GENERAL 31. CODES AND STANDARDS: IBC 2000, WITH LOCAL AMENDMENTS ACI AMERICAN CONCRETE INSTITUTE, LATEST EDITION AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION (LRFD), LATEST EDITION AWS AMERICAN WELDING SOCIETY, LATEST EDITION ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS

G2. DESIGN LOADS:

FLOOR LIVE LOAD: 100 PSF-DINING

ROOF LIVE LOAD: 30 PSF ROOF SNOW LOAD GROUND SNOW LOAD: 30 PSF FLAT ROOF SNOW LOAD: 30 PSF SNOW EXPOSURE FACTOR: SNOW LOAD IMPORTANCE FACTOR:

ANSI AMERICAN NATIONAL STANDARD INSTITUTE

SEISMIC USE GROUP.

SPECIAL RESPONSE COEFFICIENTS:

BUILDING MAIN WINDFORCE-RESISTING SYSTEM DATA: BASIC WIND SPEED: 90 MPH WIND LOAD IMPORTANCE FACTOR: WIND EXPOSURE: WIND EXPOSURE (COMPONENTS/CLADDING)

INTERNAL PRESSURE COEFFICIENT: +/- 0.18 EXTERNAL PRESSURE COEFFICIENT: +/- 0.8/-0.5 EARTHQUAKE DESIGN DATA:

.258 .134 SITE CLASS: BASIC SEISMIC-FORCE RESISTING SYSTEM: EXTERNAL WOOD SHEAR WALLS DESIGN BASE SHEAR: XX KIPS ANALYSIS PROCEDURE: EQUIV. LATERAL FORCE PROCEDURE

1.0

GROUP 1

G3. DIMENSIONS ON STRUCTURAL DRAWINGS ARE TO BE CHECKED AGAINST ARCHITECTURAL MECHANICAL, AND ELECTRICAL DRAWINGS AS WELL AS AGAINST FIELD CONDITIONS BY CONTRACTORS.

G4. UNLESS NOTED OTHERWISE, DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR CONDITIONS.

G5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION AND PLACEMENT OF INSERTS, HANGERS, SLEEVES, DUCTWORK, PADS, AND ANCHOR RODS THAT ARE REQUIRED BY MECHANICAL EQUIPMENT

G6. IF DISCREPANCIES APPEAR ON THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND EXISITING CONDITIONS, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION FROM THE ARCHITECT BEFORE BIDDING. IF THE CONTRACTOR FAILS TO MAKE SUCH REQUEST. IT IS PRESUMED THAT BOTH PROVISIONS WERE INCLUDED IN THE BID AND THE ARCHITECT SHALL DETERMINE WHICH OF THE CONFLICTING REQUIREMENTS SHALL GOVERN. THE CONTRACTOR SHALL PERFORM THE WORK AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH THE ARCHITECT'S DETERMINATION.

FOUNDATIONS

F1. ALL SOIL SUPPORTED FOOTINGS SHALL BE FOUNDED UPON UNDISTURBED, NATURAL SOIL SUBGRADE OR ON TESTED AND APPROVED FILL WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF AS FIELD VERIFIED AND APPROVED BY THE OWNER'S SOIL TESTING LABORATORY. THE FOOTING ELEVATIONS AND SOIL BEARING CAPACITIES AS SHOWN ON THE DRAWINGS ARE ESTIMATED. FINAL, EXACT ELEVATIONS AND SOIL BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE OWNER'S SOIL TESTING LABORATORY AND REVIEWED BY THE ARCHITECT/ENGINEER DURING CONSTRUCTION.

F2. THE SOIL SUBGRADE FOR ALL FOOTINGS AND SLABS SHALL BE INSPECTED AND APPROVED BY THE OWNER'S TESTING LABORATORY IMMEDIATELY PRIOR TO PLACING CONCRETE.

F3. ALL FOOTING AND SLAB SUBGRADES, INCLUDING PIT SLABS, SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR (ASTM D698) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

F4. ALL ORGANIC AND/OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED FROM SUBGRADE AND BACK FILL AREAS AND BACKFILLED WITH SELECT FILL (IDOT CA6 GRADATION), COMPACTED TO 98 PERCENT OF STANDARD PROCTOR (ASTM D698) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

F5. DO NOT UNDERMINE EXISTING CONSTRUCTION.

F6. PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES OF FOUNDATION WALLS.

F7. NO MUD SLABS, FOOTINGS, OR SLABS SHALL BE PLACED ONTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.

F8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE. SUCH PROTECTION IS ADDITIONAL SCOPE.

F9. THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.

F10. ALL PERIMETER WALL AND COLUMN FOOTINGS SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADE.

CONCRETE

C1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)," LATEST EDITION.

C2. UNLESS NOTED OTHERWISE, CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP 3500 PSI MINIMUM COMPRESSIVE STRENGTH IN 28

C3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION AND PLACEMENT OF INSERTS, EMBEDDED PLATES, MASONRY ANCHORS, REGLETS, SLEEVES, DUCTWORK, PADS, AND ANCHOR RODS. THE INSERTS, EMBEDDED PLATES, ETC. SHALL NOT INTERFERE WITH CONCRETE REINFORCEMENT LOCATION.

C4. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.

C5. EXPOSED EXTERNAL CONCRETE CORNERS SHALL BE CHAMFERED 3/4 INCHES, UNLESS SHOWN OR NOTED OTHERWISE.

C6. SLABS ON GRADE SHALL BE PLACED IN ALTERNATE STRIPS WITH A MAXIMUM WIDTH OF 40'-0" OR AS SHOWN ON PLAN. CONTROL JOINTS SHALL BE CUT WITHIN 24 HOURS AFTER THE CONCRETE HAS SET. CONTROL JOINTS SHALL NOT EXCEED 15'-0" INTERVALS IN EACH DIRECTION, AND SHALL BE LOCATED TO CONFORM WITH BAY SPACING WHEREVER POSSIBLE (I.E. AT COLUMN CENTERLINES. HALF-BAYS, THIRD-BAYS).

<u>REINFORCEMENT</u>

R1. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL CONFORM TO ASTM SPECIFICATION A615, GRADE 60.

R2. UNLESS NOTED OTHERWISE, WELDED WIRE FABRIC SHALL CONFORM TO ASTM SPECIFICATION ASTM A 185, WELDED STEEL WIRE FABRIC.

R3. CORNER BARS SHALL BE PROVIDED AT WALL CORNERS EQUAL TO THE HORIZONTAL WALL

R4. ALL CONCRETE FORMED SLAB OR WALL OPENINGS SHALL BE REINFORCED WITH 2 NO. 5 BARS PLACED ONE IN EACH FACE AT 45 DEGREES TO OPENING CORNERS.

R5. THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT UNLESS NOTED OTHERWISE:

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MINIMUM	CONCRETE PROTECTION FOR REINFOR	CEMENT
CONCRETE ELEMENT		MIN. COVER (IN.)
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH		3"
CONCRETE E	EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH	2"	
#5 BAR, W31 OR D31 WIRE, AND SMALLER		1-1/2"
CONCRETE I	NOT EXPOSED TO WEATHER OR IN CONTACT WITH	GROUND
SLABS, WALLS AND JOISTS	#14 AND #18 BARS	1-1/2"
	#11 BAR AND SMALLER	3/4"
BEAMS AND COLUMNS	PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1-1/2"

R6. ARRANGEMENT AND DETAILS FOR REINFORCEMENT, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE "A.C.I. DETAILING MANUAL (ACI SP-66),"

R7. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT THE POSITIONS INDICATED. PLASTIC COATED ACCESSORIES SHALL BE USED IN ALL EXPOSED CONCRETE

R8. ALL EMBEDMENT LENGTHS AND LAPS SHALL BE AS REQUIRED BY ACI 318. UNLESS NOTED OTHERWISE, MINIMUM LAP SHALL BE 48 BAR DIAMETERS.

WOOD TRUSSES

T1. WOOD TRUSS DESIGN AND CONFIGURATION IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER. INDIVIDUAL TRUSS HEIGHT AND SPAN CONDITIONS WILL VARY FROM THE TRUSS ELEVATION DETAILS SHOWN.

T2. REFER TO THE DESIGN LOADS IN THE GENERAL NOTES ON DRAWING SO.1 FOR TRUSS DESIGN LIVE LOADS AND WIND LOADS.

T3. ROOF TRUSS TOP CHORD DESIGN DEAD LOAD=15 PSF.

T4. ROOF TRUSS BOTTOM CHORD DESIGN DEAD LOAD=10 PSF.

T5. SEE STRUCTURAL FRAMING PLANS, TRUSS ELEVATIONS, AND ARCHITECTURAL DRAWINGS FOR TRUSS BEARING LOCATIONS AND CONDITIONS.

T6. THE TRUSS MANUFACTURER SHALL COORDINATE TRUSS LAYOUT AND DESIGN WITH ALL ROOF AND FLOOR OPENINGS AND HEADERS SHOWN ON THE STRUCTURAL FRAMING PLANS AND THE ARCHITECTURAL AND MECHANICAL

T7. INTERNAL TRUSS CONNECTIONS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER.

T8. TRUSS HANDLING, TEMPORARY SHORING AND PERMANENT BRIDGING AND BRACING OF TRUSSES DURING ERECTION IS THE RESPONSIBILITY OF THE TRUSS

T9. WOOD TRUSS SHOP DRAWINGS AND CALCULATIONS, BEARING THE CERTIFICATION OF A LICENSED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS, SHALL BE SUBMITTED FOR REVIEW. THE SHOP DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:

> DETAIL OF TRUSS WITH SIZES OF ALL MEMBERS. SPECIES, GRADE, AND ALLOWABLE WORKING STRESSES OF LUMBER USED. LOADING CONDITIONS USED IN TRUSS DESIGN. CALCULATED MEMBER FORCES FOR LOADING CONDITIONS USED IN TRUSS ALL TRUSS CONNECTIONS, INCLUDING CONNECTOR SIZES, CAPACITIES AND

STRUCTURAL STEEL

S1. STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

S2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A572, GR. 50 OR ASTM A992. PLATES, ANGLES, CHANNELS, AND MISCELLANEOUS MATERIAL SHALL CONFORM TO ASTM A36. HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B. STEEL PIPE SECTIONS SHALL CONFORM TO ASTM A53, GRADE B.

S3. ANCHOR RODS SHALL BE ASTM F1554, 3/4" DIAMETER WITH 4" HOOKS AND 9" EMBEDMENT, UNLESS NOTED OTHERWISE.

S4. HIGH STRENGTH BOLTING SHALL BE DONE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS."

S5. BOLTS, NUTS, AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. BOLTS SHALL BE 3/4 INCH DIAMETER MINIMUM.

S6. WELDING SHALL BE DONE BY CERTIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE—STEEL," LATEST EDITION. ALL WELDING ELECTRODES SHALL

S7. THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS,

SB. UNLESS NOTED OTHERWISE, CONNECTIONS SHALL BE EITHER AISC SINGLE PLATE OR DOUBLE ANGLE SHEAR CONNECTIONS USING A325 BOLTS IN SHEAR BEARING TYPE

AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL.

S9. FIELD CONNECTIONS, EXCEPT WHERE SHOWN TO BE WELDED, SHALL BE BOLTED.

S10. CONNECTIONS SHALL BE DESIGNED FOR THE BEAM REACTIONS INDICATED ON THE DRAWINGS. IN CASES WHERE REACTIONS ARE NOT INDICATED, PROVIDE AT LEAST ONE HALF (1/2) OF THE UNIFORM LOAD CARRYING CAPACITY OF THE BEAM. THE MINIMUM NUMBER OF BOLTS FOR ANY CONNECTION SHALL BE TWO (2). CONNECTIONS SHALL NOT BE LESS THAN ONE HALF (1/2) THE DEPTH OF THE BEAM.

S11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS. ESPECIALLY WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO CONCRETE WALLS, BEAMS,

S12. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.

S13. ERECT AND MAINTAIN TEMPORARY BRACING TO INSURE THE ALIGNMENT AND STABILITY OF THE STRUCTURE DURING ERECTION UNTIL PERMANENT CONNECTIONS HAVE BEEN

WOOD NOTES

W1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "TIMBER CONSTRUCTION STANDARDS" OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" OF THE AMERICAN FOREST AND PAPER ASSOCIATION, AND "CHAPTER 23-WOOD" OF THE INTERNATIONAL BUILDING

W2. ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR FOR THE LOADS AND/OR REACTIONS SHOWN. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, FOR REVIEW. ENGINEERING CALCULATIONS OF ALL CONNECTIONS AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DIAGRAMS FOR ALL STRUCTURAL TIMBER. THE SHOP DRAWINGS AND CALCULATIONS SHALL BEAR THE CERTIFICATION OF A LICENSED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS.

W3. MATERIALS

A. SAWN LUMBER AND TIMBER

SPECIES: DOUGLAS FIR-LARCH GRADE: NO. 2 MODULUS OF ELASTICITY: 1,600,000 PSI MAXIMUM IN USE MOISTURE CONTENT: 19% MINIMUM WORKING STRESSES DRY USE CONDITION: EXTREME FIBER IN BENDING, SINGER MEMBER, Fb: 1250 PSI TENSION PARALLEL TO GRAIN, Ft: 725 PSI COMPRESSION PERPENDICULAR TO GRAIN, Fc: 565 PSI HORIZONTAL SHEAR, Fv: 180 PSI

B. PLYWOOD

GRADE: C-C EXTERIOR MODULUS OF ELASTICITY: 1,800,000 PSI MINIMUM WORKING STRESSES DRY USE CONDITION: EXTREME FIBER IN BENDING, Fb: 2000 PSI TENSION IN PLANE OF PLYS, Fc: 1640 PSI COMPRESSION IN PLANE OF PLYS, Fc: 1640 PSI SHEAR IN PLANE PERPENDICULAR TO PLYS, Fv: 190 PSI SHEAR IN PLANE OF PLYS, Fs: 75 PSI BEARING PERPENDICULAR TO PLANE OF PLYS, Fc: 340 PSI

W4. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL TIMBER MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT.

W5. NO WOOD TREATMENTS OR PRESERVATIVES SHALL BE USED WITHOUT PRIOR APPROVAL OF THE ARCHITECT.

W6. ALL MATERIAL AND FABRICATING PROCEDURES SHALL BE INSPECTED BY THE OWNER'S TESTING LABORATORY. MATERIALS SHALL BE GRADED AND MARKED IN COMPLIANCE WITH THE SPECIFICATIONS.

W7. UNLESS NOTED OTHERWISE, WOOD COMPONENTS SHALL BE FASTENED AS FOLLOWS:

JOIST TO SILL OR GIRDER	3 — 8D COMMON	TOENAIL	
BRIDGING TO JOIST	2 - 8D COMMON	TOENAIL EACH END	
2" SUBFLOOR TO JOIST OR GIRDER	2 - 16D COMMON	BLIND AND FACE NAIL	
SOLE PLATE TO JOIST OR BLOCKING	16D AT 16" O.C.	TYPICAL FACE NAIL	
TOP PLATE TO STUD	2 - 16D COMMON	END NAIL	
STUD TO SOLE PLATE	4 - 8D COMMON	TOENAIL	
	2 16D COMMON	END NAIL	
DOUBLE STUDS	16D AT 24" O.C.	FACE NAIL	
DOUBLE TOP PLATES	16D AT 16" O.C.	TYPICAL FACE NAIL	
	8 - 16D COMMON	LAP SPLICE	
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3 — 8D COMMON	TOENAIL	
RIM JOIST TO TOP PLATE	8D AT 6" O.C.	TOENAIL	
TOP PLATES, LAP, AND INTERSECTIONS	2 - 16D COMMON	FACE NAIL	
CONTINUOUS HEADER, TWO PIECES	16D COMMON	16" O.C. ALONG EDGE	
CEILING JOISTS TO PLATE	3 — 8D COMMON	TOENAIL	
CONTINUOUS HEADER TO STUD	4 - 8D COMMON	TOENAIL	
CEILING JOISTS TO PARALLEL RAFTERS	3 - 16D COMMON, MIN.	FACE NAIL	
RAFTER TO PLATE	3 - 8D COMMON	TOENAIL	
BUILT-UP CORNER STUDS	16D COMMON	24" O.C.	
BUILT-UP GIRDER AND BEAMS	20D COMMON 32" O.C.	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES	
	2 — 20D COMMON	FACE NAIL AT ENDS AND AT EACH SPLICE	
COLLAR TIE TO RAFTER	3 - 10D COMMON	FACE NAIL	
JACK RAFTER TO HIP	3 - 10D COMMON	TOENAIL	
	2 - 16D COMMON	FACE NAIL	
ROOF RAFTER TO 2-BY RIDGE BEAM	2 - 16D COMMON	TOENAIL	
	2 - 16D COMMON	FACE NAIL	
JOIST TO BAND JOIST	3 - 16D COMMON	FACE NAIL	
LEDGER STRIP	3 — 16D COMMON	FACE NAIL	
	4 - 3" x 0.131" NAILS	FACE NAIL	
	4 - 3" 14 GAGE STAPLES	FACE NAIL	
WOOD STRUCTURAL PANELS AND PARTICLEBOARD	1/2" AND LESS, 6D		
SUBFLOOR, ROOF, AND WALL SHEATHING (TO FRAMING)	19/32" TO 3/4", 8D;6D	· · · · · · · · · · · · · · · · · · ·	
SINGLE FLOOR, COMBINATION	1 1/8" TO 1 1/4", 10D;8D		
SUBFLOOR-UNDERLAYMENT TO FRAMING	3/4" AND LESS, 6D		
	7/8" TO 1", 6D		
PANEL SIDING (TO FRAMING)	1/2" OR LESS, 6D	41.20	
,			
	5/8", 8D		

FASTENING SCHEDULE

FASTENING

LOCATION

CONNECTION

Structural General Notes

Foundation Plan

1st Floor Framing Plan

Roof Framing Plan

Shear Wall and Snow Drift Plan

Foundation Details

Foundation Details

Superstructure Details

Superstructure Details

STRUCTURAL SHEET INDEX

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