

**GENERAL NOTES:**

**DISCLAIMER**

- THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
- AT CONSTRUCTION ISSUE, THESE DRAWING REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, BRACING METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR PERFORMING THE WORK.

**BUILDING DESIGN CRITERIA:**

**A. CODES**

2012 INTERNATIONAL BUILDING CODE  
 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)  
 BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 531)  
 ASCE 7-10

**B. DESIGN LOADS**

FLOOR DEAD LOAD 15 PSF  
 FLOOR LIVE LOAD 40 PSF  
 ROOF DEAD LOAD 18 PSF  
 ROOF LIVE LOAD 20 PSF - REDUCIBLE

**C. WIND LOADS PER ASCE 7-10 & 2012 IBC**

RISK CATEGORY II  
 ULTIMATE DESIGN WIND SPEED,  $V_{ult} = 159$  MPH  
 NOMINAL DESIGN WIND SPEED,  $V_{nom} = 123$  MPH  
 EXPOSURE CATEGORY = C  
 MEAN ROOF HEIGHT,  $h = \pm 22$  FEET  
 ADJUSTMENT FACTOR FOR HEIGHT AND EXPOSURE,  $K = 1.31$   
 TOPOGRAPHIC FACTOR,  $K_{zt} = 1.00$   
 $\alpha = \pm 4$  FEET  
 ROOF SLOPE,  $\theta = 7/10 = 30.3^\circ$

**DESIGN WIND LOAD NOTES:**

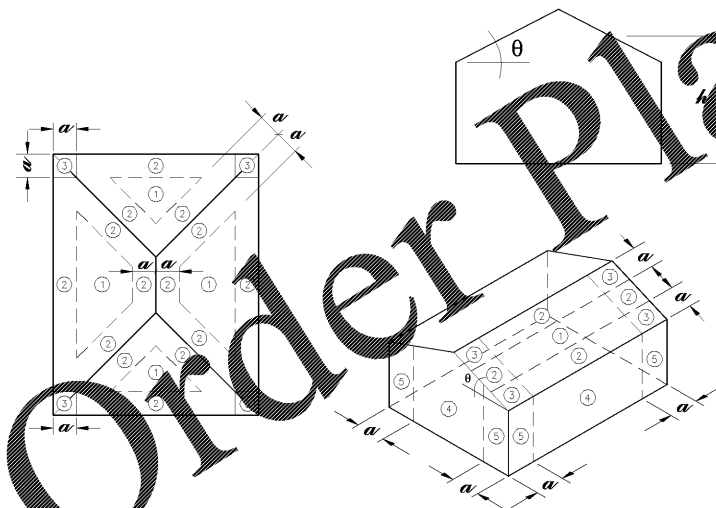
◆	PER CITY OF MOBILE, RISK CAT. II BUILDINGS ARE REQUIRED TO BE DESIGNED FOR AN ULTIMATE WIND SPEED ( $V_{ult}$ ) OF 159 MPH.
*	REFERENCE SECTION 1609.3.1 AND/OR TABLE 1609.3.1 OF THE 2012 INTERNATIONAL BUILDING CODE FOR CONVERSION OF $V_{ult}$ TO $V_{nom}$ .
**	SHOWN IN THIS TABLE ARE NET DESIGN WIND PRESSURES, $P_{net}$ , DETERMINED PER SECTION 30.5.2 OF ASCE 7-10. THESE PRESSURES ARE BASED ON ASD WIND SPEED, $V_{nom}$ PER FIGURE 26.5-1A AND SHALL BE APPLIED NORMAL TO EACH BUILDING SURFACE AS SHOWN IN FIGURE 30.5-1.
***	MINIMUM NET DESIGN WIND PRESSURE PER ASCE 7-10 SECTION 30.2.2.

COMPONENTS AND CLADDING DESIGN PRESSURES \*\*  
 REFERENCE: FIGURE 30.5-1 & SECTION 30.5.2 OF ASCE 7-10

ZONE	TRIB. AREA	COMPONENT PRESSURE	
		POSITIVE (+)	NEGATIVE (-)
ROOF	1	+32.6	-35.6
	2	+31.7	-33.8
	5	+30.6	-31.4
	10	+29.5	-29.5
	100	+32.6	-41.7
WALL	1	+31.7	-39.8
	2	+30.6	-37.3
	5	+29.5	-35.6
	10	+35.6	-38.6
	100	+34.0	-37.0

REFERENCE FIGURES BELOW:

DESIGN ALL WINDOWS AND DOORS AS IMPACT RESISTANCE FOR PRESSURE ABOVE



**LUMBER:**

- UNLESS NOTED OTHERWISE, ALL LUMBER SHALL BE #2 KD SOUTHERN YELLOW PINE OR #2 SPRUCE-PINE-FIR WITH A MAXIMUM MOISTURE CONTENT OF 19 PERCENT.
- ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED. ALL LUMBER EXPOSED TO EXTERIOR ENVIRONMENT SHALL BE PRESSURE TREATED.
- EXTERIOR LOAD-BEARING STUD FRAMING SHALL BE NO. 2 SYP OR SPF;  $F_b=1000$  PSI,  $E=1400$  KSI.
- INTERIOR LOAD-BEARING STUD FRAMING SHALL BE NO. 2 SYP OR SPF, SIZE SHOWN ON PLANS;  $F_b=1000$  PSI,  $E=1400$  KSI.
- ROOF DECK SHALL BE MINIMUM  $5/8$ " EXTERIOR GRADE PLYWOOD ATTACHED WITH 8d RING SHANK NAILS AS SHOWN ON ATTACHMENT DETAILS.
- INSTALL SIMPSON PSC CLIPS OR USP MODEL PC SHEATHING CLIPS AT ALL UNSUPPORTED EDGES OF ROOF DECK (ONE PER SPAN).
- UNLESS NOTED OTHERWISE, ALL EXTERIOR WALL SHEATHING TO BE  $1/2$ " PLYWOOD ATTACHED DIRECTLY TO WALL FRAMING MEMBERS. BLOCK ALL PANEL EDGES AND NAIL WITH 8d COMMON NAILS @ 4" o.c. AT ALL PANEL EDGES, BLOCKING, AND TOP & BOTTOM PLATES WITH FIELD NAILING @ 12" o.c.
- ALL PLYWOOD PANELS SHALL BE INSTALLED IN ACCORDANCE WITH APA RECOMMENDATIONS AND RELATED SPECIFICATIONS. ORIENTED STRAND BOARD "OSB" MAY BE SUBSTITUTED FOR PLYWOOD WHERE APPROVED BY THE ARCHITECT/ENGINEER AND PROVIDED THE PANEL CONFORM TO THE APPROPRIATE APA RAINS FOR THE INTENDED APPLICATION.
- PROVIDE A MINIMUM OF 2 STUDS NAILED TOGETHER BENEATH ALL HEADERS UNLESS NOTED OTHERWISE. USE AT LEAST 2-2x10 HEADER FOR ALL OPENINGS UP TO 4'-0" WIDE IN BEARING WALLS. USE AT LEAST 3-2x10 HEADER FOR ALL OPENINGS UP TO 8'-0" WIDE IN BEARING WALLS.
- ALL MULTIPLE PIECE WOOD BEAMS SHALL BE CONNECTED TOGETHER WITH MINIMUM TWO ROWS OF 16d NAILS @ 12" o.c. (U.N.O.).
- AS A MINIMUM, ANCHOR AND NAIL FRAMING SHALL COMPLY WITH "TABLE 2304.9.1 - FASTENING SCHEDULE" OF THE 2012 INTERNATIONAL BUILDING CODE.
- ALL BOLTS, NAILS, JOIST HANGERS, CLIPS, STRAPS, ETC THAT ARE IN CONTACT WITH PRESSURE TREATED MATERIAL SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.
- ALL CONNECTORS AND HARDWARE SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER RECOMMENDATIONS, SIZE, QUANTITY, AND LOCATION OF NAILS AND FASTENERS SHALL CONFORM TO THE MANUFACTURERS PUBLISHED LITERATURE.
- LVL BEAM SHALL BE 2950 Fb-2.0E AS MANUFACTURED.
- ALL EXTERIOR LVL'S TO BE WRAPPED & PROTECTED FROM THE WEATHER
- ROOF SHINGLES TO BE HIGH WIND CLASS "H" WITH A MINIMUM OF 6 FASTENERS EACH.

**FOUNDATIONS:**

- NO SOILS REPORT HAS BEEN PREPARED FOR THIS PROJECT, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE SOIL SUPPORT FOR THE FOUNDATION DESIGN, AND SHALL REPORT UNEXPECTED CONDITIONS TO THE DESIGNER.
- ALL FOOTINGS, OR PORTIONS THEREOF, BELOW GRADE SHALL BE FORMED BY NEAT EXCAVATIONS.
- FOOTINGS TO BE CENTERED ON WALLS OR COLUMNS UNLESS NOTED OTHERWISE.
- ALLOWABLE SOIL BEARING = 1500 psf
- COMPACT ALL SOILS BELOW SLAB AND FOOTINGS BASED ON STANDARD PROCTOR DENSITY.
- ALL SOIL FILL TO BE PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

**MASONRY:**

- HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-90 LIGHTWEIGHT, TYPE N-1 WITH A MINIMUM COMPRESSIVE STRENGTH  $f'_m = 1500$  PSI.
- ALL MORTAR FOR USE IN MASONRY SHALL CONFORM TO ASTM C 270, TYPE M OR S. GROUT USED IN MASONRY SHALL BE MINIMUM 2500 PSI AND CONFORM TO ASTM C 476. MINIMUM 8 SACK MIX.
- REINFORCING BARS TO BE GRADE 60 AND MEET ASTM A 615.
- GROUT FILL ALL CELLS BELOW GRADE.
- LAY ALL MASONRY IN A RUNNING BOND PATTERN.
- PROVIDE #9 TRUSS TYPE JOINT REINFORCEMENT AT 16" o.c. FOR TYPICAL HORIZONTAL REINFORCING.
- PROVIDE #9 TRUSS TYPE JOINT REINFORCEMENT AT 8" o.c. FOR TYPICAL HORIZONTAL REINFORCING AT PARAPET WALLS.
- PROVIDE A MINIMUM OF 1" GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.

**CONCRETE WORK:**

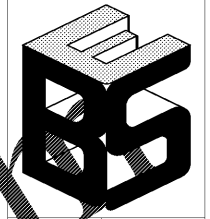
- CONCRETE (NORMAL WEIGHT) COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3000 PSI UNLESS NOTED.
- ALL REINFORCING SHALL MEET ASTM A615, GRADE 60. WELDED WIRE (WWF) SHALL MEET ASTM A185.
- CONCRETE COVERAGE OF REINFORCEMENT SHALL BE:  
 FOOTINGS 3" BOTTOM AND SIDES  
 WALLS 1/2"  
 SLABS 3/4"  
 PEDESTALS 1 1/2" CLEAR OF TIES
- ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE CURRENT "ACI MANUAL OF CONCRETE PLACEMENT AND PRACTICE".
- PORE FILLER SHALL CONFORM TO ASTM C 150, TYPE I OR II.
- AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C 33. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED PER CRSI AND ACI STANDARDS, INCLUDING CONCRETE COVER AND BAR SUPPORTS. LAP BARS AT ALL CORNERS, INCLUDING CORNER BARS AND DOWELS, IN ACCORDANCE WITH SPLICE SCHEDULE OR IN THE ABSENCE THEREOF 40 BAR DIAMETERS. LAP WWF 6" OR ONE FULL MEASUREMENT, WHICHEVER IS GREATER.

**WIND BORNE DEBRIS PROTECTION FOR EXTERIOR WINDOWS IBC 2012**

- WINDOWS TO BE DESIGNED FOR AN ASD DESIGN WIND PRESSURE OF  $\pm 40$  PSF, REFERENCE CHART.
- THE CONTRACTOR MUST USE IMPACT RESISTANT WINDOWS PER ASTM E-1886 & E1996

**STRUCTURAL DRAWING INDEX:**

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**STRUCTURAL NOTES**  
**MULHERIN CUSTODIAL HOME**

2496 HALLS MILL ROAD  
 MOBILE, ALABAMA

LOCATION:



FOR PERMIT

REVISIONS:

DRAWN BY: DRB

DESIGNED BY: CHE

DATE: 03 OCT 2018

SHEET

S0.0

18262