12
						ACCELERATION, 1 SECOND, S1	0,052
						SITE COEFF., SHORT PERIOD, Fa	1,6
						SITE COEFF., 1 SECOND, Fv	2.4
						SEISMIC DESIGN CATEGORY	B
LIVE LOAD REDUCTION APPLIED TO:		FACTOR	VALUE			RESPONSE MODIFICATION FACTOR, R	6,5
☐ COLUMNS		GROUND SNOW LD (P_g)	25			BASIC STRUCTURAL SYSTEM/SEISMIC RESISTING SYSTEM: LIGHT-FRAME WALLS SHEATHED WITH WOOD STRUCTURAL PANELS	
☐ GIRDERS		SNOW EXPOSURE(C_e)	0.9				
☐ BEAMS		SNOW IMPORTANCE (I)	1.0			ANALYSIS PROCEDURE: ☒ EQUIVALENT LATERAL FORCE	
☐ 2-WAY SLABS							
SPECIAL LOADING:		SPECIAL SNOW CONSIDERATIONS:		SPECIAL WIND CONSIDERATIONS:		SPECIAL SEISMIC CONSIDERATIONS:	
☐ LIVE LOAD GOVERNS ROOF DESIGN		☒ GOVERNS ROOF DESIGN		☒ GOVERNS LATERAL DESIGN		☐ GOVERNS LATERAL DESIGN	

STRUCTURAL DRAWING LIST

SHEET NO.	DRAWING TITLE
1 S001	GENERAL NOTES
2 S002	GENERAL NOTES
3 S100	FOUNDATION PLANS
4 S101	FIRST FLOOR FRAMING PLANS
5 S102	SEND FLOOR FRAMING PLANS
6 S103	THIRD FLOOR FRAMING PLANS
7 S104	ROOF FRAMING PLANS
8 S230	SECTIONS AND DETAILS
9 S231	SECTIONS AND DETAILS
10 S232	SECTIONS AND DETAILS
11 S250	SECTIONS AND DETAILS
12 S260	SECTIONS AND DETAILS
13 S261	SECTIONS AND DETAILS
14 S262	SECTIONS AND DETAILS
15 S263	SECTIONS AND DETAILS
16 S264	SECTIONS AND DETAILS
17 S265	SECTIONS AND DETAILS
18 S265	SECTIONS AND DETAILS

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VIENNA, VIRGINIA

20.014

REVISIONS

DATE	DESCRIPTION

FOR PERMIT
12.09.20

GENERAL NOTES

SHEET NO.

S001