2-A-24-SU, Revised 2.5.2024

FOR/OWNER:
BRADEN FAMILY PROPERTIES LLC
7400 N RUGGLES FERRY PK
KNOXVILLE, TENNESSEE 37924
PHONE: 865-696-7343

NOTES:

-TOTAL LOT AREA: 12,499 SQ. FT.

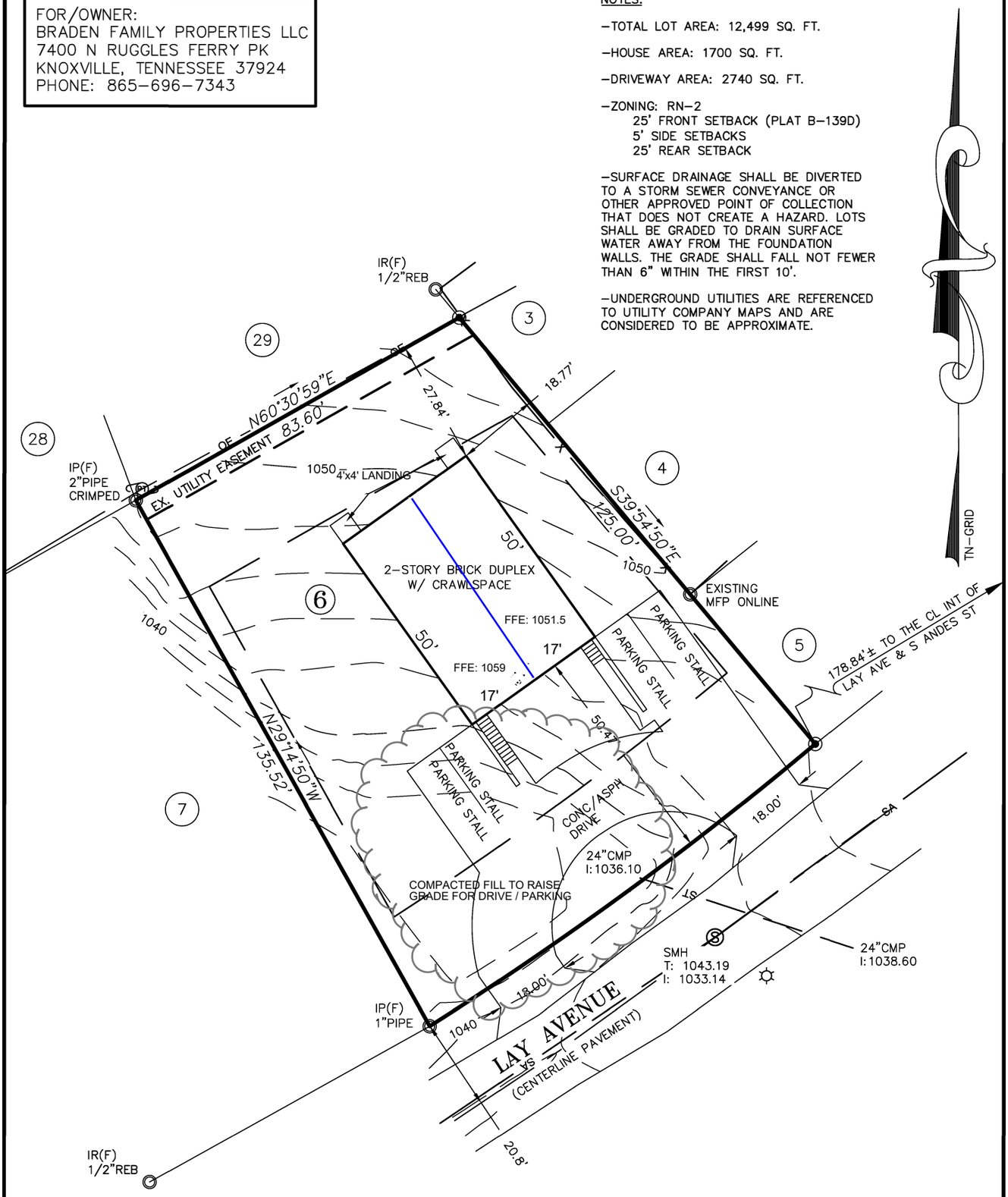
-HOUSE AREA: 1700 SQ. FT.

-DRIVEWAY AREA: 2740 SQ. FT.

-ZONING: RN-2
25' FRONT SETBACK (PLAT B-139D)
5' SIDE SETBACKS
25' REAR SETBACK

-SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER APPROVED POINT OF COLLECTION THAT DOES NOT CREATE A HAZARD. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM THE FOUNDATION WALLS. THE GRADE SHALL FALL NOT FEWER THAN 6" WITHIN THE FIRST 10'.

-UNDERGROUND UTILITIES ARE REFERENCED TO UTILITY COMPANY MAPS AND ARE CONSIDERED TO BE APPROXIMATE.



PLOT PLAN OF:

Third Unit, Oakland Park Addition

LOT 6, BLOCK "E"

3351 Lay Avenue
Knoxville, Tennessee 37914

Ward	13	City	KNOXVILLE
District	1	County	KNOX
Plat Cab:	B	Slide	139D
Deed Book	202308100007394	Page	-
CLT #	082 E "K"	Parcel	015
Scale	1"=30'	Date	11/20/2023
Drawn By	C. VITKUS	City Block	13583
Project #	4862		

THIS SURVEY WAS DONE UNDER AUTHORITY OF TCA 62-18-126. THIS SURVEY IS NOT A GENERAL PROPERTY SURVEY AS DEFINED UNDER RULE 0820-3-07.

NOTE:
NO TITLE REPORT WAS FURNISHED TO THIS SURVEYOR AND OTHER EASEMENTS AND/OR EXCEPTIONS NOT APPARENT IN THE FIELD MAY OR MAY NOT EXIST AND MAY BE REVEALED BY A TITLE SEARCH BY A TITLE ATTORNEY.

LYNCH SURVEYS LLC
SUBDIVISIONS | AS-BUILTS | SITE DESIGN
4405 COSTER RD. KNOXVILLE, TENN. 37912
865-584-2630 FAX 865-584-2801 WWW.LYNCHSURVEY.COM

1 3D View

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

3D

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Checker

A102

Scale

9/20/2023 5:50:03 PM

FLOOR PLAN NOTES

1. VERIFY ALL DIMENSIONS IN FIELD

2. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WORK AND MATERIALS IN STRICT ACCORDANCE WITH APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED BUILDING PERMITS AND APPROVALS.

5. PROVIDE ALL BLOCKING NECESSARY FOR THE CONCEALED ATTACHMENT OF CABINETRY, SHELVING, HANDRAILS, LIGHT FIXTURES, BATH ACCESSORIES, ETC.

6. ALL UTILITY RUNS (HVAC DUCTWORK, ELECTRICAL WIRING, PLUMBING, ETC.) TO BE RUN THROUGH CONCEALED SPACES (I.E. WALLS, DROPPED CEILINGS, ETC.) AND ARE NOT TO BE EXPOSED (I.E. WIRE MOLD).

7. DO NOT SCALE DRAWINGS: DIMENSIONS GOVERN.

8. COLORS OF NATIVE STONE, SIDING, ROOFING AND TRIM SHALL BE SELECTED BY OWNER.

9. INTERIOR FINISHES INCLUDING BUT NOT LIMITED TO PAINT, WALL PAPER, CARPETING, VINYL FLOORING, WOOD FLOORING AND TILE SHALL BE AS SELECTED BY OWNER

DOOR SCHEDULE 02				
TYPE MARK	Family	WIDTH	HEIGHT	Count
D-1	Door-Interior-Single-2_Panel-Wood	2' - 2"	6' - 8"	2
D-2	Door-Interior-Single-2_Panel-Wood	3' - 0"	6' - 8"	6
D-3	Door-Interior-Single-2_Panel-Wood	2' - 6"	6' - 8"	8
D-4	Door-Exterior-Single-Entry-Half Arch Glass-Wood_Clad	2' - 6"	6' - 8"	2
D-5	Door-Interior-Single-2_Panel-Wood	2' - 4"	6' - 8"	12
D-6	Door-Double-Flush_Panel	4' - 0"	6' - 8"	4
D-7	Door-Exterior-Single-Entry-Half Arch Glass-Wood_Clad	3' - 6"	6' - 8"	2
D-8	Door-Double-Flush_Panel	5' - 0"	6' - 8"	2

Grand total: 38

DOOR SCHEDULE NOTES

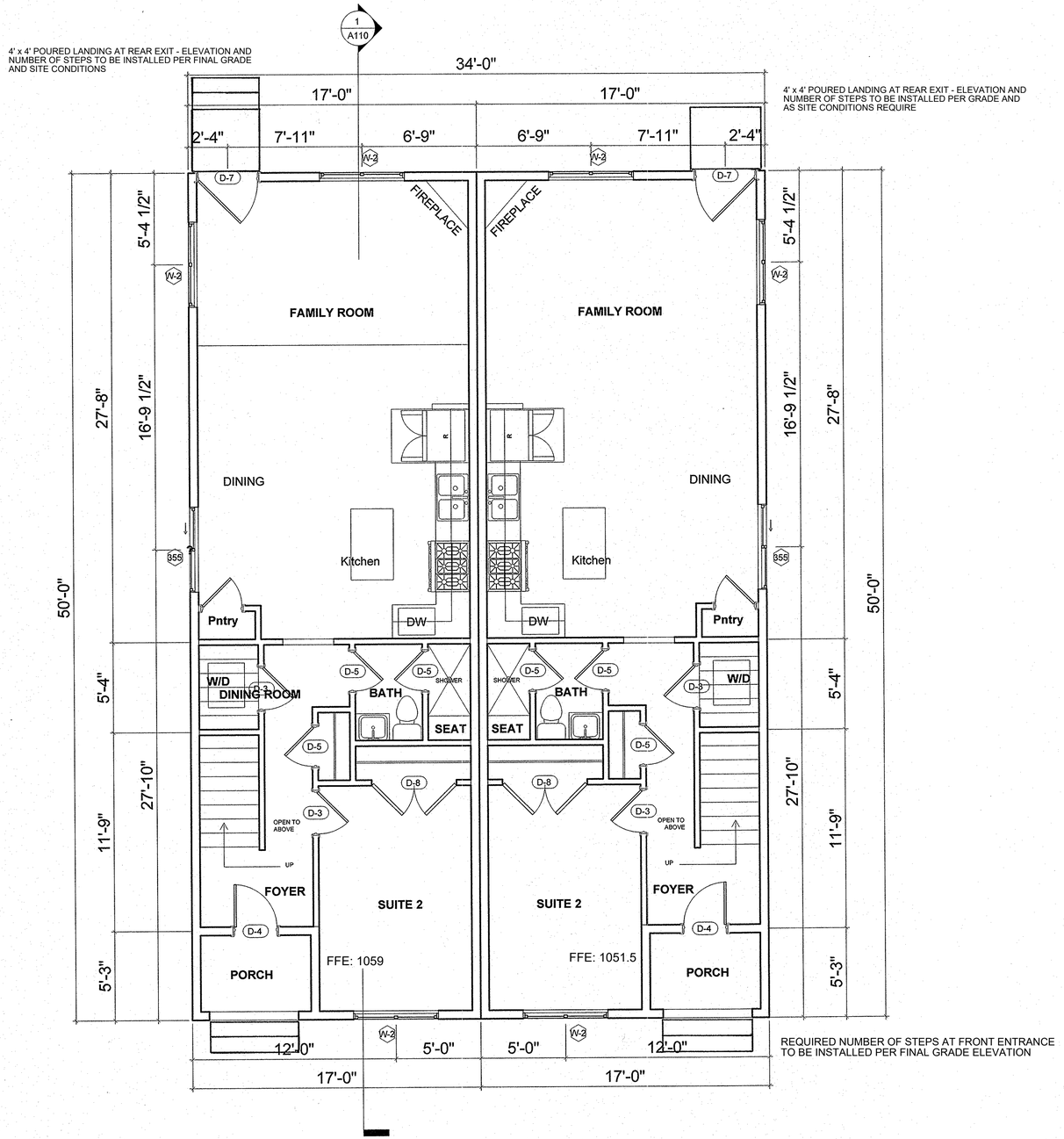
1- PRIOR TO ORDER, MODEL AND SIZE SHALL BE FIELD VERIFIED AND CONFIRMED BY OWNER AND ARCHITECT.

2- PER CRC R302.5.1, DOORS INSTALLED BETWEEN THE DWELLING AN ATTACHED GARAGE SHALL BE SELF-CLOSING AND SELF-LATCHING.
ADDITIONALLY, THEY SHOULD BE ONE OF THE FOLLOWING:

A- SOLID WOOD DOORS NOT LESS THAN 1-3/8" THICK
B- SOLID OR HONEYCOMBED CORE STEEL DOORS NOT LESS THAN 1-3/8" THICK
C- A 20-MINUTE FIRE RATED DOOR

3- ALL GLASS IN EXTERIOR DOORS MUST HAVE TEMPERED GLASS, AND IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS.

4- HEADER HT. @ 8' - 0", TYPICAL U.O.N. SEE EXTERIOR ELEVATIONS.



1 LEVEL 01 - PROPOSED
1/4" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

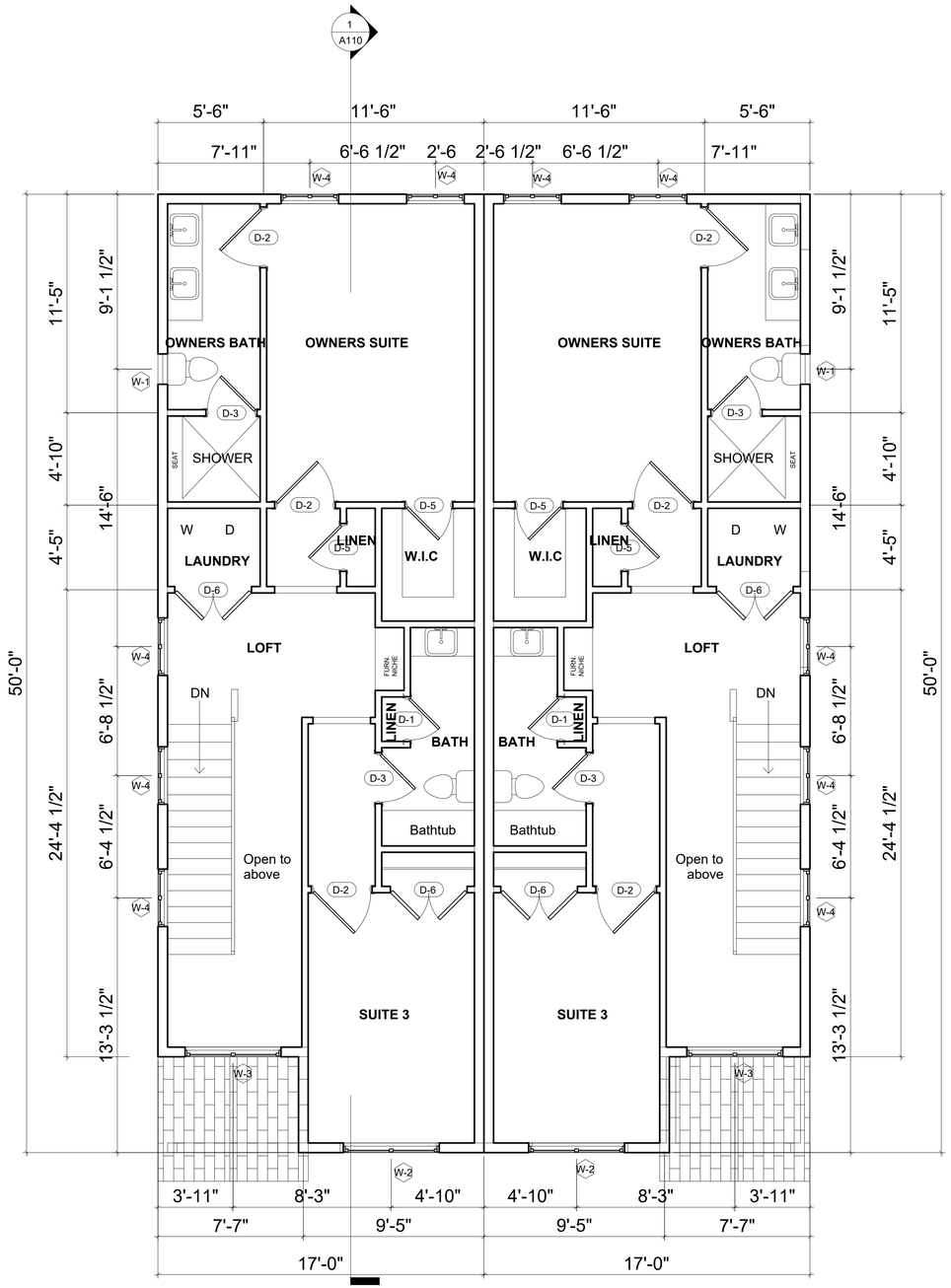
FARN

PROPOSED FLOOR PLAN

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A103

Scale 1/4" = 1'-0"



1 LEVEL 02 - PROPOSED
1/4" = 1'-0"

WINDOW SCHEDULE 02					
TYPE MARK	Family	WIDTH	HEIGHT	SILL HEIGHT	Count
355	Window-Sliding-Double	5' - 0"	3' - 0"	3' - 0"	2
W-1	Window-Awning-Single	1' - 7"	2' - 4"		2
W-2	Window-Double-Hung-Double	5' - 0"	4' - 8"	2' - 0"	8
W-3	Window-Double-Hung-Double	5' - 0"	2' - 6"	4' - 0"	2
W-4	Window-Double-Hung-Double	3' - 0"	4' - 8"	2' - 0"	10

Grand total: 24

WINDOW SCHEDULE NOTES

1- PRIOR TO ORDER, MODEL AND SIZE SHALL BE FIELD VERIFIED AND CONFIRMED BY OWNER AND ARCHITECT.

2- ALL GLASS IN EXTERIOR WINDOWS MUST BE TEMPERED GLASS.

3- ALL SKYLIGHT UNITS SHALL BE TESTED AND LABELED IN COMPLIANCE WITH AAMA / WDMA / CSA 101 / 1.S.2 / A440 PER CRC SECTION R308.6.9.

4-ALL SKYLIGHT UNITS LOCATED ON A ROOF WITH SLOPE LESS THAN 3" / 12" MUST BE INSTALLED ON A 4"
MINIMUM HIGH CURB.

5-HEADER HT. @ 7' - 0", TYPICAL U.O.N. SEE EXTERIOR ELEVATIONS.

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

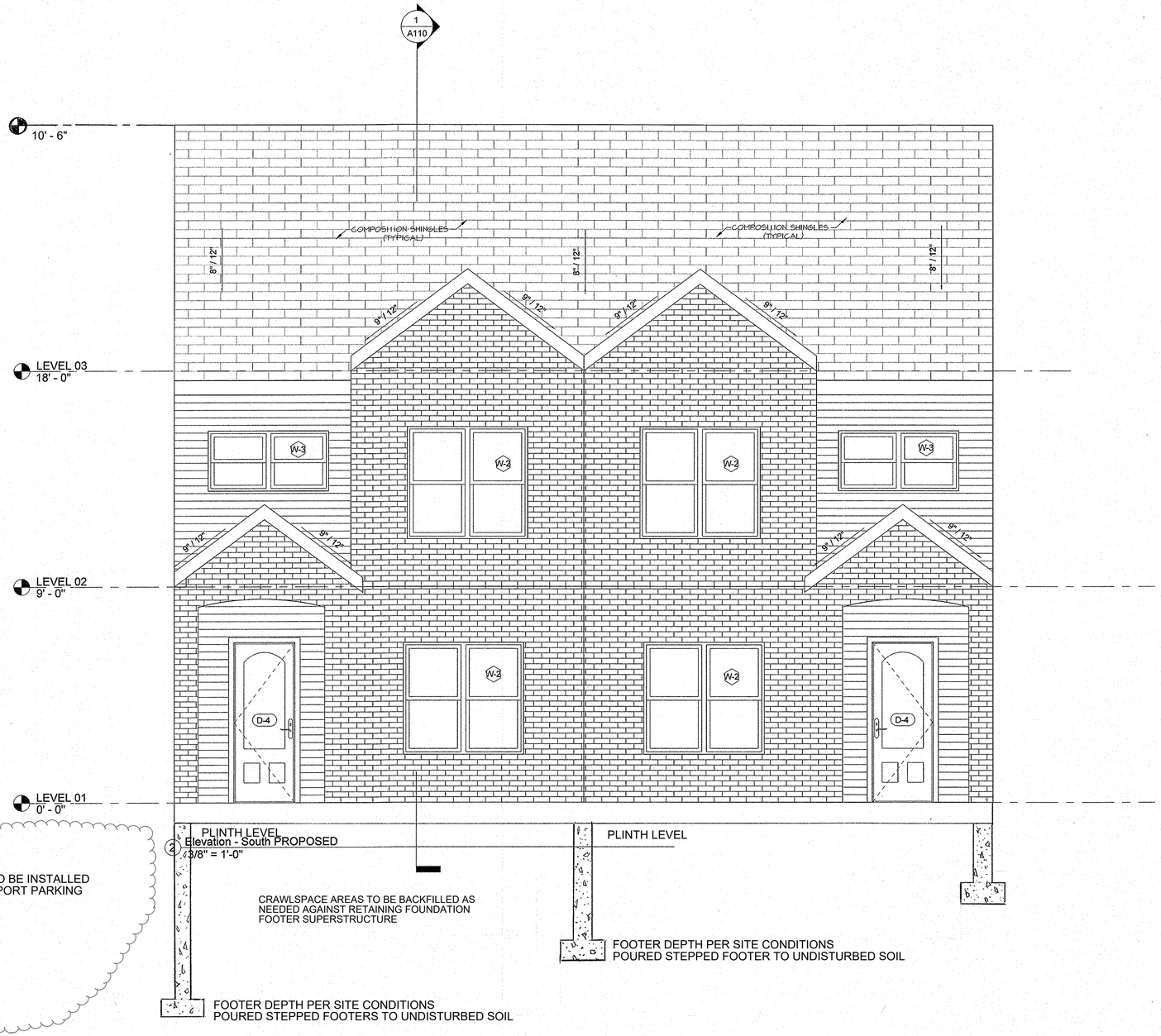
FARN

PROPOSED FLOOR PLAN

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Author
Checked by	Checker

A104

Scale 1/4" = 1'-0"



ELEVATION NOTES

1. GRADE ELEVATIONS SHOWN DO NOT NECESSARILY REFER TO THIS OR ANY OTHER LOT. THEY ARE FOR DIAGRAMMATIC PURPOSES ONLY AND MAY VARY. BUILDER IS RESPONSIBLE FOR ADAPTING THIS PLAN TO SUIT THE EXISTING TOPOGRAPHY OF THE SITE.
2. WINDOW GRILLS SHOWN ARE TO SCHEMATICALLY EXPRESS DESIGN INTENT. ACTUAL STD. GRILLS MAY VARY PER MANUFACTURER OR CUSTOM GRILLS MAY BE REQUIRED. ANY VARIATIONS FROM THAT SHOWN MUST BE APPROVED BY BUILDER.
3. ROOF VENTILATION TO BE DETERMINED BY BUILDER AS PER CODE
4. DOWNSPOUTS NOT SHOWN FOR CLARITY. CONTRACTOR TO VERIFY LOCATIONS W/ OWNER
5. CHIMNEY SHALL EXTEND AT LEAST 2' HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10'.

NOTE:

STREET FACING FACADE = 680 SF

WINDOW AND DOOR GLAZING = 150 SF

MINIMUM TRANSPARENCY 22 %

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

ELEVATIONS

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Checker

A105

Scale 3/8" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

ELEVATIONS

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A106

Scale 3/8" = 1'-0"

3/29/2023 3:50:07 PM

1 Elevation - East PROPOSED
3/8" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

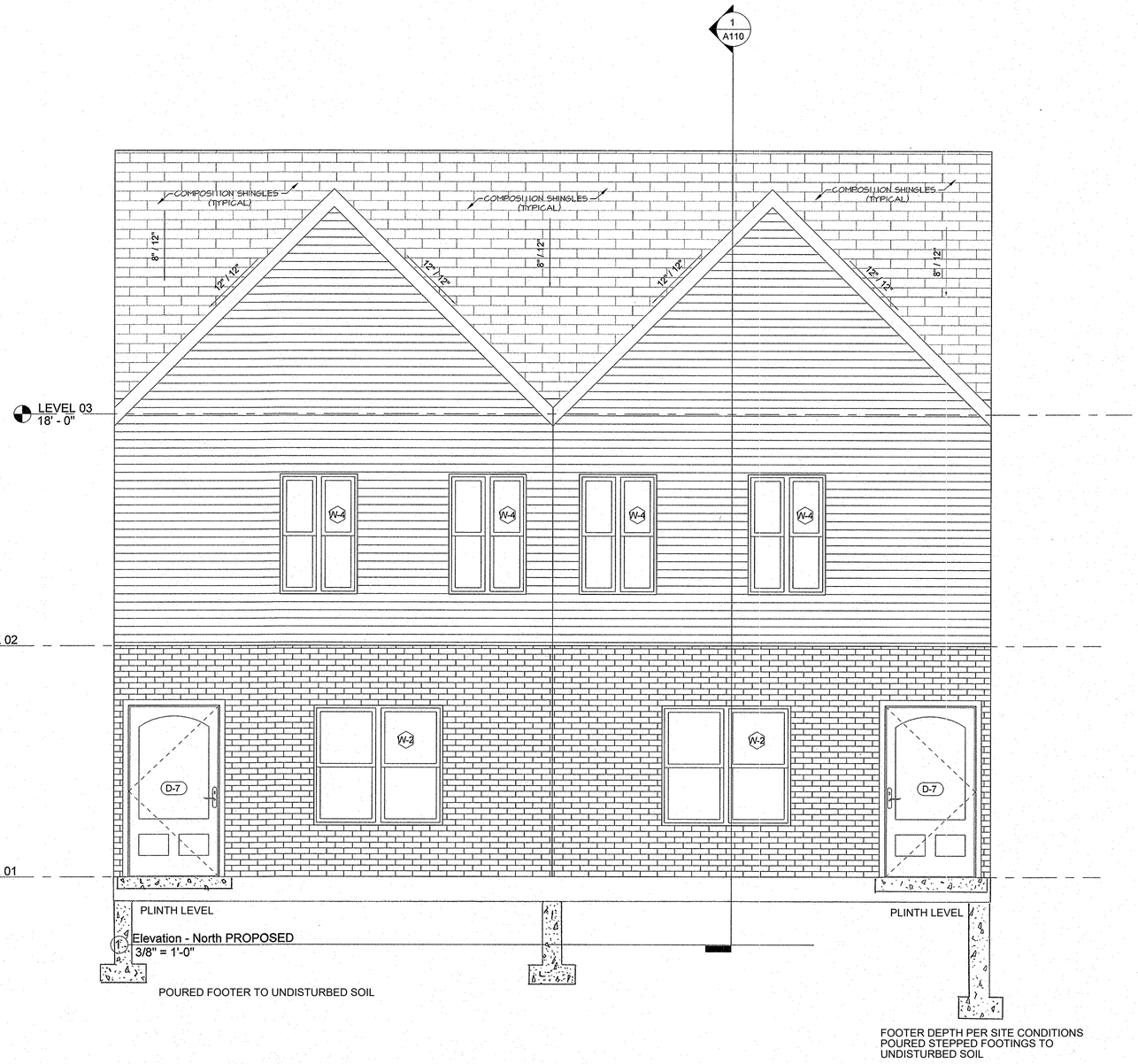
FARN

ELEVATION

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Author
Checked by	Checker

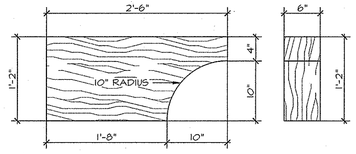
A107

Scale 3/8" = 1'-0"



ELEVATION NOTES

1. GRADE ELEVATIONS SHOWN DO NOT NECESSARILY REFER TO THIS OR ANY OTHER LOT. THEY ARE FOR DIAGRAMMATIC PURPOSES ONLY AND MAY VARY. BUILDER IS RESPONSIBLE FOR ADAPTING THIS PLAN TO SUIT THE EXISTING TOPOGRAPHY OF THE SITE.
2. WINDOW GRILLS SHOWN ARE TO SCHEMATICALLY EXPRESS DESIGN INTENT. ACTUAL STD. GRILLS MAY VARY PER MANUFACTURER OR CUSTOM GRILLS MAY BE REQUIRED. ANY VARIATIONS FROM THAT SHOWN MUST BE APPROVED BY BUILDER.
3. ROOF VENTILATION TO BE DETERMINED BY BUILDER AS PER CODE
4. DOWNSPOUTS NOT SHOWN FOR CLARITY. CONTRACTOR TO VERIFY LOCATIONS W/ OWNER
5. CHIMNEY SHALL EXTEND AT LEAST 2' HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10'.



C/6 (R.S.) TIMBER OUTLOOKER DETAIL
SCALE: 1" = 1'-0"

NOTICE:

LIVING CONCEPTS HOME PLANNING HAS TAKEN GREAT CARE IN THE PREPARATION OF THESE PLANS. HOWEVER, SINCE CODES ARE SUBJECT TO CHANGE AND INTERPRETATIONS VARY, WE DO NOT GUARANTEE COMPLIANCE WITH ANY SPECIFIC CODES OR ORDINANCES. PURCHASER OR BUILDER IS SOLELY RESPONSIBLE FOR VERIFYING COMPLIANCE WITH LOCAL BUILDING CODES AND ORDINANCES AND FOR ANY MODIFICATIONS TO THE PLANS THAT MAY NEED TO BE MADE IN ORDER TO COMPLY. BUILDER IS ALSO RESPONSIBLE FOR VERIFYING SITE AND SOIL CONDITIONS AS WELL AS ALL DIMENSIONS AND SQUARE FOOTAGE CALCULATIONS BEFORE BEGINNING CONSTRUCTION. THESE PLANS SHOULD BE REVIEWED BY A LOCAL ARCHITECT OR ENGINEER TO VERIFY ADAPTATION TO SITE AND LOCAL STRUCTURAL DESIGN REQUIREMENTS. LIVING CONCEPTS HOME PLANNING MAY NOT BE HELD RESPONSIBLE AND ASSUMES NO LIABILITY FOR ANY HOME CONSTRUCTED FROM THESE PLANS.

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

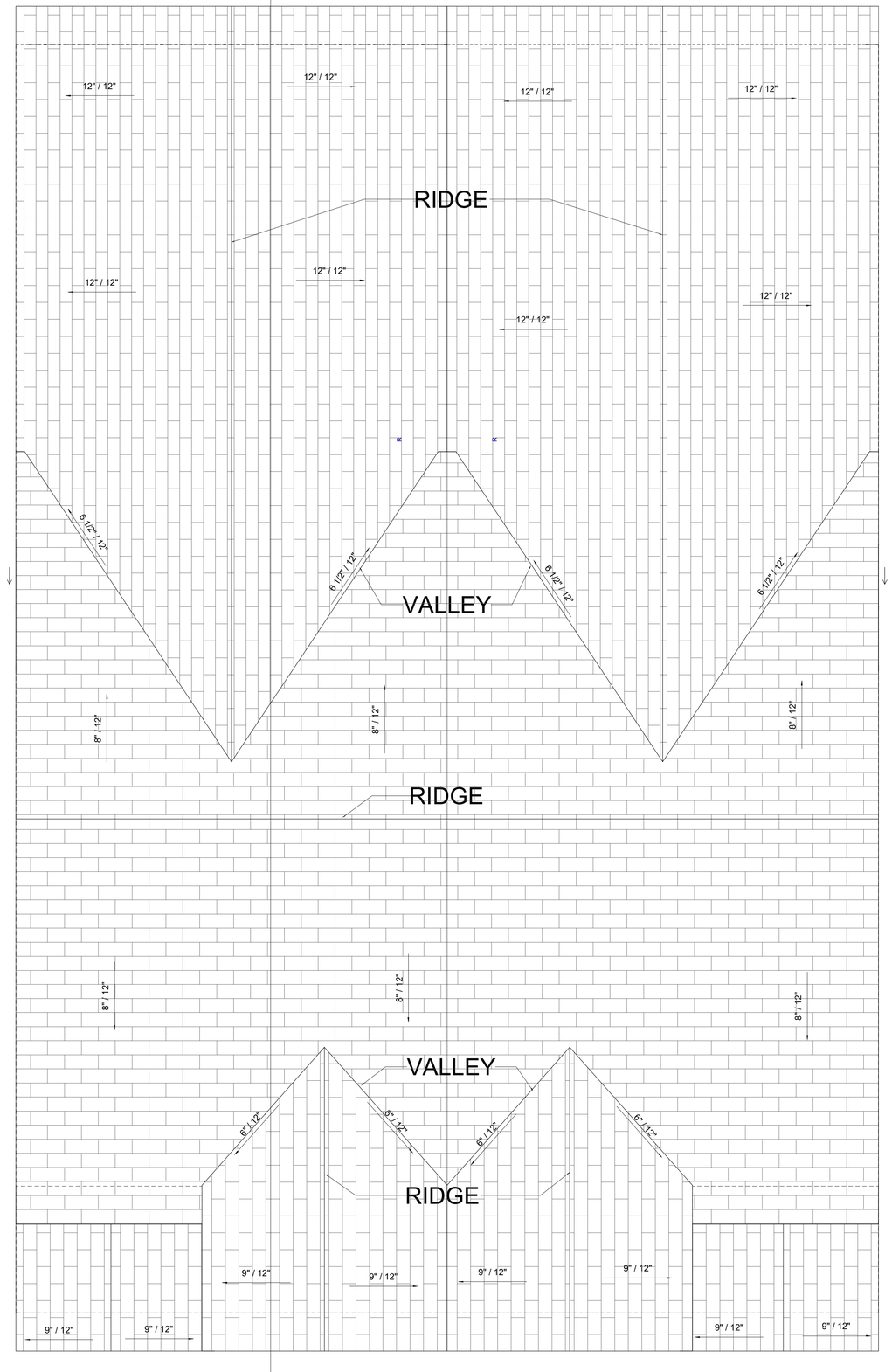
FARN

ELEVATION

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Author
Checked by	Checker

A108

Scale 3/8" = 1'-0"



1 PROPOSED ROOFING PLAN
3/8" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

Roof Plan

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Checker

A109

Scale 3/8" = 1'-0"

1 Section 1
1/4" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

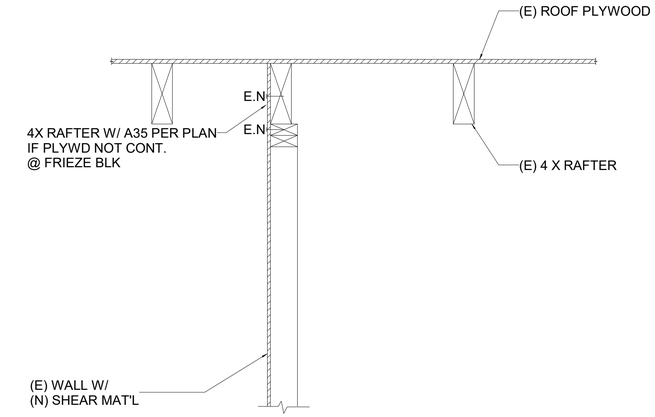
FARN

CROSS-SECTIONS

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Checker

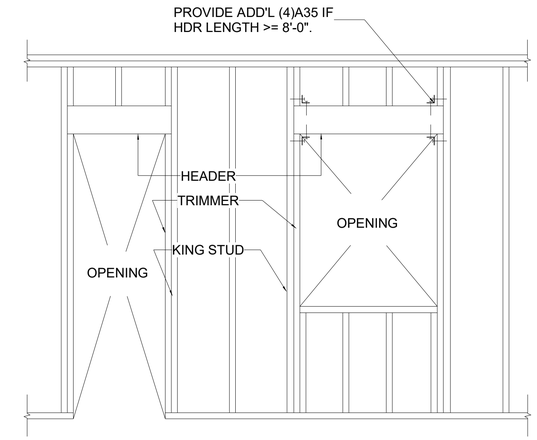
A110

Scale 1/4" = 1'-0"

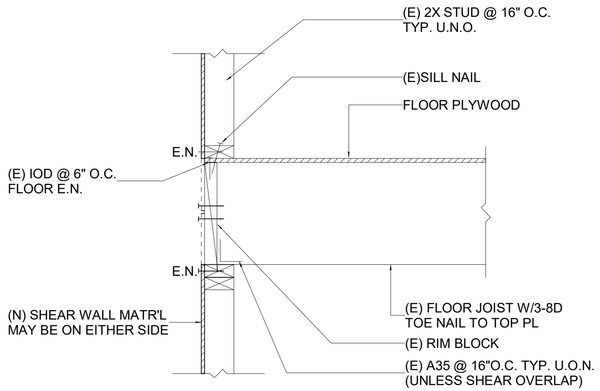


1 INTERIOR SHEARWALL
1" = 1'-0"

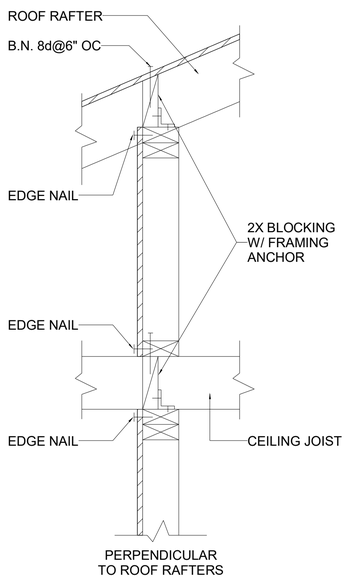
ALL STRUCTURAL MEMBERS CONNECTION SHALL FOLLOW THE NAILING SCHEDULE ON SHEET SI



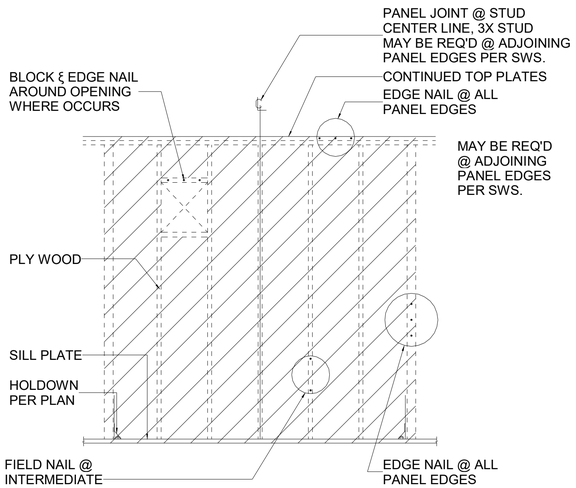
2 TYP. WINDOW & DOOR OPENING
1" = 1'-0"



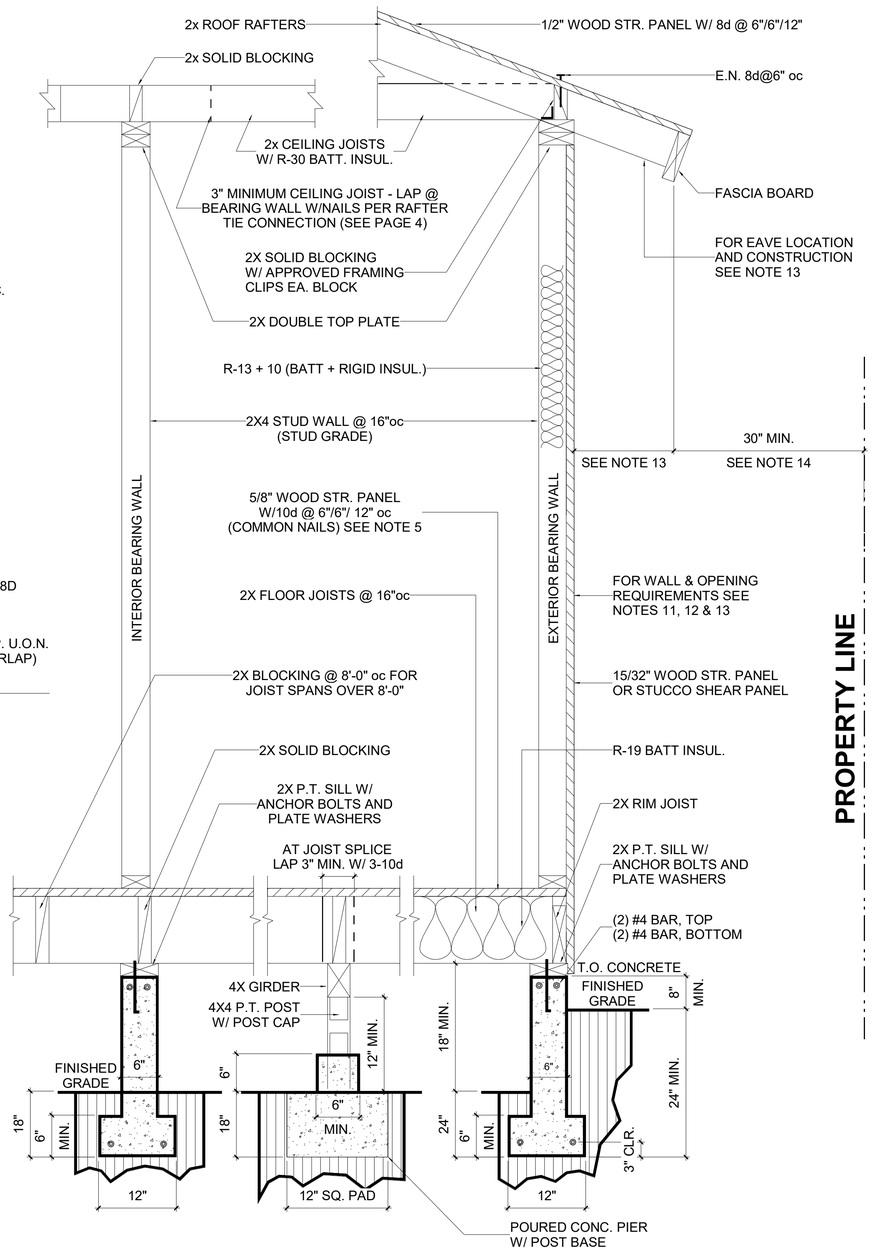
3 FLOOR JOIST WITH (N) SHEARWALL
1" = 1'-0"



4 INTERIOR SHEAR WALL AT ATTIC
1" = 1'-0"



5 TYP. SHEAR WALL
1" = 1'-0"



6 WALL SECTION RAISED FLOOR CONSTRUCTION
1" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

WALL DETAILS

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Checker

A111

Scale	1" = 1'-0"

3/29/2023 3:50:10 PM

ANCHORAGE NOTES:

1. U.O.N. FOUNDATION PLAN, SILL PLATES FOR ALL EXTERIOR, INTERIOR BEARING AND SHEAR WALLS SHALL BE ANCHORED TO CONCRETE FOUNDATION WITH 5/8" ANCHOR BOLTS AT MAXIMUM 4 FEET ON CENTER. ANCHOR BOLTS SHALL BE INSTALLED WITH SIMPSON BP -3 PER CBC 2016 2305.3.11 BEARING PLATES.
2. BEARING SLIDE SHEAR WALL AND OR EXTERIOR WALL SALES RECEIVING FASTENERS SHALL HAVE THE FIRST FASTENER AT 4" MINIMUM AND 12" MAXIMUM (PER CBC 2016 2308.6) FROM EACH CUT END OF THE SILL (TWO FASTENERS MINIMUM PER MUDSILL PIECES).
3. INTERIOR NON-BEARING WALL SEALS TO RECEIVE THE FIRST FASTENER AT 4" MINIMUM AND 12" MINIMUM FROM EACH CUT END OF THE SILL.
4. ANCHOR BOLTS MATERIAL SHALL BE ASTM A307.
5. POWDER DRIVEN ANCHOR PINS (HILTI DN72S36, ICC REPORT 1290) MAY BE USED ON INTERIOR NON-SHEER AND NON-BEARING WALL ONLY.
6. POWDER DRIVEN ANCHOR PIN SHE'LL BE SPACED AT MAXIMUM 16" O.C..
7. UNLESS HELD IN PLACE WHEN POURING CONCRETE FASTENERS TO BE INSTALLED AFTER THE CONCRETE HAS SET FOR 7 DAYS MINIMUM.
8. ANCHOR BOLTS SHALL BE EMBEDDED 7" MINIMUM INTO CONCRETE OR REINFORCED MASONRY AND 15" MINIMUM INTO UNREINFORCED GROUTED MASONRY.
9. U.O.N HPAHD, HTT, PHD, HDA, AND HD HOLDOWNS SHALL BE ATTACHED TO 4X4 POST IN WITH SHEAR EDGE NAILINGALONG FULL HEIGHT.
10. CONTRACTOR IS TO VERIFY LOCATION OF HOLDOWNS AND ANCHOR BLOTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLTIONS.
11. U.N.O. INDIVIDUAL ISOLATED POSTS SHALL BE ANCHORED BY SIMPSON PB CONNECTIONS.
12. HOLDOWNS SHALL BE TIED IN PLACE PRIOR TO INSPECTION.
13. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GAVANIZED, STAINLESS STEEL, CILICON BRONZE OR COPPER.

ADDITION AND REMODELING:

1. EXISTING CONSTRUCTION SHOWING ON DRAWINGS WAS OBTAINED FROM EXISTING DRAWINGS AND / OR BY FIELD MEASUREMENTS.
2. CONTRACTOR SHOW VERIFY ALL EXISTING FIELD CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.
3. CUTTING, DRILLING, REMOVAL ETC OF THE EXISTING CONSTRUCTION SHALL BE PERFORMED IN GREAT CARE NOT TO DAMAGE THE INTEGRITY OF THE BUILDING.
4. NO EXISTING MEMBERS MAY BE REMOVED UNLESS THE STRUCTURAL PLANS INDICATED OTHERWISE.
5. IF STRUCTURAL MEMBERS NOT INDICATE FOR REMOVAL OR INTERFERING WITH THE NEW WORK, THE ENGINEERS SHALL BE IMMEDIATELY NOTIFY.
6. CONTRACTORS SHALL SAFELY SHORE THE EXISTING CONSTRUCTION WHEREVER THE EXISTING SUPPORTS ARE REMOVED TO ALLOW THE INSTALLATION OF THE NEW WORK.
7. ALL LOCATIONS WHERE NEW STRUCTURE IS ATTACHED TO EXISTING STRUCTURE SHALL BE WATERPROOF AND DAMPPROOF.
8. OWNER OR HIS CONTRACTOR TO ENSURE THAT THE NEW ALTERATION WORKS SHALL NOT CAUSE ANY EXISTING MECHANICAL, ELECTRICAL, PLUMBING ETC SYSTEMS TO BECOME UNOPERATIONAL .

FOUNDATION DESIGN LOAD:

WHEN A SITE SPECIFIC FOUNDATION AND SOILS INVESTIGATION IS EXEMPTED, THE BUILDING AND FOUNDATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING GENERAL GUIDLINES ON THE BASIS OF THEIR LOCATION:

- THE EXEMPTION APPLIES ONLY IN NON-GEOLOGICAL HAZARD ZONES:
- THE MAXIMUM ALLOWABLE FOUNDATION PRESSURE SHALL NOT EXCEED 1500 PSF.
- THE MINIMUM DEPTH OF FOOTINGS SHALL BE 18 INCHES BELOW THE UNDISTURBED GROUND SURFACE AND MINIMUM DEPTH OF INTERIOR FOOTINGS SHALL BE 12 INCHES BELOW GROUND SURFACE.
- THE NEW FOUNDATION TYPE SHALL BE COMPATIBLE WITH THE EXISTING FOUNDATION (WHERE APPLICABLE).
- THE MAXIMUM ALLOWABLE LATERAL BEARING PRESSURE SHALL NOT EXCEED 100 PSF/FT.
- ALLOWABLE SLIDING RESISTANCE = 130 PSF X FOOTING SOILD CONTACT AREA BUT NOT TO EXCEED 0.5 X DEAD LOAD ON FOOTING.
- ALLOWABLE FRICTIONAL RESISTANCE FOR PIERS = 250 PSF
- SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE SHALL NOT BE LESS THAN 2500 PSI.
- SITE SLOPE NOT TO BE STEEPER THAN ON UNIT VERTICAL IN SIX AND HALF UNIT HORIZONTAL (15.4%).

CONCRETE NOTES:

1. FOUNDATION CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
2. RE-BARS TOWELS AND OTHER EMBEDDED ELEMENTS SHALL BE SECURED IN PLACE (AND APPROVED BY THE BUILDING OFFICIAL) BEFORE POURING CONCRETE.
3. COLD JOINTS MAY BE USED WHERE SHOWN JOINTING SURFACE SHALL BE CLEAN FREE OF FOREIGN MATERIAL AND INTENTIONALLY ROUGHENED.
4. SPECIAL INSPECTIONS REQUIRED WHERE CONCRETE STRENGTH GREATER THAN 2500 PSI IS SPECIFIED .

DRYER EXHAUST VENT TERMINATION:

- EXHAUST DUCT TERMINATION IS AS FOLLOWS: PER CMC 502.2 1. 3 FEET FROM A PROPERTY LINE
  2.10 FEET FROM A FORCED AIR INLET, AND
  3.3 FEET FROM OPENINGS INTO THE BUILDING
- UNLESS OTHERWISE PERMIT PERMITTED OR REQUIRED BY THE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED BY THE CITY, DOMESTIC DRYER MOISTURE EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF FOURTEEN FEET INCLUDING TWO 90 DEGREE ELBOWS. TWO FEET SALL BE DEDUCTED FOR EACH 90-DEGREE ELBOW IN EXCESS OF TO CMC 504.4.2.1

SANITATION:

1. SHOWER WALLS AND FLOORS SHALL HAVE A SMOOTH, HARD NON ABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CONCRETE, CERAMIC TILE OR OTHER APPROVED MATERIAL TO A HEIGHT NOT LESS THAN 72 INCHES ABOVE THE DRAIN. MATERIALS OTHER THAN STRUCTURAL ELEMENTS USE IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE.
2. WHEN GWB IS USE AS BASE FOR TILE OR WALLS PANEL WHEN GWB IS USE AS BASE FOR TILE OR WALLS PANEL FOR TUB OR SHOWER WALLS, WATER RESISTANT VAPOR BARRIER SHALL BE USED OVER CEMENT BOARD AND UNDER SHOWER PANS.

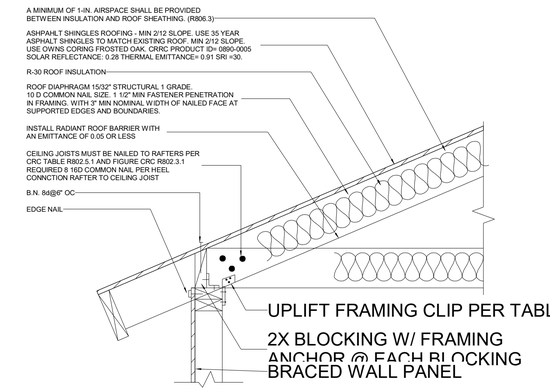
WINDOW AND SLIDING GLASS DOOR NOTES:

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WINDOWS, PATIO DOORS AND SKYLIGHTS AND PROVIDE ALL FLASHING AND CAULKING REQUIRED TO PROVIDE A WEATHER PROOF INSTALLATION. THE INSTALLATION SHALL CONFORM TO CEC AIR FILTRATION STANDARDS.
2. WINDOWS AND PATIO DOORS SHALL BE LABELED PER THE CBC.
3. WINDOWS AND PATIO DOORS SHALL HAVE DOUBLE GLAZING AND WEATHER-STRIPPING MEETING ANSI AND CEC AIR FILTRATION STANDARDS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL SCREENS AT ALL OPENINGS.

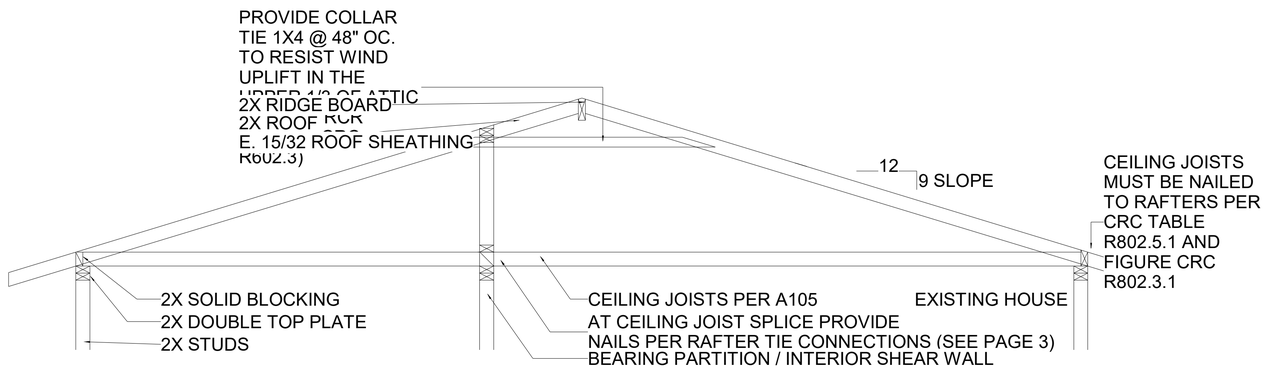
DISHWASHER AND CLOTHES WASHER:

INSTALL AT LEAST ONE QUALIFIED ENERGY STAR APPLIANCE WITH MAXIMUM WATER USE AS FOLLOWS:

1. STANDARD DISHWASHER - 4.25 GALLONS PER CYCLE.
2. COMPACT DISHWASHERS - 3.5 GALLONS PER CYCLE.
3. CLOTHES WASHERS - WATER FACTOR OF 6 GALLONS PER CUBIC FEET OF DRUM CAPACITY.



2 UPLIFT FRAMING CLIP PER TABLE R802.11
3/4" = 1'-0"



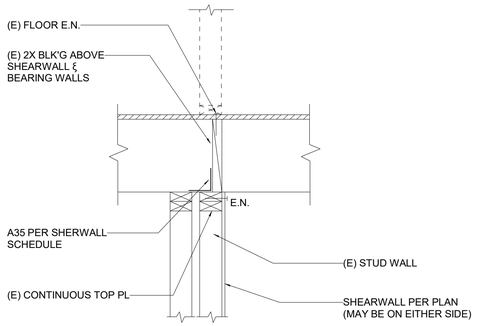
1 NEW ROOF TO EXISTING
1" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

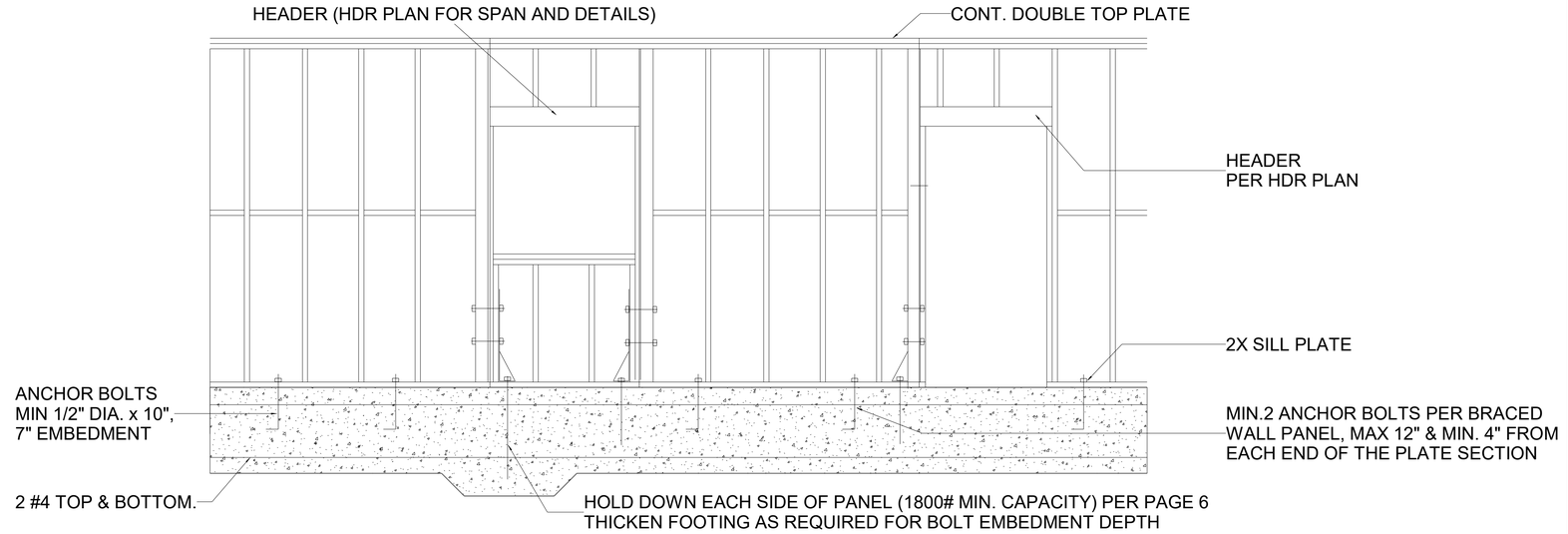
No.	Description	Date

ROOF DETAILS & NOTES

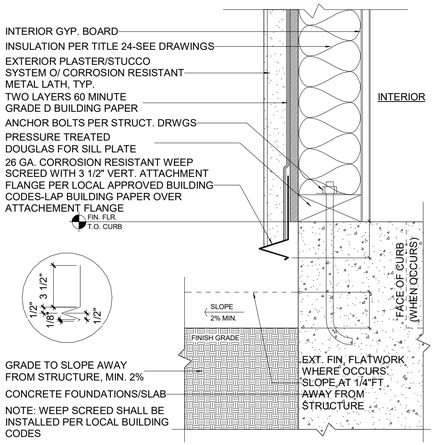
Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	MAGED ALGHARABLY
Checked by	MAGED ALGHARABLY
Scale	As indicated



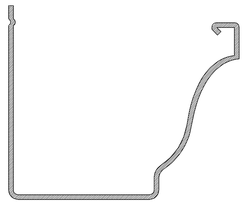
1 INTERIOR FLOOR JOIST
1" = 1'-0"



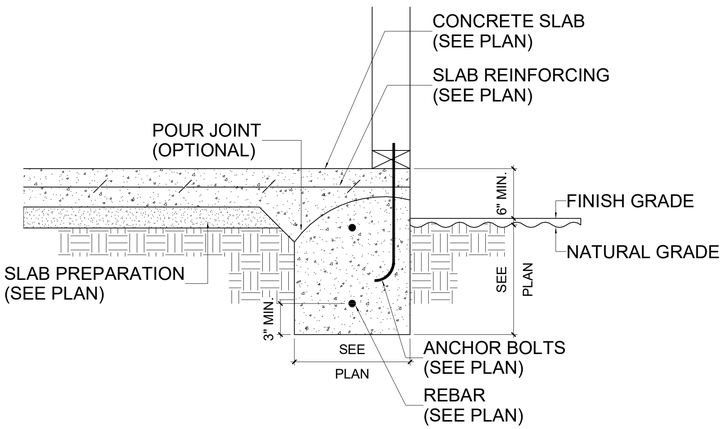
2 WALL FRAMING
1" = 1'-0"



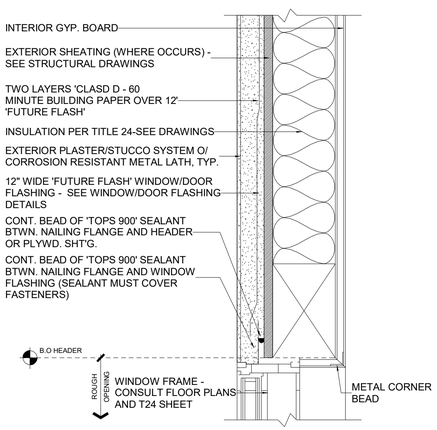
3 STUCCO SCREED
3" = 1'-0"



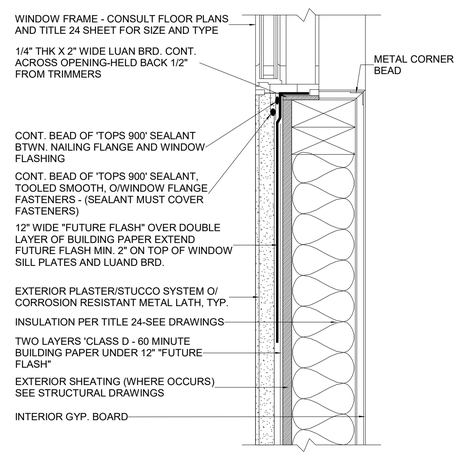
4 K-STYLE GUTTER
6" = 1'-0"



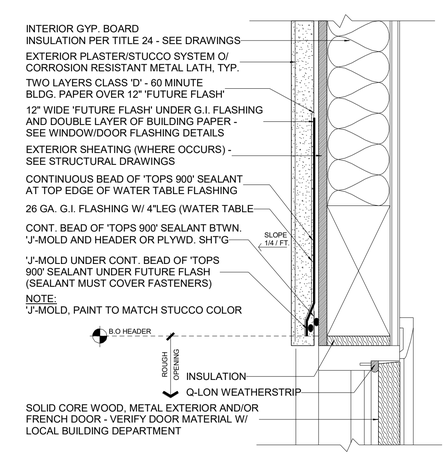
5 PERIMETER FOOTING
3/4" = 1'-0"



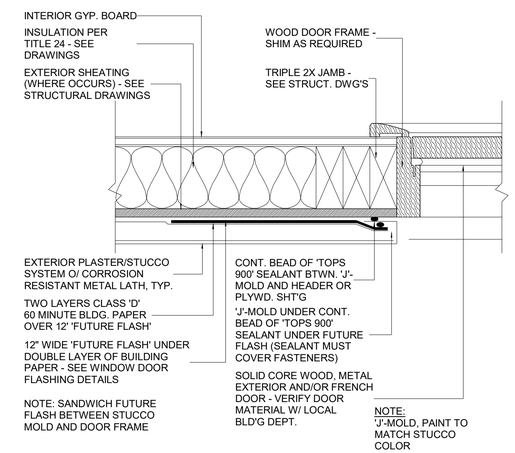
6 WINDOW HEAD
3" = 1'-0"



7 WINDOW JAMB
3" = 1'-0"



8 EXTERIOR DOOR HEAD
3" = 1'-0"



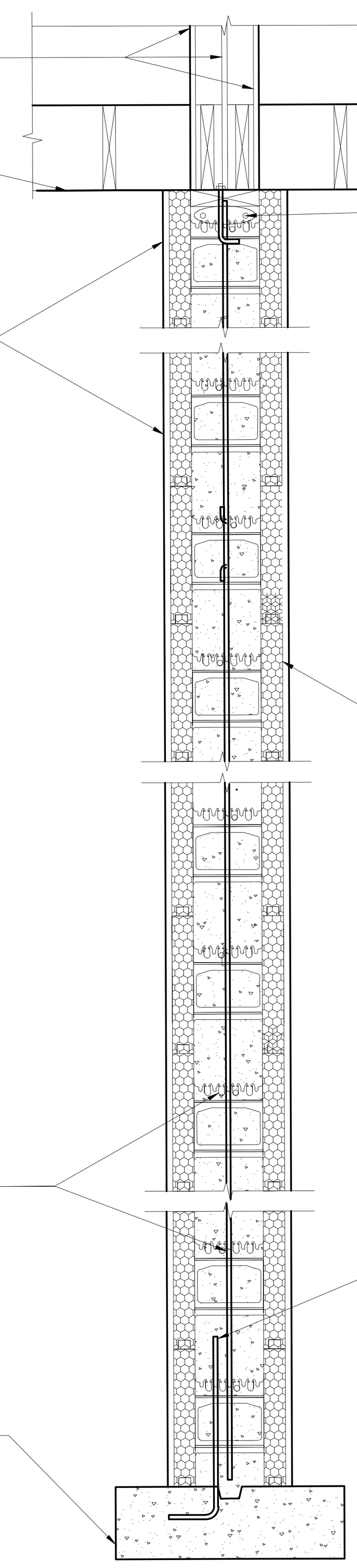
9 EXTERIOR DOOR JAMB
3" = 1'-0"

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

OTHER DETAILS

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	MAGED ALGHARABLY
Checked by	Checker
Scale	As indicated



SECTION VIEW

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. ALL DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE W/ LOCAL BUILDING CODES AND PRACTICES. AMVIC INC. RESERVES THE RIGHT TO CHANGE INFORMATION SHOWN WITHOUT NOTICE.

INSULATED CONCRETE FORMS

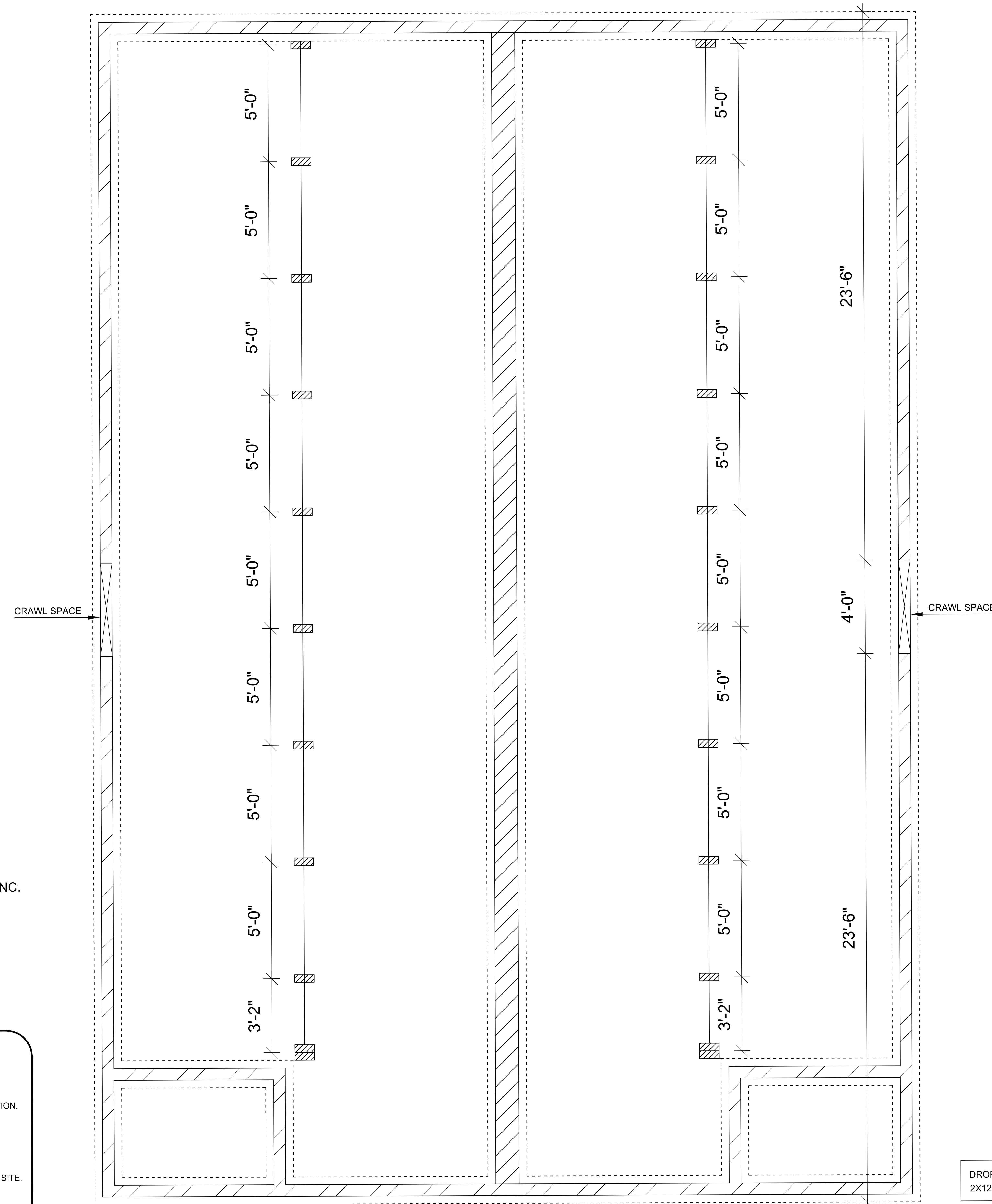
PARTY WALL DETAIL

RESIDENTIAL FOUNDATIONS

1. ALL WALL FOOTINGS AS PER PLANS AND DETAILS.
2. INTERIOR 8"X 16" CMU PIERS CAPPED WITH 4" OF SOLID MASONRY ON 1 STORY STRUCTURES OR 8" ON 2 STORY STRUCTURES UP TO 32" HIGH. ALL PIERS OVER 32" HIGH MUST BE FILLED WITH TYPE S MORTAR. MAXIMUM HEIGHT FOR 8" x 16" FILLED PIER IS 6'-8". PIERS LARGER THAN 8"x16" ARE NOTED ON PLAN.
3. FOOTINGS FOR ALL 8" x 16" PIERS ARE 2' X 3' X 10" UNLESS NOTED OTHERWISE. REINFORCING IS TO BE NOTED ON PLANS.
4. FOOTINGS ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF.
5. CONCRETE FOR FOOTING SHALL BE 3,000 PSI MIN. IN 28 DAYS UNLESS NOTED OTHERWISE. ALL CONCRETE EXPOSED TO WEATHER (FOUND. WALLS, EXTERIOR SLABS, ETC.) SHALL BE 3000 PSI. MIN. IN 28 DAYS.
6. INTERIOR THICKENED SLAB FOOTINGS WHICH OCCUR IN BASEMENT OR "SLAB ON GRADE" SHALL BE 10" DEEP BY 16" WIDE WITH 2-#4's CONTINUOUS UNLESS NOTED OTHERWISE. ALL RE-BAR SPLICES SHALL BE A MINIMUM OF 2'-0" UNLESS NOTED OTHERWISE.
7. CHIMNEY FOOTINGS ARE 12" LARGER THAN FOOTPRINTS X 12" THICK.
8. WALLS BACK FILLED WITH DIRT SUPPORTING FRAMING ABOVE FOR EARTH FILL UP TO 4' MAXIMUM HEIGHT - USE 8" CMU, 8" BRICK OR 8" CONC. WITH BITUTHANE MEMBRANE (OR EQUAL) WATERPROOFING ON EXTERIOR. SEE FOUNDATION DETAILS FOR FOOTING SIZES.
9. FOR RETAINING WALLS WITHOUT FRAMING SEE SPECIAL DESIGNS ON DRAWINGS.
10. NO POINT LOADS FROM ROOF BRACES, JACK STUDS, BEAM SUPPORTS - WHETHER WOOD OR STEEL - CAN BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO OR BETTER THAN THE POINT LOAD SUPPORT ABOVE MUST BE CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION.
11. PLATES SHALL BE ANCHORED TO FOUNDATION W/ 1/2" HOT DIPPED GALV. BOLTS (MIN. 2 PER PLATE) w/ 2"x 2"x 1/8" WASHERS SPACED 6'-0" MAX O.C. AND NO MORE THAN 12" FROM CORNERS AND FROM THE ENDS OF EACH PLATE SPLICE. BOLTS SHALL BE IMBEDDED A MIN. 7" INTO CONCRETE OR GROUTED CELLS OF MASONRY UNIT. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE.

FOUNDATION NOTES:

1. OWNER SHALL HAVE ALL FOOTING SIZES VERIFIED BY A LICENSED STRUCTURAL ENGINEER, BASED ON SOILS ANALYSIS AT SITE, PRIOR TO CONSTRUCTION.
2. FOUNDATION SHALL COMPLY WITH ALL APPLICABLE CODES AT SITE.
3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS WITH FOUNDATION PLAN AND MAKE NECESSARY ADJUSTMENTS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT SITE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER DRAINAGE AT SITE.
6. GLUE ALL STUR-DI-FLOR PLYWOOD TO FLOOR FRAMING AND NAIL SECURELY W/ RING-SHANK NAILS.
7. ALL FOUNDATION DETAILS ARE TYPICAL. SOME VARIATIONS MAY OCCUR. CONTRACTOR TO MAKE NECESSARY ADJUSTMENTS AT SITE.
8. ALL CONCRETE SLABS TO BE 4" THICK (3000 psi MIN.), REINFORCED W/ 6"x6" W4XW4 WWF
9. PROVIDE DOUBLE JOISTS UNDER ALL WALLS RUNNING PARALLEL TO FLOOR JOISTS.



DROP GIRDERS WILL BE (3PLY) 2X10 LUMBER
2X12 JOIST - FIRST FLOOR

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

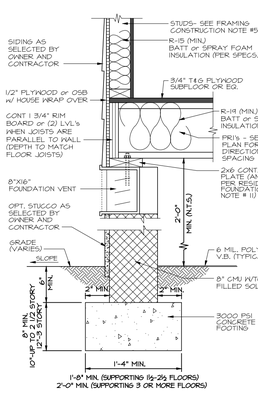
CLIENT NAME

FOUNDATION PLAN

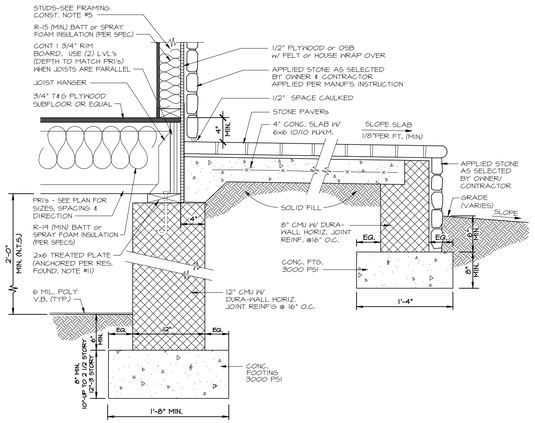
Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A114

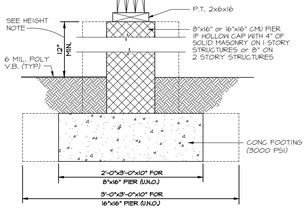
Scale



A 2 CRAWL W/ FRAME
SCALE: 1" = 1'-0" 0809.dwg



B 2 PORCH w/ APPLIED STONE
SCALE: 1" = 1'-0" 0716.dwg



HEIGHT NOTE	
CONDITION	HEIGHT
HOLLOW 8"x16" PIERS	32" MAX.
HOLLOW 16"x16" PIERS	62" MAX.
FILLED* 8"x16" PIERS	80" MAX.
FILLED* 16"x16" PIERS	160" MAX.

* CORES FILLED WITH CONCRETE or TYPE 'S' MORTAR

C 2 DROPPED GIRDER & PIER DETAIL
SCALE: 1" = 1'-0" 0020.dwg

FRAMING CONST. - OTHER THAN ROOF

1. CRAWL GIRDERS AND BAND WITH CURTAIN WALL AND PIER CONSTRUCTION SHALL BE 2-2x10 (MIN.) SOUTHERN YELLOW PINE #2 UNLESS NOTED LARGER. MAXIMUM CLEAR SPANS ARE TO BE 4'-0" , (6'-0" O.C. SPACING OF PIERS)

   TO AVOID OBJECTIONABLY CRACKING IN FINISHED HARDWOOD FLOORS OVER GIRDERS USE THE FOLLOWING PROCEDURE.

   (A) NAILING
   - (a.) ALL FLOOR JOISTS MUST BE TOENAILED TO THEIR SUPPORT GIRDERS WITH A MIN. OF (3) 8d NAILS AT EACH END. LARGER NAILS WILL SPLIT AND RENDER THE TOENAIL INEFFECTIVE. NO END NAILING THROUGH THE GIRDER OR BAND IS PERMITTED.
   - (b.) IF DROPPED GIRDERS ARE USED, END LAP ALL JOINTS AND SIDE NAIL EACH WITH A MIN. OF (2) 10d NAILS AT EACH END OF EACH JOIST. LEDGER STRIPS SHOULD BE SPACED 4" APART AND NAILED WITH (3) 16d NAILS AT EACH JOIST END.
   - (c.) NAIL MULTIPLE MEMBER BUILT-UP GIRDERS WITH TWO ROWS OF 10d NAILS STAGGERED AT 32" O.C., 2" DOWN FROM TOP AND 2" UP FROM THE BOTTOM WITH 10d NAILS AT EACH PIECE IN THE JOINT THROUGH THE MEMBERS MAKING UP MULTIPLE GIRDER.
   - (d.) THIS NAILING PATTERN WILL ENSURE A TIGHT FLOOR FROM THE OUTSIDE OF THE HOUSE TO THE OUTSIDE SO THAT WHEN THE FRAMING SHRINKS DURING THE FIRST HEATING SEASON, THE SHRINKAGE WILL BE UNIFORMLY DISTRIBUTED OVER THE ENTIRE FLOOR. IF THE GIRDER NAILING PATTERN IS OMITTED, THEN THE SHRINKAGE WILL AGGIMULATE OVER THE GIRDERS AND AN OBJECTIONABLE CRACK WILL DEVELOP THE GIRDER LINE.

   (B) AT ALL GIRDERS WHERE THE JOISTS CHANGE DIRECTION, INSTALL BRIDGING AT 6' O.C. FOR A MIN. OF JOIST SPACINGS BEYOND ANY JOIST DIRECTION CHANGE. THIS WILL INSURE SHRINKAGE DISTRIBUTION OVER THE FLOOR AND NOT LET IT ACCUMULATE AT THE GIRDER.

   (C.) THERE MUST BE HOOD BLOCKING THRU BOLTED TO THE STEEL BEAM WITH JOISTS TOENAILED OR ATTACHED TO THE BEAM WITH METAL HANGERS UNDER ANY HARDWOOD FLOORS THAT PASS OVER A STEEL BEAM SUPPORTING FLOOR JOISTS. THIS CONDITION OFTEN EXISTS OVER BASEMENT AREAS.

2. ALL OTHER LUMBER CAN BE SPRUCE #2 UNLESS NOTED OTHERWISE.

3. HOOD DECK ANCHORAGE
   - (A) ALL STRUCTURES EXCEPT MASONRY VENEER FOR UP TO 8' SPAN, USE 5/8" GALV. BOLTS AND WASHERS @ 3'-6" O.C. (MAX.) AND 2-1/2d GALV. NAILS @ 6" O.C. (MAX.). FOR 8' TO 16' SPAN, USE 5/8" GALV. BOLTS AND WASHERS @4'-0" O.C. (MAX.) AND 3-1/2d GALV. NAILS @ 6" O.C. (MAX.)
   - (B) FOR MASONRY VENEER STRUCTURES FOR UP TO 8' SPAN, USE 5/8" GALV. BOLTS AND WASHERS @ 2'-4" O.C. (MAX.). FOR 8' TO 16' SPAN, USE 5/8" BOLTS AND WASHERS @ 1'-4" O.C. (MAX.)

4. RAISED CONCRETE TERRACE FRAMING ANCHORAGE
   DOUBLE NUMBER OF BOLTS REQUIRED FOR WOOD DECKS ABOVE UNLESS NOTED OTHERWISE.

5. FIRST LEVEL STUD WALLS FOR BLDGS GREATER THAN 2 STORIES:
   - (A) INTERIOR WALLS
     - (a.) LOAD BEARING...2x4 @ 12" O.C.
     - (b.) NON LOAD BEARING...2x4 @ 16" O.C.
   - (B) EXTERIOR WALLS USE 2x6 @ 16" O.C. WITH 1"x4"x8' PLYWOOD SHEATHING, OSB OR EQUAL AT ALL CORNERS AND EVERY 25'. OR USE 2 x 4 STUDS @ 12" O.C. WITH 1/2" PLYWOOD SHEATHING, OSB, OR EQUAL SOLID ON WALLS.

   EXTERIOR STUD WALL TALLER THAN 10'
   - (A) STUDS SHALL BE 2 X 4's @ 12" O.C. OR 2 X 6's @ 16" O.C. IF 10' TO 12' HIGH WITH 1/2" OSB SHEATHING AND 3 KING STUDS ON EACH SIDE OF EACH OPENING NAILED SECURELY TO THE HEADER.
   - (B) STUDS SHALL BE 2 X 6's @ 16" O.C. IF 12' TO 20' HIGH (1/2" OSB SHEATHING REQUIRED FOR WALL HEIGHTS >17') PROVIDE 2 - 1 3/4" X 9 1/4" LVL KING STUDS ON EACH SIDE OF OPENINGS 3' TO 6' WIDE AND 2 - 2X6 KING STUDS FOR OPENINGS LESS THAN 3' WIDE. FASTEN KING STUDS SECURELY TO ALL HEADERS WITH A MIN. OF 12-16 D. NAILS OR 4 3/8" D. LAG SCREWS EMBEDDED A MIN. OF 4" INTO THE HEADER.
   - (C) GABLE END WALLS OF ROOMS WITH VAULTED CEILING JOISTS: BALLOON FRAME WALL AND PROVIDE TRIPLE KING STUD ON EACH SIDE OF OPENINGS, NAILED SECURELY TO THE HEADER.
   - (D) TWO STORY HIGH FOYER WALLS LESS THAN 9' WIDE: EXTEND 3 1/2" X 9 1/4" PARALLAM PSL LUMBER WITH 3 - 2X6 FLAT PLATES ACROSS THE ENTIRE WALL. LOCATE THE BEAM NEAR MID-HEIGHT OF THE WALL STUD OR NEAR FIRST FLOOR TOP PLATE.

   NOTE:
   SEE SPECIAL DESIGN OR ENGINEER FOR WALLS TALLER THAN 20' WHEN OPENINGS IN HIGH WALLS EXCEED 6' IN WIDTH, OR IF THE WALL CANNOT BE CONSTRUCTED USING ANY OF THE METHODS MENTIONED.

6. LVL BEAMS ARE DESIGNED WITH THE FOLLOWING ALLOWABLE STRESS VALUES (PSI):

BENDING STRESS (Fb) = 2850	COMPRESSION STRESS
MODULUS OF ELASTICITY = 2.0	PARALLEL TO GRAIN = 2300
SHEAR STRESS = 290	PERPENDICULAR TO GRAIN = 750

   (A) LVL BEAMS MUST HAVE 3-2x4 JACK STUDS UNDER EACH END FOR SUPPORT UNLESS NOTED OTHERWISE.

7. STEEL BEAMS MUST HAVE 3" STEEL PIPE COLUMN or 3-2x4 JACK STUDS UNDER EACH END FOR SUPPORT UNLESS NOTED OTHERWISE.

8. MASONRY OPENINGS
   - (A) BRICK
     - (a.) FOR FLAT SPANS UP TO 6' USE 3 1/2" X 3 1/2" X 1/4" STEEL ANGLES
     - (b.) FOR FLAT SPANS OVER 6' TO 9' USE 5" x 3 1/2" X 5/16" STEEL ANGLES.
     - (c.) FOR SPANS OVER 9' TO 18' USE 3 PAIR OF 9 GAUGE WIRE IN FIRST 3 COURSES OF BRICK ON A 5"x 3 1/2"x 5/16" STEEL ANGLE. LAP ALL 9 GAUGE WIRE SPLICES 12" MIN. AND EXTEND WIRES 12" MIN. INTO JAMBS. TEMPORARILY SUPPORT STEEL ANGLE BEFORE LAYING MASONRY & FOR 5 DAYS FOLLOWING INSTALLATION OF MASONRY OR AS SHOWN ON PLANS.
     - (d.) WHEN STRUCTURAL STEEL BEAMS WITH BOTTOM PLATES ARE USED TO SUPPORT MASONRY, THE BOTTOM PLATE MUST EXTEND THE FULL LENGTH OF THE STEEL BEAM. THIS PROVIDES SUPPORT TO THE ENDS OF THE PLATE BY BEARING ON THE ADJACENT MASONRY JAMBS. THE BEAM SHOULD BE TEMP. SHORED PRIOR TO LAYING THE MASONRY. THE SHORING MAY BE REMOVED FIVE DAYS AFTER LAYING THE MAS.
   - (B) STONE
     - (a.) FOR FLAT SPANS UP TO 9' USE 6" X 6" X5/16" STEEL ANGLES.
     - (b.) FOR FLAT SPANS OVER 9' USE 5/16" X 7" STEEL PLATE AS LEDGER WELDED TO BOTTOM FLANGE OF STEEL BEAM - SEE PLANS FOR SIZE.
   - (C) ON ALL MASONRY ARCHES, SHORE UP FOR 10 DAYS BEFORE REMOVING
   - (D) ARCHES AT GARAGE DOOR W/ LESS THAN 3' OF MASONRY ON SIDES NEED 1 #4 VERTICALLY AT CORNER FOR BRICK & 2 #4 VERTICALLY FOR STONE.

9. ALL BRICK OVER LOWER ROOFS MUST HAVE A STRUCTURAL ANGLE LAG SCREWED TO AN ADJACENT STUD WALL IN ACCORDANCE WITH DETAIL WITH STEEL BRICK STOPS TO PREVENT SLIDING OF BRICK.

10. ALL WOOD I'L JOISTS AND OPEN JOISTS MUST BE BRACED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS PLUS DETAILS SHOWN ON PLANS. LOAD BEARING PARTITIONS, JACKS, BEAMS AND COLUMN SUPPORTS MUST BE SOLID BLOCKED THROUGH FLOOR TO CARRY LOADS TO SUPPORTING MEMBERS AND WALLS TO FOUNDATION. I-JOISTS, TRUSSES, AND PLYWOOD CANNOT CARRY CONCENTRATED POINT LOADS. ALL POINT LOADS MUST BE CARRIED TO FOUNDATIONS W/ BLOCKING AND/OR BEAMS.
    - (A) OPEN WEB FLOOR TRUSSES
      CONTINUOUS 2 X 6 BRIDGING SHALL BE NAILED TO DIAGONAL OR VERTICAL WEB MEMBERS OF ALL OPEN-WEB FLOOR TRUSSES OVER 10' LONG. THEY SHALL BE INSTALLED NEAR MID-SPAN AS A LOAD DISTRIBUTION MEMBER. IF THE 2 X 6 BRIDGING IS NOT CONTINUOUS, LAP ENDS OF BRIDGING ONE TRUSS SPACE.
    - (B) ON ALL OPEN WEB FLOOR TRUSSES OVER A 10' SPAN A MINIMUM SINGLE LINE OF 2x4's SHALL BE NAILED TO DIAGONAL MEMBERS OR VERTICAL MEMBERS IN THE APPROXIMATE MID-SPAN AS A LOAD DISTRIBUTION MEMBER. IF LINE OF TIE MEMBER IS NOT CONTINUOUS, LAP ALL OFF-LINE MEMBERS ONE SPACE. WHERE PARTITIONS FALL BETWEEN FLOOR TRUSSES 2x4 LADDERS @16" O.C. MUST BE PLACED PERPENDICULAR TO THE TRUSSES TO SUPPORT THE PLYWOOD DECKING.

11. WHERE CEILING JOISTS ARE PARALLEL TO EXTERIOR WALLS AND RAFTERS BEAR ON STUD WALL TOP PLATE ADJACENT TO CEILING JOISTS, BRACE RAFTERS AND TOP PLATE TO 2X6 NOGS (MIN.) ON 6' CENTERS ALONG LENGTH OF CEILING JOISTS. BRACES SHOULD BE AT LEAST 45 DEG. ANGLE.

12. ALL RAFTER BRACES (UNLESS TO NOG @ C.J.) MUST HAVE 2 STUDS FROM PLATE TO FOUNDATION OR BEAM BELOW THEM TO ALL FLOORS. NO BRACES ON C.L.G. PLATE WITHOUT STUDS DIRECTLY UNDER THEM.
    - (A) ROOF TRUSSES THAT HAVE NON-BEARING PARTITIONS PASSING UNDER UNDER THEM SHOULD BE NAILED TO THE PARTITION PLATES TO AVOID CEILING-WALL CRACKING.
    - (B) ROOF TRUSSES CLOSE TO SIDE WALLS FRAMING AND USED AS DEAD HOOD FOR SHEETROCK BOARDS SHOULD BE NAILED TO THE WALL FRAMING TO PREVENT CEILING-WALL CRACKING.

13. 2-STORY WINDOW WALLS
    UNLESS SPECIFICALLY DETAILED OTHERWISE, ALL 2-STORY OPEN GREAT ROOMS & LIVING ROOMS, WITH 2 OR MORE ADJACENT OPENINGS AND A SPACING BETWEEN OPENINGS OF 9 FEET OR LESS MUST USE A 9 1/2" x 9 1/2" x 5/16" STEEL ANGLE VERTICALLY FROM FLOOR TO TOP PLATE LAGGED TO KING STUDS WITH 3/8" x 3" LAGS @ 24" O.C. VERTICALLY AND LAGGED TO FLOOR AND TOP PLATE WITH 1-3/8" x 3" LAG THRU A 1/4" PLATE AT THE TOP AND BOTTOM. MULTIPLE OPENINGS WITH 3' OR LESS SPACE BETWEEN ROUGH OPENINGS SHALL HAVE AT LEAST 1 STEEL ANGLE VERTICALLY IN EACH MULLION SPACE. THE SHEATHING ON THIS STEEL REINFORCED PARTITION SHALL BE 1/2" PLYWOOD OR OSB - NO OTHER SHEATHING SHALL BE PERMITTED.

14. MIN. HEADER SIZES SHALL BE AS SHOWN UNLESS NOTED DIFFERENTLY ON PLANS. ALL HEADERS TO BE MINIMUM SPF #2.
    - (A) INTERIOR
      1) SPANS UP TO 2'-6" - 2-2x6's
      2) SPANS OVER 2'-6" TO 3'-6" - 2-2x8's
      3) SPANS OVER 3'-6" TO 6'-6" - 2-2x10's
      4) SPANS OVER 6'-6" - SEE PLAN or CONTACT DESIGNER IF NOT SHOWN
    - (B) EXTERIOR
      1) SPANS UP TO 2'-0" - 2-2x6's
      2) SPANS OVER 2'-0" TO 3'-0" - 2-2x8's
      3) SPANS OVER 3'-0" TO 6'-0" - 2-2x10's
      4) SPANS OVER 6'-0" - SEE PLAN or CONTACT DESIGNER IF NOT SHOWN

    HEADER SPANS GREATER THAN 5' SHALL HAVE A MINIMUM OF 3 - 2X4 KING STUDS ON EACH SIDE UNLESS NOTED OTHERWISE.

15. AT ALL BAY WINDOWS EACH PANEL SHALL BE NAILED TO EACH ADJACENT PANEL WITH 5 - 16d. NAILS OR TIED TOGETHER WITH METAL STRAPPING NAILED AT FOUR LOCATIONS BETWEEN FLOORS WITH A MINIMUM OF 2 - 16d. NAILS INTO EACH PANEL AT EACH STRAP. THIS WILL AVOID VERTICAL CRACKING IN JOINTS DUE TO HORIZONTAL OSCILLATING PANELS.

16. AT ALL STAIRS EVERY STUD AT EACH STRINGER MUST BE NAILED TO EACH STRINGER WITH A MINIMUM OF 2 - 16d. NAILS. THIS WILL AVOID CRACKING BETWEEN WALLBOARD AND TOP OF BASE MOLDING DUE TO VERTICAL OSCILLATION OF STAIR STRINSERS.

17. HARD COAT EXTERIOR STUCCO
    - (A) JOINTS ARE NECCESSARY AT THE FOLLOWING LOCATIONS:
      1) HORIZONTALLY AT EACH FLOOR LINE.
      2) NO AREAS LARGER THAN 100 S.F. SURFACE EXPOSED
      3) NO DIMENSION LONGER THAN 18'
      4) NO DIMENSION LONGER THEN 2 1/2 TIMES THE SHORTEST DIMENSION.
    - (B) DRIP SCREED REQUIRED AT THE BOTTOM OF ALL WALLS 2" ABOVE PAVED AREAS AND 4" ABOVE GRADE.
    - (C) SEE ASTM 926 AND 1063 FOR FURTHER INFORMATION

18. ALL STEEL COLUMNS SHALL BEAR ON CONCRETE, MASONRY, OR STEEL ONLY. AN ADEQUATELY SIZED BASE PLATE SHALL BE USED TO SPREAD THE COLUMN LOAD ACROSS THE BEARING SURFACE AREAS SO AS NOT TO EXCEED ITS ALLOWABLE COMPRESSIVE STRESS. BEAMS THAT BEAR ON TOP OF STEEL COLUMNS SHALL BE WELDED TO THE COLUMN. BASE PLATES SHALL BE BOLTED WITH FOUR 1/2" D. ANCHOR BOLTS OR EXPANSION BOLTS TO CONCRETE OR MASONRY.

NOTICE:

LIVING CONCEPTS HOME PLANNING HAS TAKEN GREAT CARE IN THE PREPARATION OF THESE PLANS. HOWEVER, SINCE CODES ARE SUBJECT TO CHANGE AND INTERPRETATIONS VARY, WE DO NOT GUARANTEE COMPLIANCE WITH ANY SPECIFIC CODES OR ORDINANCES. PURCHASER OR BUILDER IS SOLELY RESPONSIBLE FOR VERIFYING COMPLIANCE WITH LOCAL BUILDING CODES AND ORDINANCES AND FOR ANY MODIFICATIONS TO THE PLANS THAT MAY NEED TO BE MADE IN ORDER TO COMPLY. BUILDER IS ALSO RESPONSIBLE FOR VERIFYING SITE AND SOIL CONDITIONS AS WELL AS ALL DIMENSIONS AND SQUARE FOOTAGE CALCULATIONS BEFORE BEGINNING CONSTRUCTION. THESE PLANS SHOULD BE REVIEWED BY A LOCAL ARCHITECT OR ENGINEER TO VERIFY ADAPTATION TO SITE AND LOCAL STRUCTURAL DESIGN REQUIREMENTS. LIVING CONCEPTS HOME PLANNING MAY NOT BE HELD RESPONSIBLE AND ASSUMES NO LIABILITY FOR ANY HOME CONSTRUCTED FROM THESE PLANS.

GENERAL NOTES

1. DESIGN LOADS ARE ALL DEAD LOADS PLUS:
   - A. FOOTINGS ARE BASED ON A SOIL BEARING CAPACITY OF = 2000 PSF
   - B. MAIN FLOOR LIVE LOAD = 40 PSF
   - C. UPPER FLOOR LIVE LOAD = 40 PSF EXCEPT BEDROOMS = 30 PSF
   - D. CEILING JOISTS UNDER ATTICS W/ LESS THEN 6' CLEAR HEIGHT = 10 PSF
   - E. CEILING JOISTS UNDER ATTICS W/ OVER 6' CLEAR HEIGHT BUT WOUT PERMANENT STAIR = 20 PSF
   - F. CEILING JOISTS UNDER ATTICS W/ OVER 6' CLEAR HEIGHT BUT W/ PERMANENT STAIR = 30 PSF
   - G. ROOF LIVE LOAD = 20 PSF
   - H. SNOW LOAD WHERE APPLICABLE = 30 PSF
   - I. WIND LOAD 15 (90 MPH, (NOMINAL) 115 (ULTIMATE) EQUIVALENT TO = 20.7 PSF
   - J. EARTHQUAKE 1S PER NORTH CAROLINA CODE

2. THESE PLANS SHOULD BE STUDIED AND USED IN THEIR ENTIRETY AS INFORMATION VITAL TO EACH STAGE OF CONSTRUCTION WILL APPEAR ON MORE THAN ONE SHEET.

3. IF CONTRACTOR DISCOVERS A CONSTRUCTION DEVIATION FROM THE PLANS, IT IS CONTRACTOR'S RESPONSIBILITY TO BRING INTO COMPLIANCE WITH THE PLANS OR CONTACT THE DESIGNER BEFORE PROCEEDING. GENERAL CONTRACTOR ASSUMES ALL LIABILITY FOR ANY DEVIATION FROM THE PLANS NOT APPROVED BY THE DESIGNER.

4. GENERAL CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR COMPLETION OF ALL WORK SHOWN OR REASONABLY IMPLIED BY THESE DRAWINGS AND/OR SPECIFICATIONS. HE SHALL CONFIRM ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER IN WRITING OF ANY DISCREPANCIES.

5. DESIGNER NOT RESPONSIBLE FOR EQUIPMENT OR MATERIALS NOT SPECIFIED ON THESE PLANS.

6. DIMENSIONS ON FLOOR PLANS ARE FROM FACE OF STUD (TYPICAL) BEAMS ARE DIMENSIONED TO CENTERLINE (UNLESS NOTED OTHERWISE)

7. DIMENSIONS ON FOUNDATION PLANS ARE FROM FACE OF MASONRY U.N.O.

8. DIMENSIONS FROM 1ST. FLOOR TO TOP OF GARAGE FLOOR SLAB MAY VARY ACCORDING TO FIELD GRADE CONDITIONS UNLESS SPECIFICALLY DIMENSIONED ON PLANS.

9. DRAWINGS SHALL NOT BE SCALED, USE LABELED DIMENSIONS ONLY. 1 DIMENSIONS SHOULD BE WITHIN 1".

10. DETAILS TAKE PRECEDENCE OVER PLANS & ELEVATIONS. LARGER SCALED DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALED DRAWINGS.

11. WATER AND MOISTURE PROTECTION
    - (A.) PROVIDE FOUNDATION WATERPROOFING WHERE EXTERIOR GRADE IS ABOVE CRAWL SPACE OR BASEMENT SLAB AND INSTALL 4" PERFORATED PLASTIC FOUNDATION DRAINS AND SLOPE TO ON-SITE DRY WELL OR NATURAL DRAINAGE COURSES.
    - (B.) ALL BUILDING EXTERIOR SURFACE PENETRATIONS WITH POTENTIAL EXPOSURE TO WEATHER SHALL BE FLASHED AND/OR CAULKED AS PER CODE AND/OR INDUSTRY-RECOGNIZED CONSTRUCTION TECHNIQUES. ALL ROOF SHINGLE FLASHING AGAINST A VERTICAL SIDEWALL SHALL BE THRU WALL FLASHING.
    - (C.) ALL FLASHING SHALL BE TURNED OUT AT LOWER EDGE TO DIRECT WATER OUT OF STRUCTURE.
    - (D.) ALL FLASHING SHALL BE COPPER, ALUMINUM OR PVC UNLESS NOTED OTHERWISE. ALUMINUM FLASHING SHALL NOT BE USED IN CONTACT WITH CEMENTITIOUS MATERIAL, EXCEPT AT COUNTER FLASHING, AND SHALL NOT BE USED IN DECK CONSTRUCTION.
    - (E.) IF ANY TYPE OF LAP SIDING OTHER THAN VINYL IS USED, PROVIDE A SEALED WATERPROOF BARRIER BEHIND ANY VERTICAL OR SILL TRIM WITH BARRIER TURNED OUT AT FIRST SIDING COURSE BELOW TRIM
    - (F.) IF ANY TYPE OF LAP SIDING OTHER THAN VINYL IS USED, WRAP ALL CORNERS W/ A SEALED WATERPROOF BARRIER EXTENDING 12" HORIZONTALLY BEYOND VERTICAL JOINTS AND TURNED OUT OVER CLADDING OR FLASHING AT BOTTOM OF JOINT.

12. WINDOWS AND DOORS
    - (A.) WINDOW SIZES SHOWN ARE NOMINAL FRAME SIZES UNLESS NOTED OR SPECIFIED OTHERWISE AND MAY VARY SLIGHTLY ACCORDING TO MANUFACTURER.
    - (B.) CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING WINDOWS THAT MEET EGRESS AND TEMPERED GLASS REQUIREMENTS.
    - (C.) ALL FRENCH DOORS, SLIDING GLASS DOORS, AND SHOWER ENCLOSURES AND DOORS SHALL BE TEMPERED.
    - (D.) HEADER HEIGHTS ARE APPROXIMATE AND MAY VARY ACCORDING TO MANUFACTURER. CONTRACTOR SHALL SET WINDOWS, DOORS, AND CASED OPENINGS AT SAME NOMINAL HEIGHT SO THAT TRIM SHALL ALIGN.
    - (E.) UNLESS NOTED OTHERWISE, TRANSOM HEIGHTS ARE NOMINAL AND SHALL BE SIZED TO MALL DIRECTLY TO WINDOW BELOW AND YIELD A NOMINAL OVERALL HEIGHT TO MATCH ANY 8'-0" DOORS OR OPENINGS.
    - (F.) ALL GLASS IN ANY DOOR SHALL BE TEMPERED; UNLESS OTHERWISE PERMITTED BY CODE.

13. GARAGE SEPARATION:
    - (A.) GARAGE CEILING & WALL BETWEEN HOUSE AND GARAGE SHALL BE 1/2" SHEET ROCK
    - (B.) DOORS FROM HOUSE TO GARAGE SHALL BE 1 3/8" THICK SOLID WOOD OR 20-MIN. RATED.

14. GUARDRAIL OPENING LIMITATIONS AND STEPS WITH OPEN RISERS
    - (A) REQUIRED GUARDRAILS (MIN. HEIGHT 36") ON OPEN SIDES OF STAIRWAYS, RAISED FLOOR AREAS, BALCONIES AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES WHICH DO NOT ALLOW PASSAGE OF AN OBJECT 6 INCHES (152 mm) OR MORE IN DIAMETER. HORIZONTAL SPACING BETWEEN THE VERTICAL MEMBERS IN REQUIRED GUARDRAILS SHALL BE A MAX. OF 4 INCHES (102 mm) AT THE NEAREST POINT BETWEEN THE MEMBERS.

      EXCEPTION: THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH A SIZE THAT A SPHERE 6 INCHES (153 mm) CAN NOT PASS THROUGH
    - (B) STEPS WITH OPEN RISERS SHALL HAVE AN OPENING BETWEEN TREADS THAT DOES NOT ALLOW A 4 INCH DIAMETER SPHERE TO PASS THRU.

15. TERMITE PROTECTION:
    ALL HOUSE FOUNDATIONS & SLABS SHALL BE PRETREATED FOR TERMITES BY A LICENSED EXTERMINATOR.

16. BONUS ROOM INSULATION:
    - A) INSULATION IN CEILINGS OVER HEATED AREAS SHALL BE R-38 (MIN) BATT UNLESS NOTED OTHERWISE
    - B) THE MIN. FLOOR INSULATION IN ROOM(S) OVER GARAGES OR OUTDOOR AREAS SHALL BE R-38.
    - C) KNEE WALL(S) BETWEEN CONDITIONED AND UNCONDITIONED SPACES SHALL HAVE R-15 BATT INSULATION.
    - D) KNEE WALL(S) OVER 4' HIGH BETWEEN CONDITIONED AND UNCONDITIONED SPACES SHALL HAVE SHEATHING ON UNCONDITIONED SIDE.

17. THE DESIGNER MAKES EVERY EFFORT TO USE ONLY PRODUCTS AND TECHNIQUES RECOGNIZED AT THE TIME AS APPROPRIATE FOR THE APPLICATIONS SHOWN. HOWEVER, MANY ITEMS SHOWN ON THESE PLANS ARE IN GENERIC TERMS AND ARE LEFT TO THE OWNER'S AND/OR CONTRACTOR'S DISCRETION OR ARE SHOWN SPECIFICALLY AS REQUESTED BY THE OWNER AND/OR THE CONTRACTOR. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY MATERIAL OR PRODUCTS SHOWN OR ANY TECHNIQUES NOT SPECIFICALLY SHOWN ON THE PLANS.

18. PROVIDE FIREBLOCKING EVERY 10' BOTH VERTICALLY AND HORIZONTALLY AT ALL CONCEALED DRAFT OPENINGS.

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

GENERAL NOTES

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A115

Scale 1/4" = 1'-0"

2021 International Residential Code® Construction Specifications and Methodologies

IMPORTANT NOTE: THESE NOTES AND SPECIFICATIONS ARE PROVIDED BY LIVING CONCEPTS AS A SERVICE TO THEIR CUSTOMERS TO PROVIDE THE MOST POPULAR CODE TOPICS. THE INFORMATION AND METHODOLOGIES PREPARED HEREIN ARE IN ACCORDANCE TO AND REFERENCED TO THE 2021 INTERNATIONAL RESIDENTIAL CODE®. THE INFORMATION IS ALSO A GENERAL SUMMARIZATION OF THE CODE AND IT IS RECOMMENDED THAT YOU BECOME FAMILIAR WITH THE FULL EXTENT OF THE ACTUAL CODE. THE NOTES AND SPECIFICATIONS MAY HAVE TO BE AMENDED DUE TO VARIATIONS IN LOCAL CODES AND GEOLOGICAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR HOMEOWNER TO MAKE THE NECESSARY MODIFICATIONS TO ENSURE CODE COMPLIANCE AND STRUCTURAL INTEGRITY. IT IS RECOMMENDED THAT YOU CONSULT A LOCAL ARCHITECT OR ENGINEER OF YOUR CHOICE AND CHECK WITH LOCAL BUILDING OFFICIALS PRIOR TO THE START OF ACTUAL CONSTRUCTION. SPECIAL ENGINEERING MAY REQUIRE THAT THESE SPECIFICATIONS BE CHANGED OR AMENDED TO COMPLY WITH SEISMIC, WIND, OR OTHER SPECIAL CONDITIONS AS REQUIRED BY LOCAL CONSTRUCTION METHODOLOGIES AND LOCAL CODES.

IMPORTANT DISCLAIMER

THE ENCLOSED INFORMATION IS INTENDED TO ASSIST AND INFORM YOU THROUGH THE CONSTRUCTION OF YOUR HOME. YOUR CONSTRUCTION PLANS HAVE BEEN DRAWN TO PRESCRIBE TO INDUSTRY STANDARDS. THESE PROFESSIONAL STANDARDS DETERMINE HOW CONSTRUCTION PLANS ARE DRAWN AND WHAT INFORMATION THEY INCLUDE. CONSTRUCTION PLANS ARE INTENDED AS A TECHNICAL GUIDE TO PROFESSIONAL CONTRACTORS AND ARE NOT INTENDED TO BE A SET OF STEP-BY-STEP INSTRUCTIONS. THEREFORE, IF YOU ARE PLANNING TO BUILD YOUR HOME WITHOUT THE SERVICED OF A PROFESSIONAL BUILDER, WE SUGGEST THAT YOU BECOME THOROUGHLY FAMILIAR WITH READING CONSTRUCTION PLANS OR CONSIDER CONSULTING A CONSTRUCTION SPECIALIST. IF YOU SHOULD HAVE ANY QUESTIONS REGARDING THE CONSTRUCTION PLANS AND/OR THE SUPPORTIVE DOCUMENTATION, PLEASE FEEL FREE TO CONTACT US AT 1-800-617-6105

GREAT CARE AND EFFORT GOES INTO THE CREATION OF THE DESIGN AND ENGINEERING OF YOUR CONSTRUCTION PLANS. HOWEVER, BECAUSE OF THE IMPOSSIBILITY OF PROVIDING ANY PERSONAL AND/OR "ON-SITE" CONSULTATION, SUPERVISION AND CONTROL OVER THE ACTUAL CONSTRUCTION, AND BECAUSE OF THE GREAT VARIANCES IN LOCAL BUILDING CODE REQUIREMENTS AND OTHER LOCATION BUILDING AND WEATHER CONDITIONS, LIVING CONCEPTS NOR THE AGENTS OR EMPLOYEES ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCLUDING BUT LIMITED TO, ANY DEFICIENCIES, OMISSIONS, OR ERRORS IN THE DESIGN. IN ANY CASE, ANY DISCREPANCIES, ERRORS, AND/OR OMISSIONS IN THE DIMENSIONS, AND/OR DRAWINGS CONTAINED IN THE CONSTRUCTION PLANS SHALL BE BROUGHT TO THE ATTENTION OF LIVING CONCEPTS PRIOR TO COMMENCEMENT OF CONSTRUCTION. PROCEEDING WITH CONSTRUCTION CONSTITUTES THE ACCEPTANCE OF THE CONSTRUCTION DOCUMENTS 'AS IS' AND ANY DISCREPANCIES, ERRORS, AND/OR OMISSIONS BECOME THE SOLE RESPONSIBILITY OF THE PURCHASER. IF ANY ERRORS ARE DISCOVERED PRIOR TO CONSTRUCTION LIVING CONCEPTS WILL BE GIVEN FULL OPPORTUNITY TO CORRECT ANY ERRORS AND/OR OMISSIONS TO THE CONSTRUCTION PLANS. IN ANY OR ALL CIRCUMSTANCES, THE MAXIMUM FINANCIAL LIABILITY TO LIVING CONCEPTS CAN NOT EXCEED THE TOTAL PLAN PURCHASE.

PROFESSIONAL SEAL

THOUGH EVERY EFFORT WAS MADE TO MAKE THE CONSTRUCTION DOCUMENTS FOLLOW THE I.R.C. NATIONAL CODE METHODOLOGIES, A FEW STATES AND CITIES HAVE PASSED BI-LAWS REGARDING CONSTRUCTION PLANS THAT WOULD BE SUBMITTED TO YOU LOCAL MUNICIPALITY AND USED FOR THE CONSTRUCTION OF YOUR HOME. THESE BI-LAWS REQUIRE THE CONSTRUCTION PLANS TO BE REVIEWED AND/OR PREPARED, INSPECTED, AND SEALED (OR STAMPED) BY A LICENSED ARCHITECT IN YOUR STATE. IT IS ADVISED THAT YOU CONTACT YOUR MUNICIPALITY'S BUILDING DEPARTMENT FOR INSTRUCTIONS TO COMPLY WITH THEIR CONSTRUCTION PLANS REVIEW PROCESS.

GENERAL SITE NOTES

1. CONTRACTOR TO VERIFY LOCATIONS OF SITE UTILITIES, REQUIREMENTS, AND CONNECTIONS FEES. OWNER, CONTRACTOR AND SUB-CONTACTORS TO PAY ALL OF THIER RELATED CONSTRUCTION PERMIT FEES AS AGREED UPON BETWEEN THE OWNER AND CONTRACTOR.
2. BEFORE EXCAVATION, THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS, MAPS, AND BUILDING SITE OF EXITING FACILITY TO DETERMINE THE ROUTES OF ALL UNDERGROUND UTILITIES. BEFORE DIGGING COMMENCES IT IS ADVISED THAT THE OWNER AND OR CONTRACTOR CALL THEIR STATES UTILITY LOCATOR FACILITATOR.
3. IT IS RECOMMENDED THAT THE SITES SOIL BE TESTED FOR COMPRESSION RATING TO DETERMINE FOUNDATION AND FOOTING DESIGN. CONCRETE FOUNDATIONS AND FOOTING DESIGN SHALL BE IN ACCORDANCE TO CHAPTER 4 OF THE I.R.C. CODE. SEE FOUNDATION SECTION ON THIS PAGE FOR MORE DETAIL.
4. CONSULT A LOCAL CIVIL ENGINEER FOR SITE PLANS AND SURVEYS OF EXISTING PROPERTY. A LANDSCAPE ARCHITECT SHOULD BE CONSULTED FOR MORE EXTENSIVE LANDSCAPE DESIGNS.

CHAPTER 3 :: BUILDING PLANNING

SECTION R304 MINIMUM ROOM AREAS

R304.1 MINIMUM AREA.
HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SQUARE FEET (6.5 M2).
EXCEPTION: KITCHENS.

R304.2 MINIMUM DIMENSIONS.
HABITABLE ROOMS SHALL BE NOT LESS THAN 7 FEET (2134 MM) IN ANY HORIZONTAL DIMENSION.

EXCEPTION: KITCHENS.

R304.3 HEIGHT EFFECT ON ROOM AREA.
PORTIONS OF A ROOM WITH A SLOPING CEILING MEASURING LESS THAN 5 FEET (1524 MM) OR A FURRED CEILING MEASURING LESS THAN 7 FEET (2134 MM) FROM THE FINISHED FLOOR TO THE FINISHED CEILING SHALL NOT BE CONSIDERED AS CONTRIBUTING TO THE MINIMUM REQUIRED HABITABLE AREA FOR THAT ROOM.

SECTION R305 CEILING HEIGHT

R305.1 MINIMUM HEIGHT.
HABITABLE SPACE, HALLWAYS AND PORTIONS OF BASEMENTS CONTAINING THESE SPACES SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET (2134 MM). BATHROOMS, TOILET ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 6 FEET 8 INCHES (2032 MM).

NOTE: SEE SECTION R305.1 FOR EXCEPTIONS

R305.1.1 BASEMENTS.
PORTIONS OF BASEMENTS THAT DO NOT CONTAIN HABITABLE SPACE OR HALLWAYS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 6 FEET 8 INCHES (2032 MM).

EXCEPTION: AT BEAMS, GIRDERS, DUCTS OR OTHER OBSTRUCTIONS, THE CEILING HEIGHT SHALL BE NOT LESS THAN 6 FEET 4 INCHES (1931 MM) FROM THE FINISHED FLOOR.

SECTION R306 SANITATION

R306.1 TOILET FACILITIES.
EVERY DWELLING UNIT SHALL BE PROVIDED WITH A WATER CLOSET, LAVATORY, AND A BATHTUB OR SHOWER.

R306.2 KITCHEN.
EACH DWELLING UNIT SHALL BE PROVIDED WITH A KITCHEN AREA AND EVERY KITCHEN AREA SHALL BE PROVIDED WITH A SINK.

R306.3 SEWAGE DISPOSAL.
PLUMBING FIXTURES SHALL BE CONNECTED TO A SANITARY SEWER OR TO AN APPROVED PRIVATE SEWAGE DISPOSAL SYSTEM.

R306.4 WATER SUPPLY TO FIXTURES.
PLUMBING FIXTURES SHALL BE CONNECTED TO AN APPROVED WATER SUPPLY. KITCHEN SINKS, LAVATORIES, BATHTUBS, SHOWERS, BIDETS, LAUNDRY TUBS AND WASHING MACHINE OUTLETS SHALL BE PROVIDED WITH HOT AND COLD WATER.

SECTION R307 TOILET, BATH, AND SHOWER SPACES

R307.1 SPACE REQUIRED. FIXTURES SHALL BE SPACED IN ACCORDANCE WITH FIGURE R307.1, AND IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION P2705.1.

R307.2 BATHTUB AND SHOWER SPACES. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET (1829 MM) ABOVE THE FLOOR.

SECTION R308 GLAZING

R308.4 HAZARDOUS LOCATIONS.
THE LOCATIONS SPECIFIED IN SECTIONS R308.4.1 THROUGH R308.4.7 SHALL BE CONSIDERED TO BE SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING.

R308.4.1 GLAZING IN DOORS.
GLAZING IN FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOORS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

NOTE: SEE SECTION 308.4.1 FOR EXCEPTIONS

R308.4.2 GLAZING ADJACENT TO DOORS.
GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) ABOVE THE FLOOR OR WALKING SURFACE AND IT MEETS EITHER OF THE FOLLOWING CONDITIONS:
1. WHERE THE GLAZING IS WITHIN 24 INCHES (610 MM) OF EITHER SIDE OF THE DOOR IN THE PLANE OF THE DOOR IN A CLOSED POSITION.
2. WHERE THE GLAZING IS ON A WALL LESS THAN 180 DEGREES (3.14 RAD) FROM THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES (610 MM) OF THE HINGE SIDE OF AN IN-SWINGING DOOR.

EXCEPTIONS:
1. DECORATIVE GLAZING.
2. WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.
3. WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET (914 MM) OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION R308.4.3.
4. GLAZING THAT IS ADJACENT TO THE FIXED PANEL OF PATIO DOORS.

R308.4.3 GLAZING IN WINDOWS.
GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET (0.836 M2).
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES (457 MM) ABOVE THE FLOOR.
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES
4. (914 MM) ABOVE THE FLOOR.
5. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES (914 MM), MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

NOTE: SEE SECTION R308.4.3. FOR EXCEPTIONS

R308.4.4 GLAZING IN GUARDS AND RAILINGS.
GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

R308.4.4.1 STRUCTURAL GLASS BALUSTER PANELS.
GUARDS WITH STRUCTURAL GLASS BALUSTER PANELS SHALL BE INSTALLED WITH AN ATTACHED TOP RAIL OR HANDRAIL. THE TOP RAIL OR HANDRAIL SHALL BE SUPPORTED BY NOT LESS THAN THREE GLASS BALUSTER PANELS, OR SHALL BE OTHERWISE SUPPORTED TO REMAIN IN PLACE SHOULD ONE GLASS BALUSTER PANEL FAIL.

NOTE: SEE SECTION 308.4.4.1 FOR EXCEPTIONS.

R308.4.5 GLAZING AND WET SURFACES.
GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR ADJACENT TO HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 MM) MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE GLAZING.

NOTE: SEE SECTION 308.4.5 FOR EXCEPTIONS.

R308.4.6 GLAZING ADJACENT TO STAIRS AND RAMPS.
GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

NOTE: SEE SECTION 308.4.6 FOR EXCEPTIONS.

R308.4.7 GLAZING ADJACENT TO THE BOTTOM STAIR LANDING.
GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE LANDING AND WITHIN A 60-INCH (1524 MM) HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION.

SEE SECTION 308.4.7 FOR EXCEPTION

R308.5 SITE-BUILT WINDOWS.
SITE-BUILT WINDOWS SHALL COMPLY WITH SECTION 2404 OF THE INTERNATIONAL BUILDING CODE.

R308.6 SKYLIGHTS AND SLOPED GLAZING.
SKYLIGHTS AND SLOPED GLAZING SHALL COMPLY WITH THE FOLLOWING SECTIONS.

R308.6.1 DEFINITIONS. THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2:
-SKYLIGHT, UNIT.
-SKYLIGHTS AND SLOPED GLAZING.
-TUBULAR DAYLIGHTING DEVICE (TDD).

SECTION R309 GARAGES AND CARPORTS

R309.1 FLOOR SURFACE.
GARAGE FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL. THE AREA OF FLOOR USED FOR PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY.

R309.2 CARPORTS.
CARPORTS SHALL BE OPEN ON NOT LESS THAN TWO SIDES. CARPORT FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL. CARPORTS NOT OPEN ON TWO OR MORE SIDES SHALL BE CONSIDERED TO BE A GARAGE AND SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION FOR GARAGES. THE AREA OF FLOOR USED FOR PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY.

EXCEPTION: ASPHALT SURFACES SHALL BE PERMITTED AT GROUND LEVEL IN CARPORTS.

R309.4 AUTOMATIC GARAGE DOOR OPENERS.
AUTOMATIC GARAGE DOOR OPENERS, IF PROVIDED, SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 325.

R309.5 FIRE SPRINKLERS.
PRIVATE GARAGES SHALL BE PROTECTED BY FIRE SPRINKLERS WHERE THE GARAGE WALL HAS BEEN DESIGNED BASED ON TABLE R302.1(2), NOTE A. SPRINKLERS IN GARAGES SHALL BE CONNECTED TO AN AUTOMATIC SPRINKLER SYSTEM THAT COMPLIES WITH SECTION P2904. GARAGE SPRINKLERS SHALL BE RESIDENTIAL SPRINKLERS OR QUICK-RESPONSE SPRINKLERS, DESIGNED TO PROVIDE A DENSITY OF 0.05 GPM/FT2. GARAGE DOORS SHALL NOT BE CONSIDERED OBSTRUCTIONS WITH RESPECT TO SPRINKLER PLACEMENT.

SECTION R310 EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 EMERGENCY ESCAPE AND RESCUE OPENING REQUIRED.
BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQUIRED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT HAVING A MINIMUM WIDTH OF 36 INCHES (914 MM) THAT OPENS TO A PUBLIC WAY.

NOTE: SEE SECTION R310.1 FOR EXCEPTION

R310.1.1 OPERATIONAL CONSTRAINTS AND OPENING CONTROL DEVICES.
EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING CONTROL DEVICES AND FALL PREVENTION DEVICES COMPLY WITH ASMF F2090 SHALL BE PERMITTED FOR USE ON WINDOWS SERVING AS A REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING AND SHALL BE NOT MORE THAT 70 INCHES (178 CM) ABOVE THE FINISHED FLOOR.

R310.2 EMERGENCY ESCAPE AND RESCUE OPENINGS.
EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE MINIMUM DIMENSIONS IN ACCORDANCE WITH SECTIONS R310.2.1 THROUGH R310.2.4.

R310.2.1 MINIMUM SIZE.
EMERGENCY AND ESCAPE RESCUE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET (0.530 M2).

EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE-FLOOR EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE 5 SQUARE FEET (0.465 M2)
HAVE A NET CLEAR OPENING AREA OF NOT LESS THAN 5 SQUARE FEET (0.465 M2).

R310.2.2 MINIMUM DIMENSIONS.
THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES (610 MM). THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20 INCHES (508 MM). THE NET CLEAR OPENING DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE MOMENT.

R310.2.3 MAXIMUM HEIGHT FROM FLOOR.
EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES (1118 MM) ABOVE THE FLOOR.

R310.2.4 EMERGENCY ESCAPE AND RESCUE OPENINGS UNDER DECKS AND CANTILEVERS.
EMERGENCY ESCAPE AND RESCUE OPENINGS INSTALLED UNDER DECKS,PORCHES AND CANTILEVERS SHALL BE FULLY OPENABLE AND PROVIDE A PATH NOT LESS THAN 36 INCHES (914 MM) IN HEIGHT AND 36 INCHES (914 MM) IN WIDTH TO A YARD OR COURT.

NOTE: SEE SECTION 310.2.4 FOR EXCEPTION

R310.2.4 EMERGENCY ESCAPE AND RESCUE OPENINGS UNDER DECKS AND PORCHES.
EMERGENCY ESCAPE AND RESCUE OPENINGS INSTALLED UNDER DECKS AND PORCHES SHALL BE FULLY OPENABLE AND PROVIDE A PATH NOT LESS THAN 36 INCHES (914 MM) IN HEIGHT TO A YARD OR COURT.

R310.3 EMERGENCY ESCAPE AND RESCUE DOORS
WHERE A DOOR IS PROVIDED AS THE REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING, IT SHALL BE A SIDE-HINGED DOOR OR A SLIDING DOOR.

R310.4 AREA WELLS.
AN EMERGENCY ESCAPE AND RESCUE OPENING WHERE THE BOTTOM OF THE CLEAR OPENING IS BELOW THE ADJACENT GRADE SHALL BE PROVIDED WITH AN AREA WELL IN ACCORDANCE WITH SECTIONS R310.4.1 THROUGH R310.4.4.

R310.4.1 MINIMUM SIZE.
THE HORIZONTAL AREA OF THE AREA WELL SHALL BE NOT LESS THAN 9 SQUARE FEET (0.9 M2), WITH A HORIZONTAL PROJECTION AND WIDTH OF NOT LESS THAN 36 INCHES (914 MM). THE SIZE OF THE AREA WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.

NOTE: SEE SECTION 310.4.1 FOR EXCEPTION

R310.4.2 LADDER AND STEPS.
AREA WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES (1118 MM) SHALL BE EQUIPPED WITH AN APPROVED, PERMANENTLY AFFIXED LADDER OR STEPS. THE LADDER OR STEPS SHALL NOT BE OBSTRUCTED BY THE EMERGENCY ESCAPE AND RESCUE OPENING WHERE THE WINDOW OR DOOR IS IN THE OPEN POSITION. LADDERS OR STEPS REQUIRED BY THIS SECTION SHALL NOT BE REQUIRED TO COMPLY WITH SECTION R311.7.

R310.4.2.1 LADDER.
LADDERS AND RUNGS SHALL HAVE AN INSIDE WIDTH OF NOT LESS THAN 12 INCHES (305 MM), SHALL PROJECT NOT LESS THAN 3 INCHES (76 MM) FROM THE WALL AND SHALL BE SPACED NOT MORE THAN 18 INCHES (457 MM) ON CENTER VERTICALLY FOR THE FULL HEIGHT OF THE AREA WELL.

R310.4.2.2 STEPS.
STEPS SHALL HAVE AN INSIDE WIDTH OF NOT LESS THAN 12 INCHES (305 MM), A MINIMUM TREAD DEPTH OF 5 INCHES (127 MM) AND A MAXIMUM RISER HEIGHT OF 18 INCHES (457 MM) FOR THE FULL HEIGHT OF THE AREA WELL.

R310.4.3 DRAINAGE.
AREA WELLS SHALL BE DESIGNED FOR PROPER DRAINAGE BY CONNECTING TO THE BUILDING'S FOUNDATION DRAINAGE SYSTEM REQUIRED BY SECTION R405.1

NOTE: SEE SECTION 310.4.3 FOR EXCEPTION

R310.4.4 BARS, GRILLES, COVERS AND SCREENS.
WHERE BARS, GRILLES, COVERS, SCREENS OR SIMILAR DEVICES ARE PLACED OVER EMERGENCY ESCAPE AND RESCUE OPENINGS, AREA WELLS BULKHEAD ENCLOSURES OR AREA WELLS THAT SERVE SUCH OPENINGS, THE MINIMUM NET CLEAR OPENING SIZE SHALL COMPLY WITH SECTIONS R310.2 THROUGH R310.2.2 AND R310.4.1. SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, OR TOOL, OR FORCE GREATER THAN THAT REQUIRED FOR THE NORMAL OPERATION OF THE ESCAPE AND RESCUE OPENING.

R310.5 REPLACEMENT WINDOWS FOR EMERGENCY ESCAPE AND RESCUE OPENINGS.
REPLACEMENT WINDOWS INSTALLED IN BUILDINGS MEETING THE SCOPE OF THIS CODE SHALL BE EXEMPT FROM SECTIONS R310.2 AND R310.4.4, PROVIDED THAT THE REPLACEMENT WINDOW MEETS THE FOLLOWING CONDITIONS:

1. THE REPLACEMENT WINDOW IS THE MANUFACTURER'S LARGEST STANDARD SIZE WINDOW THAT WILL FIT WITHIN THE EXISTING FRAME OR EXISTING ROUGH OPENING. THE REPLACEMENT WINDOW IS OF THE SAME OPERATING STYLE AS THE EXISTING WINDOW OR A STYLE THAT PROVIDES FOR AN EQUAL OR GREATER WINDOW OPENING AREA THAN THE EXISTING WINDOW.
2. THE REPLACEMENT WINDOW IS NOT PART OF A CHANGE OF OCCUPANCY.

R310.6 DWELLING ADDITIONS.
WHERE DWELLING ADDITIONS CONTAIN SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROVIDED IN EACH NEW SLEEPING ROOM. WHERE DWELLING ADDITIONS HAVE BASEMENTS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE PROVIDED IN THE NEW BASEMENT.

NOTE: SEE SECTION 310.6 FOR EXCEPTIONS

R310.7 ALTERATIONS OR REPAIRS OF EXISTING BASEMENTS.
NEW SLEEPING ROOMS CREATED IN AN EXISTING BASEMENT SHALL BE PROVIDED WITH EMERGENCY ESCAPE AND RESCUE OPENINGS IN ACCORDANCE WITH SECTION R310.1. OTHER THAN NEW SLEEPING ROOMS, WHERE EXISTING BASEMENTS UNDERGO ALTERATIONS OR REPAIRS, AN EMERGENCY ESCAPE AND RESCUE OPENING IS NOT REQUIRED.

NOTE: SEE SECTION 310.7 FOR EXCEPTION

SECTION R311 MEANS OF EGRESS

R311.1 MEANS OF EGRESS.
DWELLINGS SHALL BE PROVIDED WITH A MEANS OF EGRESS IN ACCORDANCE WITH THIS SECTION. THE MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE REQUIRED EGRESS DOOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE. THE REQUIRED EGRESS DOOR SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

R311.2 EGRESS DOOR.
NOT LESS THAN ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED, AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES (813 MM) WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). THE CLEAR HEIGHT OF THE DOOR OPENING SHALL BE NOT LESS THAN 78 INCHES (1981 MM) IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE READILY OPENABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS.
THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL BE NOT LESS THAN THE DOOR SERVED.
LANDINGS SHALL HAVE A DIMENSION OF NOT LESS THAN 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDINGS SHALL NOT EXCEED 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2 PERCENT).

NOTE: SEE SECTION 311.3. FOR EXCEPTION

R311.3.1 FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS.
LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL BE NOT MORE THAN 1 1/2 INCHES (38 MM) LOWER THAN THE TOP OF THE THRESHOLD.

NOTE: SEE SECTION 311.3.1 FOR EXCEPTION

R311.3.2 FLOOR ELEVATIONS AT OTHER EXTERIOR DOORS.
DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS OR FLOORS NOT MORE THAN 7 3/4 INCHES (196 MM) BELOW THE TOP OF THE THRESHOLD.

NOTE: SEE SECTION 311.3.2. FOR EXCEPTION

R311.3.3 STORM AND SCREEN DOORS.
STORM AND SCREEN DOORS SHALL BE PERMITTED TO SWING OVER EXTERIOR STAIRS AND LANDINGS.

R311.4 VERTICAL EGRESS.
EGRESS FROM HABITABLE LEVELS INCLUDING HABITABLE ATTIC AND BASEMENTS THAT ARE NOT PROVIDED WITH AN EGRESS DOOR IN ACCORDANCE WITH SECTION R311.2 SHALL BE BY A RAMP IN ACCORDANCE WITH SECTION R311.8 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.7.

R311.5 LANDING, DECK, BALCONY AND STAIR CONSTRUCTION, AND ATTACHMENT
EXTERIOR LANDINGS, DECKS, BALCONIES, STAIRS AND SIMILAR FACILITIES SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE TO RESIST BOTH VERTICAL AND LATERAL FORCES OR SHALL BE DESIGNED TO BE SELF-SUPPORTING. ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL.

R311.6 HALLWAYS.
THE WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET (914 MM).

living concepts
7400 Carmel Executive Park
Suite 150
Charlotte, North Carolina 28226
1-800-617-6105
www.livingconcepts.com

SHEET NO.
IRC-1
OF

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

NOTES

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A116

Scale	1/4" = 1'-0"

R311.7 STAIRWAYS. WHERE REQUIRED BY THIS CODE OR PROVIDED, STAIRWAYS SHALL COMPLY WITH THIS SECTION.

EXCEPTIONS:
1. STAIRWAYS NOT WITHIN OR SERVING A BUILDING, PORCH OR DECK.
2. STAIRWAYS LEADING TO NONHABITABLE ATTICS.
3. STAIRWAYS LEADING TO CRAWL SPACES.

R311.7.1 WIDTH.
STAIRWAYS SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. THE CLEAR WIDTH OF STAIRWAYS AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 31 1/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (698 MM) WHERE HANDRAILS ARE INSTALLED ON BOTH SIDES.

NOTE: SEE SECTION 311.7.1 FOR EXCEPTION

R311.7.2 HEADROOM.
THE HEADROOM IN STAIRWAYS SHALL BE NOT LESS THAN 6 FEET 8 INCHES (2032 MM) MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.

NOTE: SEE SECTION 311.7.2 FOR EXCEPTIONS

R311.7.3 VERTICAL RISE.
A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE GREATER THAN 12 FEET 7 INCHES (3835 MM) BETWEEN FLOOR LEVELS OR LANDINGS

R311.7.4 WALK-LINE.
THE WALK-LINE ACROSS WINDER TREADS AND LANDINGS SHALL BE CONCENTRIC TO THE TURN AND PARALLEL TO THE DIRECTION OF TRAVEL ENTERING AND EXITING THE TURN. THE WALKLINE SHALL BE LOCATED 12 INCHES (305 MM) FROM THE INSIDE OF THE TURN. THE 12-INCH (305mm) DIMENSION SHALL BE MEASURED FROM THE WIDEST POINT OF THE CLEAR STAIR WIDTH AT THE WALKING SURFACE. WHERE WINDERS ARE ADJACENT WITHIN A FLIGHT, THE POINT OF THE WIDEST CLEAR STAIR WIDTH OF THE ADJACENT WINDERS SHALL BE USED.

R311.7.5 STAIR TREADS AND RISERS.
STAIR TREADS AND RISERS SHALL MEET THE REQUIREMENTS OF THIS SECTION. FOR THE PURPOSES OF THIS SECTION, DIMENSIONS AND DIMENSIONED SURFACES SHALL BE EXCLUSIVE OF CARPETS, RUGS OR RUNNERS.

R311.7.5.1 RISERS.
THE RISER HEIGHT SHALL BE NOT MORE THAN 7 3/4 INCHES (196 MM). THE RISER HEIGHT SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES (0.51 RAD) FROM THE VERTICAL. AT OPEN RISERS, OPENINGS LOCATED MORE THAN 30 INCHES (762 MM), AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW SHALL NOT PERMIT THE PASSAGE OF 4-INCH-DIA (102 MM) SPHERE.

NOTE: SEE SECTION 311.5.1 FOR EXCEPTIONS

R311.7.5.2 TREADS.
THE TREAD DEPTH SHALL BE NOT LESS THAN 10 INCHES (254 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM).

R311.7.5.2.1 WINDER TREADS.
WINDER TREADS SHALL HAVE A TREAD DEPTH OF NOT LESS THAN 10 INCHES (254MM) MEASURED BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AT THE INTERSECTIONS WITH THE WALK-LINE. WINDER TREADS SHALL HAVE A TREAD DEPTH OF NOT LESS THAN 6 INCHES (152 MM) AT ANY POINT WITHIN THE CLEAR WIDTH OF THE STAIR. WITHIN ANY FLIGHT OF STAIRS, THE LARGEST WINDER TREAD DEPTH AT THE WALK-LINE SHALL NOT EXCEED THE SMALLEST WINDER TREAD BY MORE THAN 3/8 INCH (9.5 MM). CONSISTENTLY SHAPED WINDERS AT THE WALK-LINE SHALL BE ALLOWED WITHIN THE SAME FLIGHT OF STAIRS AS RECTANGULAR TREADS AND SHALL NOT BE REQUIRED TO BE WITHIN 3/8 INCH (9.5 MM) OF THE RECTANGULAR TREAD DEPTH.

NOTE: SEE SECTION 311.7.5 .2.1 FOR EXCEPTION

R311.7.5.3 NOSINGS.
NOSINGS AT TREADS, LANDINGS AND FLOORS OF STAIRWAYS SHALL HAVE A RADIUS OF CURVATURE AT THE NOSING NOT GREATER THAN 9/16 INCH (14 MM) OR A BEVEL NOT GREATER THAN 1/4 INCH (12.7 MM). A NOSING PROJECTION NOT LESS THAN 3/4 INCH (19 MM) AND NOT MORE THAN 11/4 INCHES (32 MM) SHALL BE PROVIDED ON STAIRWAYS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8 INCH (9.5 MM) WITHIN A STAIRWAY.

NOTE: SEE SECTION 311.7.5.3 FOR EXCEPTION

R311.7.5.4 EXTERIOR PLASTIC COMPOSITE STAIR TREADS.
PLASTIC COMPOSITE EXTERIOR STAIR TREADS SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION AND SECTION R507.2.2.

R311.7.6 LANDINGS FOR STAIRWAYS.
THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH PERPENDICULAR TO THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN THE WIDTH OF THE FLIGHT SERVED. FOR LANDINGS OF SHAPES OTHER THAN SQUARE OR RECTANGULAR, THE DEPTH AT THE WALK LINE AND THE TOTAL AREA SHALL BE NOT LESS THAN THAT OF A QUARTER CIRCLE WITH A RADIUS EQUAL TO THE REQUIRED LANDING WIDTH. WHERE THE STAIRWAY HAS A STRAIGHT RUN, THE DEPTH IN THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN 36 INCHES (914 MM).

NOTE: SEE SECTION 311.7.6 FOR EXCEPTION

R311.7.7 STAIRWAY WALKING SURFACE.
THE WALKING SURFACE OF TREADS AND LANDINGS OF STAIRWAYS SHALL BE SLOPED NOT STEEPER THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE).

NOTE: SEE SECTION 311.7.7 FOR EXCEPTION

R311.7.8 HANDRAILS.
HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH FLIGHT OF STAIRS WITH FOUR OR MORE RISERS.

R311.7.8.1 HEIGHT.
HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM).

NOTE: SEE SECTION 311.7.8.1 FOR EXCEPTIONS

R311.7.8.2 HANDRAIL PROJECTION.
HANDRAILS SHALL NOT PROJECT MORE THAN 4 1/2 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY.

NOTE: SEE SECTION 311.7.8.2 FOR EXCEPTIONS

R311.7.8.3 HANDRAIL CLEARANCE.
HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1 1/2 INCHES (38 MM) BETWEEN THE WALL AND THE HANDRAILS.

R311.7.8.4 CONTINUITY.
HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED TOWARD A WALL, GUARD WALKING SURFACE CONTINUOUS TO ITSELF, OR TERMINATE TO A POST

NOTE: SEE SECTION 311.7.8.4 FOR EXCEPTIONS

R311.7.8.5 GRIP-SIZE.
REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.

NOTE: SEE R3117.8.3 FOR TYPE I AND TYPE II HANDRAILS.

R311.7.8.6 EXTERIOR PLASTIC COMPOSITE HANDRAILS.
PLASTIC COMPOSITE EXTERIOR HANDRAILS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R507.2.2.

R311.7.9 ILLUMINATION.
STAIRWAYS SHALL BE PROVIDED WITH ILLUMINATION IN ACCORDANCE WITH SECTION R303.7 AND R303.8.

R311.7.10 SPECIAL STAIRWAYS.
SPIRAL STAIRWAYS AND BULKHEAD ENCLOSURE STAIRWAYS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R311.7 EXCEPT AS SPECIFIED IN SECTIONS R311.7.10.1 AND R311.7.10.2.

R311.7.10.1 SPIRAL STAIRWAYS.
THE CLEAR WIDTH AT AND BELOW THE HANDRAILS AT SPIRAL STAIRWAYS SHALL BE NOT LESS THAN 26 INCHES (660 MM) AND THE WALK-LINE RADIUS SHALL BE NOT GREATER THAN 24 1/2 INCHES (622 MM). EACH TREAD SHALL HAVE A DEPTH OF NOT LESS THAN 6 3/4 INCHES (171 MM) AT THE WALK-LINE. TREADS SHALL BE IDENTICAL, AND THE RISE SHALL BE NOT MORE THAN 9 1/2 INCHES (241 MM). HEADROOM SHALL BE NOT LESS THAN 6 FEET 6 INCHES (1982 MM).

R311.7.10.2 BULKHEAD ENCLOSURE STAIRWAYS.
STAIRWAYS SERVING BULKHEAD ENCLOSURES, NOT PART OF THE REQUIRED BUILDING EGRESS, PROVIDING ACCESS FROM THE OUTSIDE GRADE LEVEL TO THE BASEMENT SHALL BE EXEMPT FROM THE REQUIREMENTS OF SECTIONS R311.3 AND R311.7 WHERE THE HEIGHT FROM THE BASEMENT FINISHED FLOOR LEVEL TO GRADE ADJACENT TO THE STAIRWAY IS NOT MORE THAN 8 FEET (2438 MM) AND THE GRADE LEVEL OPENING TO THE STAIRWAY IS COVERED BY A BULKHEAD ENCLOSURE WITH HINGED DOORS OR OTHER APPROVED MEANS.

NOTE: SEE SECTION R311.7.11 THROUGH R311.7.12.2 FOR ALTERNATING TREAD DEVICES AND SHIPS LADDERS.

R311.8 RAMPS. WHERE REQUIRED BY THIS CODE OR PROVIDED, RAMPS SHALL COMPLY WITH THIS SECTION.

EXCEPTION: RAMPS NOT WITHIN OR SERVING A BUILDING, PORCH OR DECK.

R311.8.1 MAXIMUM SLOPE.
RAMPS SERVING THE EGRESS DOOR REQUIRED BY SECTION R311.2 SHALL HAVE A SLOPE OF NOT MORE THAN 1 UNIT VERTICAL IN 12 UNITS HORIZONTAL (8.3-PERCENT SLOPE). OTHER RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1 UNIT VERTICAL IN 8 UNITS HORIZONTAL (12.5 PERCENT).

EXCEPTION: WHERE IT IS TECHNICALLY INFEASIBLE TO COMPLY BECAUSE OF SITE CONSTRAINTS, RAMPS SHALL HAVE A SLOPE OF NOT MORE THAN 1 UNIT VERTICAL IN 8 UNITS HORIZONTAL (12.5 PERCENT).

R311.8.2 LANDINGS REQUIRED.
THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH RAMP, WHERE DOORS OPEN ONTO RAMPS, AND WHERE RAMPS CHANGE DIRECTIONS. THE WIDTH OF THE LANDING PERPENDICULAR TO THE RAMP SLOPE SHALL BE NOT LESS THAN 36 INCHES (914 MM).

R311.8.3 HANDRAILS REQUIRED.
HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF RAMPS EXCEEDING A SLOPE OF ONE UNIT VERTICAL IN 12 UNITS HORIZONTAL (8.33-PERCENT SLOPE).

R311.8.3.1 HEIGHT.
HANDRAIL HEIGHT, MEASURED ABOVE THE FINISHED SURFACE OF THE RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM)AND NOT MORE THAN 38 INCHES (965 MM).

R311.8.3.2 GRIP SIZE.
HANDRAILS ON RAMPS SHALL COMPLY WITH SECTION R311.7.8.5.

R311.8.3.3 CONTINUITY.
HANDRAILS WHERE REQUIRED ON RAMPS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE RAMP. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1 1/2 INCHES (38 MM) BETWEEN THE WALL AND THE HANDRAILS.

SECTION R312 GUARDS AND WINDOW FALL PROTECTION

R312.1 GUARDS.
GUARDS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R312.1.1 THROUGH R312.1.4.

R312.1.1 WHERE REQUIRED.
GUARDS SHALL BE PROVIDED FOR THOSE PORTIONS OF OPEN-SIDED WALKING SURFACES, INCLUDING FLOORS, STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES (762 MM) MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES (914 MM) HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

R312.1.2 HEIGHT.
REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE NOSINGS.

NOTE: SEE SECTION 312.1.2 FOR EXCEPTIONS

R312.1.3 OPENING LIMITATIONS.
REQUIRED GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT THAT ALLOW PASSAGE OF A SPHERE 4 INCHES (102 mm) IN DIAMETER.

NOTE: SEE SECTION 312.1.3 FOR EXCEPTIONS

R312.1.4 EXTERIOR PLASTIC COMPOSITE GUARDS.
PLASTIC COMPOSITE EXTERIOR GUARDS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R317.4.

R312.2 WINDOW FALL PROTECTION.
WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R312.2.1 AND R312.2.2.

R312.2.1 WINDOW OPENING HEIGHT.
IN DWELLING UNITS, WHERE THE BOTTOM OF THE CLEAR OPENING OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 24 INCHES (610 MM) ABOVE THE FINISHED FLOOR AND GREATER THAN 72 INCHES (1829 MM) ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING, THE OPERABLE WINDOW SHALL COMPLY WITH ONE OF THE FOLLOWING:

1. OPERABLE WINDOW OPENINGS WILL NOT ALLOW A 4-INCH-DIAMETER (102 MM) SPHERE TO PASS THROUGH WHERE THE OPENINGS ARE IN THEIR LARGEST OPENED POSITION.
2. OPERABLE WINDOWS ARE PROVIDED WITH WINDOW OPENING CONTROL DEVICES OR FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F2090.

R312.2.2 WINDOW OPENING CONTROL DEVICES.
WINDOW OPENING CONTROL DEVICES SHALL COMPLY WITH ASTM F2090. THE WINDOW OPENING CONTROL DEVICE, AFTER OPERATION TO RELEASE THE CONTROL DEVICE ALLOWING THE WINDOW TO FULLY OPEN, SHALL NOT REDUCE THE NET CLEAR OPENING AREA OF THE WINDOW UNIT TO LESS THAN THE AREA REQUIRED BY SECTION R310.2.1.

SECTION R313 AUTOMATIC FIRE SPRINKLER SYSTEMS

313.1 TOWNHOUSE AUTOMATIC FIRE SPRINKLER SYSTEMS.
AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN TOWNHOUSES.

NOTE: SEE SECTION 313.1 FOR EXCEPTION

R313.1.1 DESIGN AND INSTALLATION.
AUTOMATIC SPRINKLER SYSTEMS FOR TOWNHOUSES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION P2904 OR NFPA 13D.

R313.2 ONE- AND TWO-FAMILY DWELLINGS AUTOMATIC FIRE SPRINKLER SYSTEMS.
AN AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED IN ONE- AND TWO-FAMILY DWELLINGS.

NOTE: SEE SECTION 313.2 FOR EXCEPTION

R313.2.1 DESIGN AND INSTALLATION.
AUTOMATIC SPRINKLER SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION P2904 OR NFPA 13D.

SECTION R314 SMOKE ALARMS

R314.1 GENERAL.
SMOKE ALARMS SHALL COMPLY WITH NFPA 72 AND SECTION R314.

R314.1.1 LISTINGS.
SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034.

R314.2 WHERE REQUIRED.
SMOKE ALARMS SHALL BE PROVIDED IN ACCORDANCE WITH THIS SECTION.

R314.2.1 NEW CONSTRUCTION.
SMOKE ALARMS SHALL BE PROVIDED IN DWELLING UNITS.

R314.2.2 ALTERATIONS, REPAIRS AND ADDITIONS.
WHERE ALTERATIONS, REPAIRS OR ADDITIONS REQUIRING A PERMIT OCCUR, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS.

NOTE: SEE SECTION 314.2.2 FOR EXCEPTIONS

R314.3 LOCATION.
SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN EACH SLEEPING ROOM.
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS AND NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.
4. SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN 3 FEET (914 MM) HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY THIS SECTION.
5. IN THE HALLWAY AND IN THE ROOM OPEN TO THE HALLWAY IN DWELLING UNITS WHERE THE CEILING HEIGHT OF A ROOM OPEN TO A HALLWAY SERVING BEDROOMS EXCEEDS THAT OF THE HALLWAY BY 24 INCHES (610 MM) OR MORE.

R314.3.1 INSTALLATION NEAR COOKING APPLIANCES.
SMOKE ALARMS SHALL NOT BE INSTALLED IN THE FOLLOWING LOCATIONS UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM IN A LOCATION REQUIRED BY SECTION R314.3.

1. IONIZATION SMOKE ALARMS SHALL NOT BE INSTALLED LESS THAN 20 FEET (6096 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
2. IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH SHALL NOT BE INSTALLED LESS THAN 10 FEET (3048 mm) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
3. PHOTOELECTRIC SMOKE ALARMS SHALL NOT BE INSTALLED LESS THAN 6 FEET (1828 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
4. SMOKE ALARMS LISTED AND MARKED "HELPS REDUCE COOKING NUISANCE ALARMS" SHALL NOT BE INSTALLED LESS THAN 6 FEET (1828 MM) HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

R314.4 INTERCONNECTION.
WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT IN ACCORDANCE WITH SECTION R314.3, THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL DWELLING UNIT. PHYSICAL INTERCONNECTION OF SMOKE ALARMS SHALL NOT BE REQUIRED WHERE LISTED WIRELESS ALARMS ARE INSTALLED AND ALL ALARMS SOUND UPON ACTIVATION OF ONE ALARM.

R314.5 COMBINATION ALARMS.
COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF SMOKE ALARMS.

R314.6 POWER SOURCE.
SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION.

NOTE: SEE SECTION 314.6 FOR EXCEPTIONS

R314.7 FIRE ALARM SYSTEMS
FIRE ALARM SYSTEMS SHALL BE PERMITTED TO BE USED IN LIEU OF SMOKE ALARMS AND SHALL COMPLY WITH SECTIONS R314.7.1 THROUGH R314.7.4.

R314.7.1 GENERAL.
FIRE ALARM SYSTEMS SHALL COMPLY WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SMOKE DETECTORS SHALL BE LISTED IN ACCORDANCE WITH UL 268.

R314.7.2 LOCATION.
SMOKE DETECTORS SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED IN SECTION R314.3.

R314.7.3 PERMANENT FIXTURE.
WHERE A HOUSEHOLD FIRE ALARM SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY, OWNED BY THE HOMEOWNER.

R314.7.4 COMBINATION DETECTORS.
COMBINATION SMOKE AND CARBON MONOXIDE DETECTORS SHALL BE PERMITTED TO BE INSTALLED IN FIRE ALARM SYSTEMS IN LIEU OF SMOKE DETECTORS, PROVIDED THAT THEY ARE LISTED IN ACCORDANCE WITH UL 268 AND UL 2075.

SECTION R315 CARBON MONOXIDE ALARMS

R315.1 GENERAL.
CARBON MONOXIDE ALARMS SHALL COMPLY WITH SECTION R315.

R315.1.1 LISTINGS.
CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034. COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034 AND UL 217.

R315.2 WHERE REQUIRED.
CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R315.2.1 AND R315.2.2.

R315.2.1 NEW CONSTRUCTION.
FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN DWELLING UNITS WHERE EITHER OR BOTH OF THE FOLLOWING CONDITIONS EXIST.

1. THE DWELLING UNIT CONTAINS A FUEL-FIRED APPLIANCE.
2. THE DWELLING UNIT HAS AN ATTACHED GARAGE WITH AN OPENING THAT COMMUNICATES WITH THE DWELLING UNIT.

R315.2.2 ALTERATIONS, REPAIRS AND ADDITIONS.
WHERE ALTERATIONS, REPAIRS OR ADDITIONS REQUIRING A PERMIT OCCUR, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH CARBON MONOXIDE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS.
EXCEPTIONS:

NOTE: SEE SECTION 315.2.2 FOR EXCEPTIONS

R315.3 LOCATION.
CARBON MONOXIDE ALARMS IN DWELLING UNITS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED WITHIN THE BEDROOM.

R315.4 COMBINATION ALARMS.
COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF CARBON MONOXIDE ALARMS.

R315.5 INTERCONNECTIVITY.
WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT IN ACCORDANCE WITH SECTION R315.3, THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL DWELLING UNIT. PHYSICAL INTERCONNECTION OF CARBON MONOXIDE ALARMS SHALL NOT BE REQUIRED WHERE LISTED WIRELESS ALARMS ARE INSTALLED AND ALL ALARMS SOUND UPON ACTIVATION OF ONE ALARM.

NOTE: SEE SECTION 315.5 FOR EXCEPTIONS

R315.6 POWER SOURCE.
CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVER-CURRENT PROTECTION.

NOTE: SEE SECTION 315.5 FOR EXCEPTIONS

R315.7 CARBON MONOXIDE DETECTION SYSTEMS.
CARBON MONOXIDE DETECTION SYSTEMS SHALL BE PERMITTED TO BE USED IN LIEU OF CARBON MONOXIDE ALARMS AND SHALL COMPLY WITH SECTIONS R315.7.1 THROUGH R315.7.4.

R315.7.1 GENERAL.
HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEMS SHALL COMPLY WITH NFPA 720. CARBON MONOXIDE DETECTORS SHALL BE LISTED IN ACCORDANCE WITH UL 2075.

R315.7.2 LOCATION.
CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED IN SECTION R315.3. THESE LOCATIONS SUPERSEDE THE LOCATIONS SPECIFIED IN NFPA 720.

R315.7.3 PERMANENT FIXTURE.
WHERE A HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY AND OWNED BY THE HOMEOWNER.

R315.7.4 COMBINATION DETECTORS.
COMBINATION CARBON MONOXIDE AND SMOKE DETECTORS INSTALLED IN CARBON MONOXIDE DETECTION SYSTEMS IN LIEU OF CARBON MONOXIDE DETECTORS SHALL BE LISTED IN ACCORDANCE WITH UL 268 AND UL 2075 .

SECTION R321 ELEVATORS AND PLATFORM LIFTS

R321.1 ELEVATORS.
WHERE PROVIDED, PASSENGER ELEVATORS, LIMITED- USE AND LIMITED-APPLICATION ELEVATORS OR PRIVATE RESIDENCE ELEVATORS SHALL COMPLY WITH ASME A17.1/CSA B44.

SECTION R322 FLOOD-RESISTANT CONSTRUCTION

R322.1 GENERAL.
BUILDINGS AND STRUCTURES CONSTRUCTED IN WHOLE OR IN PART IN FLOOD HAZARD AREAS, INCLUDING A OR V ZONES AND COASTAL A ZONES, AS ESTABLISHED IN TABLE R301.2(1), AND SUBSTANTIAL IMPROVEMENT AND REPAIR OF SUBSTANTIAL DAMAGE OF BUILDINGS AND STRUCTURES IN FLOOD HAZARD AREAS, SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THIS SECTION. BUILDINGS AND STRUCTURES THAT ARE LOCATED IN MORE THAN ONE FLOOD HAZARD AREA SHALL COMPLY WITH THE PROVISIONS ASSOCIATED WITH THE MOST RESTRICTIVE FLOOD HAZARD AREA. BUILDINGS AND STRUCTURES LOCATED IN WHOLE OR IN PART IN IDENTIFIED FLOODWAYS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ASCE 24.

R322.1.2 STRUCTURAL SYSTEMS.
STRUCTURAL SYSTEMS OF BUILDINGS AND STRUCTURES SHALL BE DESIGNED, CONNECTED AND ANCHORED TO RESIST FLOTATION, COLLAPSE OR PERMANENT LATERAL MOVEMENT DUE TO STRUCTURAL LOADS AND STRESSES FROM FLOODING EQUAL TO THE DESIGN FLOOD ELEVATION.

R322.1.3 FLOOD-RESISTANT CONSTRUCTION.
BUILDINGS AND STRUCTURES ERECTED IN AREAS PRONE TO FLOODING SHALL BE CONSTRUCTED BY METHODS AND PRACTICES THAT MINIMIZE FLOOD DAMAGE.

R322.1.4 ESTABLISHING THE DESIGN FLOOD ELEVATION.
THE DESIGN FLOOD ELEVATION SHALL BE USED TO DEFINE FLOOD HAZARD AREAS. AT A MINIMUM, THE DESIGN FLOOD ELEVATION SHALL BE THE HIGHER OF THE FOLLOWING:

1. THE BASE FLOOD ELEVATION AT THE DEPTH OF PEAK ELEVATION OF FLOODING, INCLUDING WAVE HEIGHT, THAT HAS A 1 PERCENT (100-YEAR FLOOD) OR GREATER CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR.
2. THE ELEVATION OF THE DESIGN FLOOD ASSOCIATED WITH THE AREA DESIGNATED ON A FLOOD HAZARD MAP ADOPTED BY THE COMMUNITY, OR OTHERWISE LEGALLY DESIGNATED.

FOR DETERMINING DESIGN FLOOD ELEVATIONS AND IMPACTS REFER TO SECTIONS R322.1.4.1 AND R322.1.4.2

R322.1.5 LOWEST FLOOR.
THE LOWEST FLOOR SHALL BE THE LOWEST FLOOR OF THE LOWEST ENCLOSED AREA, INCLUDING BASEMENT, AND EXCLUDING ANY UNFINISHED FLOOD-RESISTANT ENCLOSURE THAT IS USEABLE SOLELY FOR VEHICLE PARKING, BUILDING ACCESS OR LIMITED STORAGE PROVIDED THAT SUCH ENCLOSURE IS NOT BUILT SO AS TO RENDER THE BUILDING OR STRUCTURE IN VIOLATION OF THIS SECTION.

living concepts
7400 Carmel Executive Park
Suite 150
Charlotte, North Carolina 28226
1-800-617-6105
www.livingconcepts.com

SHEET NO.
IRC-2
OF

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

NOTES

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A117

Scale	1/4" = 1'-0"

R322.1.6 PROTECTION OF MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS.
ELECTRICAL SYSTEMS, EQUIPMENT AND COMPONENTS; HEATING, VENTILATING, AIR CONDITIONING; PLUMBING APPLIANCES AND PLUMBING FIXTURES; DUCT SYSTEMS; AND OTHER SERVICE EQUIPMENT SHALL BE LOCATED AT OR ABOVE THE ELEVATION REQUIRED IN SECTION R322.2 OR R322.3. IF REPLACED AS PART OF A SUBSTANTIAL IMPROVEMENT, ELECTRICAL SYSTEMS, EQUIPMENT AND COMPONENTS; HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING APPLIANCES AND PLUMBING FIXTURES; DUCT SYSTEMS; AND OTHER SERVICE EQUIPMENT SHALL MEET THE REQUIREMENTS OF THIS SECTION. SYSTEMS, FIXTURES, AND EQUIPMENT AND COMPONENTS SHALL NOT BE MOUNTED ON OR PENETRATE THROUGH WALLS INTENDED TO BREAK AWAY UNDER FLOOD LOADS.

NOTE: SEE SECTION 322.1.6 FOR EXCEPTION

R322.1.7 PROTECTION OF WATER SUPPLY AND SANITARY SEWAGE SYSTEMS.
NEW AND REPLACEMENT WATER SUPPLY SYSTEMS SHALL BE DESIGNED TO MINIMIZE OR ELIMINATE INFILTRATION OF FLOOD WATERS INTO THE SYSTEMS IN ACCORDANCE WITH THE PLUMBING PROVISIONS OF THIS CODE. NEW AND REPLACEMENT SANITARY SEWAGE SYSTEMS SHALL BE DESIGNED TO MINIMIZE OR ELIMINATE INFILTRATION OF FLOODWATERS INTO SYSTEMS AND DISCHARGES FROM SYSTEMS INTO FLOODWATERS IN ACCORDANCE WITH THE PLUMBING PROVISIONS OF THIS CODE AND CHAPTER 3 OF THE INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE.

R322.1.8 FLOOD-RESISTANT MATERIALS.
BUILDING MATERIALS AND INSTALLATION METHODS USED FOR FLOORING AND INTERIOR AND EXTERIOR WALLS AND WALL COVERINGS BELOW THE ELEVATION REQUIRED IN SECTION R322.2 OR R322.3 SHALL BE FLOOD DAMAGE- RESISTANT MATERIALS THAT CONFORM TO THE PROVISIONS OF FEMA TB-2.

SEE SECTION R322.2 FOR FLOOD HAZARD AREAS (INCLUDING A ZONES).

R322.2.2 ENCLOSED AREA BELOW REQUIRED ELEVATION.
ENCLOSED AREAS, INCLUDING CRAWL SPACES, THAT ARE BELOW THE ELEVATION REQUIRED IN SECTION R322.2.1 SHALL:
1. BE USED SOLELY FOR PARKING OF VEHICLES, BUILDING ACCESS OR STORAGE.
2. BE PROVIDED WITH FLOOD OPENINGS THAT MEET THE FOLLOWING CRITERIA AND ARE INSTALLED IN ACCORDANCE WITH SECTION R322.2.2.1 SECTIONS 2.1 THROUGH 2.3, AS WELL AS, SECTIONS:

-R322.2.2.1 FOR INSTALLATION OF OPENINGS.
-R322.2.3 FOUNDATION DESIGN AND CONSTRUCTION.
-R322.2.4 TANKS.

REFER TO SECTION R322.3 FOR COASTAL HIGH-HAZARD AREAS (INCLUDING V ZONES AND COASTAL A ZONES, WHERE DESIGNATED). INCLUDING:

R322.3.1 LOCATION AND SITE PREPARATION
R322.3.2 ELEVATION REQUIREMENTS
R322.3.3 FOUNDATIONS
R322.3.4 CONCRETE SLABS
R322.3.5 WALLS BELOW REQUIRED ELEVATION
R322.3.6 ENCLOSED AREAS BELOW REQUIRED ELEVATION.
R322.3.7 STAIRWAYS AND RAMPS
R322.3.8 DECKS AND PORCHES
R322.3.9 CONSTRUCTION DOCUMENTS
R322.3.10 TANKS

SECTION R323 STORM SHELTERS

R323.1 GENERAL.
THIS SECTION APPLIES TO STORM SHELTERS WHERE CONSTRUCTED AS SEPARATE DETACHED BUILDINGS OR WHERE CONSTRUCTED AS SAFE ROOMS WITHIN BUILDINGS FOR THE PURPOSE OF PROVIDING REFUGE FROM STORMS THAT PRODUCE HIGH WINDS, SUCH AS TORNADOS AND HURRICANES. IN ADDITION TO OTHER APPLICABLE REQUIREMENTS IN THIS CODE, STORM SHELTERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ICC/NSSA-ICC 500.

R323.1.1 SEALED DOCUMENTATION.
THE CONSTRUCTION DOCUMENTS FOR ALL STRUCTURAL COMPONENTS AND IMPACT PROTECTIVE SYSTEMS OF THE STORM SHELTER SHALL BE PREPARED AND SEALED BY A REGISTERED DESIGN PROFESSIONAL INDICATING THAT THE DESIGN MEETS THE CRITERIA OF ICC 500.

EXCEPTION: STORM SHELTERS, STRUCTURAL COMPONENTS AND IMPACT-PROTECTIVE SYSTEMS

SECTION R327 SWIMMING POOLS, SPAS AND HOT TUBS

R327.1 GENERAL.
THE DESIGN AND CONSTRUCTION OF POOLS AND SPAS SHALL COMPLY WITH THE INTERNATIONAL SWIMMING POOL AND SPA CODE.

SECTION R326 HABITABLE ATTICS

R326.1 GENERAL.
HABITABLE ATTICS SHALL COMPLY WITH SECTIONS R326.2 AND R326.3.

R326.2 MINIMUM DIMENSIONS.
A HABITABLE ATTIC SHALL HAVE A FLOOR AREA IN ACCORDANCE WITH SECTION R304 AND A CEILING HEIGHT IN ACCORDANCE WITH SECTION R305.

R326.3 STORY ABOVE GRADE PLANE.
A HABITABLE ATTIC SHALL BE CONSIDERED A STORY ABOVE GRADE PLANE.

NOTE: SEE SECTION 326.3 FOR EXCEPTION

R326.4 MEANS OF EGRESS.
THE MEANS OF EGRESS FOR HABITABLE ATTICS SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF SECTION R311.

CHAPTER 4 :: FOUNDATIONS

SECTION R401 GENERAL

R401.1 APPLICATION. THE PROVISIONS OF THIS CHAPTER SHALL CONTROL THE DESIGN AND CONSTRUCTION OF THE FOUNDATION AND FOUNDATION SPACES FOR BUILDINGS. IN ADDITION TO THE PROVISIONS OF THIS CHAPTER, THE DESIGN AND CONSTRUCTION OF FOUNDATIONS IN FLOOD HAZARD AREAS AS ESTABLISHED BY TABLE R301.2 SHALL MEET THE PROVISIONS OF SECTION R322. WOOD FOUNDATIONS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH AWC PWF.

NOTE: SEE SECTION R401.1 FOR EXCEPTIONS

R401.2 REQUIREMENTS.
FOUNDATION CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS IN ACCORDANCE WITH SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING SOIL. FILL SOILS THAT SUPPORT FOOTINGS AND FOUNDATIONS SHALL BE DESIGNED, INSTALLED AND TESTED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

R401.3 DRAINAGE.
SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER APPROVED POINT OF COLLECTION THAT DOES NOT CREATE A HAZARD. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE SHALL FALL NOT FEWER THAN 6 INCHES (152 MM) WITHIN THE FIRST 10 FEET (3048 MM).

NOTE: SEE SECTION R401.3 FOR EXCEPTIONS

R401.4 SOIL TESTS.
WHERE QUANTIFIABLE DATA CREATED BY ACCEPTED SOIL SCIENCE METHODOLOGIES INDICATE EXPANSIVE SOILS, COMPRESSIBLE SOILS, SHIFTING SOILS, OR OTHER QUESTIONABLE SOIL CHARACTERISTICS ARE LIKELY TO BE PRESENT, THE BUILDING OFFICIAL SHALL DETERMINE WHETHER TO REQUIRE A SOIL TEST TO DETERMINE THE SOIL'S CHARACTERISTICS AT A PARTICULAR LOCATION. THIS TEST SHALL BE DONE BY AN APPROVED AGENCY USING AN APPROVED METHOD.

SECTION R402 MATERIALS

R402.1 WOOD FOUNDATIONS.
WOOD FOUNDATION SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE.

R402.1.1 FASTENERS.
FASTENERS USED BELOW GRADE TO ATTACH PLYWOOD TO THE EXTERIOR SIDE OF EXTERIOR BASEMENT OR CRAWLSPACE WALL STUDS, OR FASTENERS USED IN KNEE WALL CONSTRUCTION, SHALL BE OF TYPE 304 OR 316 STAINLESS STEEL. FASTENERS USED ABOVE GRADE TO ATTACH PLYWOOD AND ALL LUMBER-TOLUMBER FASTENERS EXCEPT THOSE USED IN KNEE WALL CONSTRUCTION SHALL BE OF TYPE 304 OR 316 STAINLESS STEEL, SILICON BRONZE, COPPER, HOT-DIPPED GALVANIZED (ZINC COATED) STEEL NAILS, OR HOT-TUMBLED GALVANIZED (ZINC COATED) STEEL NAILS. ELECTRO-GALVANIZED STEEL NAILS AND GALVANIZED (ZINC COATED) STEEL STAPLES SHALL NOT BE PERMITTED.

R402.1.2 WOOD TREATMENT.
LUMBER AND PLYWOOD SHALL BE PRESSURE-PRESERVATIVE TREATED AND DRIED AFTER TREATMENT IN ACCORDANCE WITH AWPA U1 (COMMODITY SPECIFICATION A, SPECIAL REQUIREMENT 4.2), AND SHALL BEAR THE LABEL OF AN ACCREDITED AGENCY. WHERE LUMBER OR PLYWOOD IS CUT OR DRILLED AFTER TREATMENT, THE TREATED SURFACE SHALL BE FIELD TREATED WITH COPPER NAPHTHENATE, THE CONCENTRATION OF WHICH SHALL CONTAIN NOT LESS THAN 2-PERCENT COPPER METAL, BY REPEATED BRUSHING, DIPPING OR SOAKING UNTIL THE WOOD CANNOT ABSORB MORE PRESERVATIVE.

R402.2 CONCRETE.
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH, AS SHOWN IN TABLE R402.2. CONCRETE SUBJECT TO MODERATE OR SEVERE WEATHERING AS INDICATED IN TABLE R301.2(1) SHALL BE AIR ENTRAINED AS SPECIFIED IN TABLE R402.2. THE MAXIMUM WEIGHT OF FLY ASH, OTHER POZZOLANS, SILICA FUME, SLAG OR BLENDED CEMENTS THAT IS INCLUDED IN CONCRETE MIXTURES FOR GARAGE FLOOR SLABS AND FOR EXTERIOR PORCHES, CARPORT SLABS AND STEPS THAT WILL BE EXPOSED TO DEICING CHEMICALS SHALL NOT EXCEED THE PERCENTAGES OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS SPECIFIED IN SECTION 19.3.3.4 OF ACI MATERIALS USED TO PRODUCE CONCRETE AND TESTING THEREOF SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN CHAPTERS 19 AND 20 OF ACI 318 OR ACI 332. R402.2.1

R402.3 PRECAST CONCRETE.
PRECAST CONCRETE FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R404.5 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE MANUFACTURER'S INSTRUCTIONS.

R402.4 MASONRY.
MASONRY SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THIS CHAPTER AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 1,500 PSI (10.3 MPA).

SECTION 403 FOOTINGS

R403.1 GENERAL.
ALL EXTERIOR WALLS SHALL BE SUPPORTED ON CONTINUOUS SOLID OR FULLY GROUTED MASONRY OR CONCRETE FOOTINGS, CRUSHED STONE FOOTINGS, WOOD FOUNDATIONS, OR OTHER APPROVED STRUCTURAL SYSTEMS THAT SHALL BE OF SUFFICIENT DESIGN TO ACCOMMODATE ALL LOADS ACCORDING TO SECTION R301 AND TO TRANSMIT THE RESULTING LOADS TO THE SOIL WITHIN THE LIMITATIONS AS DETERMINED FROM THE CHARACTER OF THE SOIL. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL. CONCRETE FOOTINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R403 OR IN ACCORDANCE WITH ACI 332.

R403.1.1 MINIMUM SIZE.
THE MINIMUM WIDTH, W, AND THICKNESS, T, FOR CONCRETE FOOTINGS SHALL BE IN ACCORDANCE WITH TABLES R403.1(1) THROUGH R403.1(3) AND FIGURE R403.1(1) OR R403.1.3, AS APPLICABLE, BUT NOT LESS THAN 12 INCHES (305MM) IN WIDTH AND 6 INCHES (152) IN DEPTH. THE FOOTING WIDTH SHALL BE BASED ON THE LOAD-BEARING VALUE OF THE SOIL IN ACCORDANCE WITH TABLE R401.4.1. FOOTING PROJECTIONS, P, SHALL BE NOT LESS THAN 2 INCHES (51 MM) AND SHALL NOT EXCEED THE THICKNESS OF THE FOOTING. FOOTING THICKNESS AND PROJECTION FOR FIREPLACES SHALL BE IN ACCORDANCE WITH SECTION R1001.2. THE SIZE OF FOOTINGS SUPPORTING PIERS AND COLUMNS SHALL BE BASED ON THE TRIBUTARY LOAD AND ALLOWABLE SOIL PRESSURE IN ACCORDANCE WITH TABLE R401.4.1. FOOTINGS FOR WOOD FOUNDATIONS SHALL BE IN ACCORDANCE WITH THE DETAILS SET FORTH IN SECTION R403.2, AND FIGURES R403.1(2) AND R403.1(3). FOOTINGS FOR PRECAST FOUNDATIONS SHALL BE IN ACCORDANCE WITH THE DETAILS SET FORTH IN SECTION R403.4, TABLE R403.4, AND FIGURES R403.4(1) AND R403.4(2).

REFER TO THESE SECTIONS FOR THE FOLLOWING TOPICS:
-R403.1.2 CONTINUOUS FOOTING IN SEISMIC DESIGN CATEGORIES D0, D1 AND D2.
-R403.1.3 FOOTING AND STEM WALL REINFORCING IN SEISMIC DESIGN CATEGORIES D0, D1, AND D2.
-R403.1.3.4 INTERIOR BEARING AND BRACED WALL PANEL FOOTINGS IN SEISMIC DESIGN CATEGORIES D0, D1 AND D2.
-R403.1.3.5 REINFORCEMENT.
-R403.1.3.6 ISOLATED CONCRETE FOOTINGS.

R403.1.4 MINIMUM DEPTH.
EXTERIOR FOOTINGS SHALL BE PLACED NOT LESS THAN 12 INCHES (305 MM) BELOW THE UNDISTURBED GROUND SURFACE. WHERE APPLICABLE, THE DEPTH OF FOOTINGS SHALL ALSO CONFORM TO SECTIONS R403.1.4.1. DECK FOOTINGS SHALL BE IN ACCORDANCE WITH SECTION R507.3.

R403.1.4.1 FROST PROTECTION.
EXCEPT WHERE OTHERWISE PROTECTED FROM FROST, FOUNDATION WALLS, PIERS AND OTHER PERMANENT SUPPORTS OF BUILDINGS AND STRUCTURES SHALL BE PROTECTED FROM FROST BY ONE OR MORE OF THE FOLLOWING METHODS:
1. EXTENDED BELOW THE FROST LINE SPECIFIED IN TABLE R301.2.(1).
2. CONSTRUCTED IN ACCORDANCE WITH SECTION R403.3.
3. CONSTRUCTED IN ACCORDANCE WITH ASCE 32.
4. ERECTED NO SOLID ROCK.

FOOTINGS SHALL NOT BEAR ON FROZEN SOIL UNLESS THE FROZEN CONDITION IS PERMANENT.

NOTE: SEE SECTION R403.1.4.1 FOR EXCEPTIONS

R403.1.5 SLOPE.
THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. THE BOTTOM SURFACE OF FOOTINGS SHALL NOT HAVE A SLOPE EXCEEDING ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). FOOTINGS SHALL BE STEPPED WHERE IT IS NECESSARY TO CHANGE THE ELEVATION OF THE TOP SURFACE OF THE FOOTINGS OR WHERE THE SLOPE OF THE BOTTOM SURFACE OF THE FOOTINGS WILL EXCEED ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE).

R403.1.6 FOUNDATION ANCHORAGE.
WOOD SILL PLATES AND WOOD WALLS SUPPORTED DIRECTLY ON CONTINUOUS FOUNDATIONS SHALL BE ANCHORED TO THE FOUNDATION IN ACCORDANCE WITH THIS SECTION.

COLD-FORMED STEEL FRAMING SHALL BE ANCHORED DIRECTLY TO THE FOUNDATION OR FASTENED TO WOOD SILL PLATES IN ACCORDANCE WITH SECTION R505.3.1 OR R603.3.1, AS APPLICABLE. WOOD SILL PLATES SUPPORTING COLD-FORMED STEEL FRAMING SHALL BE ANCHORED TO THE FOUNDATION IN ACCORDANCE WITH THIS SECTION.

WOOD SOLE PLATES AT ALL EXTERIOR WALLS ON MONOLITHIC SLABS, WOOD SOLE PLATES OF BRACED WALL PANELS AT BUILDING INTERIORS ON MONOLITHIC SLABS AND ALL WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH MINIMUM 1/2-INCH DIAMETER (12.7 MM) ANCHOR BOLTS SPACED NOT GREATER THAN 6 FEET (1829 MM) ON CENTER OR APPROVED ANCHORS OR ANCHOR STRAPS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2-INCH-DIAMETER (12.7 MM) ANCHOR BOLTS. BOLTS SHALL EXTEND NOT LESS THAN 7 INCHES (178 MM) INTO CONCRETE OR GROUTED CELLS OF CONCRETE MASONRY UNITS. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. A NUT AND WASHER SHALL BE TIGHTENED ON EACH ANCHOR BOLT. THERE SHALL BE NOT FEWER THAN TWO BOLTS PER PLATE SECTION WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES (305 MM) OR LESS THAN SEVEN BOLT DIAMETERS FROM EACH END OF THE PLATE SECTION. INTERIOR BEARING WALL SOLE PLATES ON MONOLITHIC SLAB FOUNDATION THAT ARE NOT PART OF A BRACED WALL PANEL SHALL BE POSITIVELY ANCHORED WITH APPROVED FASTENERS. SILL PLATES AND SOLE PLATES SHALL BE PROTECTED AGAINST DECAY AND TERMITES WHERE REQUIRED BY SECTIONS R317 AND R318. ANCHOR BOLTS SHALL BE PERMITTED TO BE LOCATED WHILE CONCRETE IS STILL PLASTIC AND BEFORE IT HAS SET. WHERE ANCHOR BOLTS RESIST PLACEMENT OR THE CONSOLIDATION OF CONCRETE AROUND ANCHOR BOLTS IS IMPEDED, THE CONCRETE SHALL BE VIBRATED TO ENSURE FULL CONTACT BETWEEN THE ANCHOR BOLTS AND CONCRETE.

NOTE: SEE SECTION 403.1.6 FOR EXCEPTIONS

R403.1.6.1 FOUNDATION ANCHORAGE IN SEISMIC DESIGN CATEGORIES C, D0, D1 AND D2.
IN ADDITION TO THE REQUIREMENTS OF SECTION R403.1.6, THE FOLLOWING REQUIREMENTS SHALL APPLY TO WOOD LIGHT-FRAME STRUCTURES IN SEISMIC DESIGN CATEGORIES D0, D1 AND D2 AND WOOD LIGHT-FRAME TOWNHOUSES IN SEISMIC DESIGN CAT. C.

NOTE: SEE SECTION 403.1.6.1 FOR REQUIREMENTS

R403.1.7 FOOTINGS ON OR ADJACENT TO SLOPES.
THE PLACEMENT OF BUILDINGS AND STRUCTURES ON OR ADJACENT TO SLOPES STEEPER THAN ONE UNIT VERTICAL IN THREE UNITS HORIZONTAL (33.3-PERCENT SLOPE) SHALL CONFORM TO SECTIONS R403.1.7.1 THROUGH R403.1.7.4

R403.1.8 FOUNDATIONS ON EXPANSIVE SOILS.
FOUNDATION AND FLOOR SLABS FOR BUILDINGS LOCATED ON EXPANSIVE SOILS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 1808.6 OF THE INTERNATIONAL BUILDING CODE.

NOTE: SEE SECTION 403.1.8 FOR EXCEPTION AND EXPANSIVE SOILS CLASSIFICATIONS.

R403.2 FOOTINGS FOR WOOD FOUNDATIONS.
FOOTINGS FOR WOOD FOUNDATIONS SHALL BE IN ACCORDANCE WITH FIGURES R403.1(2) AND R403.1(3). GRAVEL SHALL BE WASHED AND WELL GRADED. THE MAXIMUM SIZE STONE SHALL NOT EXCEED 3/4 INCH (19.1 MM). GRAVEL SHALL BE FREE FROM ORGANIC, CLAYEY OR SILTY SOILS. SAND SHALL BE COARSE, NOT SMALLER THAN 1/16-INCH (1.6 MM) GRAINS AND SHALL BE FREE FROM ORGANIC, CLAYEY OR SILTY SOILS. CRUSHED STONE SHALL HAVE A MAXIMUM SIZE OF 1/2 INCH (12.7 MM).

R403.3 FROST-PROTECTED SHALLOW FOUNDATIONS.
FOR BUILDINGS WHERE THE MONTHLY MEAN TEMPERATURE OF THE BUILDING IS MAINTAINED AT NOT LESS THAN 64°F (18°C), FOOTINGS ARE NOT REQUIRED TO EXTEND BELOW THE FROST LINE WHERE PROTECTED FROM FROST BY INSULATION IN ACCORDANCE WITH FIGURE R403.3(1) AND TABLE R403.3(1). FOUNDATIONS PROTECTED FROM FROST IN ACCORDANCE WITH FIGURE R403.3(1) AND TABLE R403.3(1) SHALL NOT BE USED FOR UNHEATED SPACES SUCH AS PORCHES, UTILITY ROOMS, GARAGES AND CARPORTS, AND SHALL NOT BE ATTACHED TO BASEMENTS OR CRAWL SPACES THAT ARE NOT MAINTAINED AT A MINIMUM MONTHLY MEAN TEMPERATURE OF 64°F (18°C).

REFER TO SECTION 403 FOR THE FOLLOWING AREAS:

-R403.3.1 FOUNDATIONS ADJOINING FROST-PROTECTED SHALLOW FOUNDATIONS
-R403.3.2 PROTECTION OF HORIZONTAL INSULATION BELOW GROUND.
-R403.3.3 DRAINAGE.
-R403.3.4 TERMITE PROTECTION.

R403.4 FOOTINGS FOR PRECAST CONCRETE FOUNDATIONS.
FOOTINGS FOR PRECAST CONCRETE FOUNDATIONS SHALL COMPLY WITH SECTION R403.4.

SECTION 404
FOUNDATION AND RETAINING WALLS

R404.1 CONCRETE AND MASONRY FOUNDATION WALLS.
REFER TO SECTION 404.1 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR CONCRETE AND MASONRY FOUNDATION WALLS.

R404.2 WOOD FOUNDATION WALLS.
REFER TO SECTION 404.2 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR WOOD FOUNDATION WALLS.

R404.3 WOOD SILL PLATES.
WOOD SILL PLATES SHALL BE NOT LESS THAN 2-INCH BY 4-INCH (51 MM BY 102 MM) NOMINAL LUMBER. SILL PLATE ANCHORAGE SHALL BE IN ACCORDANCE WITH SECTIONS R403.1.6 AND R602.11.

R404.4 RETAINING WALLS.
RETAINING WALLS THAT ARE NOT LATERALLY SUPPORTED AT THE TOP AND THAT RETAIN IN EXCESS OF 48 INCHES (1219 MM) OF UNBALANCED FILL, OR RETAINING WALLS EXCEEDING 24 INCHES (610 MM) IN HEIGHT THAT RESIST LATERAL LOADS IN ADDITION TO SOIL, SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE TO ENSURE STABILITY AGAINST OVERTURNING, SLIDING, EXCESSIVE FOUNDATION PRESSURE AND WATER UPLIFT. RETAINING WALLS SHALL BE DESIGNED FOR A SAFETY FACTOR OF 1.5 AGAINST LATERAL SLIDING AND OVERTURNING. THIS SECTION SHALL NOT APPLY TO FOUNDATION WALLS SUPPORTING BUILDINGS.

R404.5 PRECAST CONCRETE FOUNDATION WALLS.
REFER TO SECTION 404.5 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR PRECAST CONCRETE FOUNDATION WALLS.

SECTION R405 FOUNDATION DRAINAGE

R405.1 CONCRETE OR MASONRY FOUNDATIONS.
DRAINS SHALL BE PROVIDED AROUND CONCRETE OR MASONRY FOUNDATIONS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES LOCATED BELOW GRADE. DRAINAGE TILES, GRAVEL OR CRUSHED STONE DRAINS, PERFORATED PIPE OR OTHER APPROVED SYSTEMS OR MATERIALS SHALL BE INSTALLED AT OR BELOW THE TOP OF THE FOOTING OR BELOW THE BOTTOM OF THE SLAB AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM. GRAVEL OR CRUSHED STONE DRAINS SHALL EXTEND NOT LESS THAN 1 FOOT (305 MM) BEYOND THE OUTSIDE EDGE OF THE FOOTING AND 6 INCHES (152 MM) ABOVE THE TOP OF THE FOOTING AND BE COVERED WITH AN APPROVED FILTER MEMBRANE MATERIAL. THE TOP OF OPEN JOINTS OF DRAIN TILES SHALL BE PROTECTED WITH STRIPS OF BUILDING PAPER. EXCEPT WHERE OTHERWISE RECOMMENDED BY THE DRAIN MANUFACTURER, PERFORATED DRAINS SHALL BE SURROUNDED WITH AN APPROVED FILTER MEMBRANE OR THE FILTER MEMBRANE SHALL COVER THE WASHED GRAVEL OR CRUSHED ROCK COVERING THE DRAIN. DRAINAGE TILES OR PERFORATED PIPE SHALL BE PLACED ON NOT LESS THAN 2 INCHES (51 MM) OF WASHED GRAVEL OR CRUSHED ROCK NOT LESS THAN ONE SIEVE SIZE LARGER THAN THE TILE JOINT OPENING OR PERFORATION AND COVERED WITH NOT LESS THAN 6 INCHES (152 MM) OF THE SAME MATERIAL.

REFER TO SECTION 405 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR PRECAST CONCRETE FOUNDATION WALLS.

SECTION R406
FOUNDATION WATER-PROOFING AND DAMP-PROOFING

REFER TO SECTION 406 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR WATER-PROOFING AND DAMP-PROOFING FOUNDATIONS INCLUDING THE FOLLOWING AREAS:

-R406.1 CONCRETE AND MASONRY FOUNDATION DAMPPROOFING.
-R406.2 CONCRETE AND MASONRY FOUNDATION WATERPROOFING.
-R406.3 DAMPPROOFING FOR WOOD FOUNDATIONS.
-R406.4 PRECAST CONCRETE FOUNDATION SYSTEM DAMPPROOFING.

SECTION R407 COLUMNS

REFER TO SECTION 407 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR COLUMNS INCLUDING THE FOLLOWING AREAS:

-R407.1 WOOD COLUMN PROTECTION.
-R407.2 STEEL COLUMN PROTECTION.
-R407.3 STRUCTURAL REQUIREMENTS.

SECTION R408 UNDER-FLOOR SPACE

REFER TO SECTION 408 FOR FURTHER SPECIFICATIONS, NOTES AND DESIGN CRITERIA FOR UNDER-FLOOR SPACE INCLUDING THE FOLLOWING AREA:

-R408.1 MOISTURE CONTROL.
-R408.2 OPENINGS FOR UNDER-FLOOR VENTILATION.
-R408.3 UN-VENTED CRAWL SPACE.
-R408.4 ACCESS.
-R408.5 REMOVAL OF DEBRIS.
-R408.6 FINISHED GRADE.
-R408.7 FLOOD RESISTANCE.
-R408.8 UNDER-FLOOR VAPOR RETARDER.

CHAPTER 5 :: FLOORS

SECTION R501 GENERAL

R501.1 APPLICATION.
THE PROVISIONS OF THIS CHAPTER SHALL CONTROL THE DESIGN AND CONSTRUCTION OF THE FLOORS FOR BUILDINGS, INCLUDING THE FLOORS OF ATTIC SPACES USED TO HOUSE MECHANICAL OR PLUMBING FIXTURES AND EQUIPMENT.

R501.2 REQUIREMENTS.
FLOOR CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS IN ACCORDANCE WITH SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING STRUCTURAL ELEMENTS.

SECTION R502 WOOD FLOOR FRAMING

R502.1 GENERAL.
WOOD AND WOOD-BASED PRODUCTS USED FOR LOAD-SUPPORTING PURPOSES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION. SEE SECTIONS 502.1.1 THROUGH 502.1.7 FOR FURTHER SPECIFICATIONS.

R502.2 DESIGN AND CONSTRUCTION.
FLOORS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER, FIGURE R502.2 AND SECTIONS R317 AND R318 OR IN ACCORDANCE WITH ANSI AWC NDS. SEE SECTIONS 502.2.1 THROUGH 502.2.2 FOR FURTHER SPECIFICATIONS.

R502.3 ALLOWABLE JOIST SPANS.
SPANS FOR FLOOR JOISTS SHALL BE IN ACCORDANCE WITH TABLES R502.3.1(1) AND R502.3.1(2). FOR OTHER GRADES AND SPECIES AND FOR OTHER LOADING CONDITIONS, REFER TO THE AWC STJR. SEE SECTIONS 502.3.1 THROUGH 502.3.3 FOR FURTHER SPECIFICATIONS.

R502.4 JOISTS UNDER BEARING PARTITIONS.
JOISTS UNDER PARALLEL BEARING PARTITIONS SHALL BE OF ADEQUATE SIZE TO SUPPORT THE LOAD.DOUBLE JOISTS, SIZED TO ADEQUATELY SUPPORT THE LOAD, THAT ARE SEPARATED TO PERMIT THE INSTALLATION OF PIPING OR VENTS SHALL BE FULL DEPTH SOLID BLOCKED WITH LUMBER NOT LESS THAN 2 INCHES (51 MM) IN NOMINAL THICKNESS SPACED NOT MORE THAN 4 FEET (1219 MM) ON CENTER. BEARING PARTITIONS PERPENDICULAR TO JOISTS SHALL NOT BE OFFSET FROM SUPPORTING GIRDERS, WALLS OR PARTITIONS MORE THAN THE JOIST DEPTH UNLESS SUCH JOISTS ARE OF SUFFICIENT SIZE TO CARRY THE ADDITIONAL LOAD.

R502.5 ALLOWABLE GIRDER AND HEADER SPANS.
THE ALLOWABLE SPANS OF GIRDERS AND HEADERS FABRICATED OF DIMENSION LUMBER SHALL NOT EXCEED THE VALUES SET FORTH IN TABLES R602.7(1), R602.7(2) AND R602.7(3).

R502.6 BEARING.
THE ENDS OF EACH JOIST, BEAM OR GIRDER SHALL HAVE NOT LESS THAN 1 1/2 INCHES (38 MM) OF BEARING ON WOOD OR METAL, NOT LESS THAN 3 INCHES (76 MM) OF BEARING ON MASONRY OR CONCRETEOR BE SUPPORTED BY APPROVED JOIST HANGERS. ALTERNATIVELY, THE ENDS OF JOISTS SHALL BE SUPPORTED ON A 1-INCH BY 4-INCH (25 MM BY 102 MM) RIBBON STRIP AND SHALL BE NAILED TO THE ADJACENT STUD. THE BEARING ON MASONRY OR CONCRETE SHALL BE DIRECT, OR A SILL PLATE OF 2-INCH-MINIMUM (51 mm) NOMINAL THICKNESS SHALL BE PROVIDED UNDER THE JOIST, BEAM OR GIRDER. THE SILL PLATE SHALL PROVIDE A MINIMUM NOMINAL BEARING AREA OF 48 SQUARE INCHES (30 865 MM2). SEE SECTIONS 502.6.1 THROUGH 502.6.2 FOR FURTHER SPECIFICATIONS.

REFER TO THE IRC FOR FURTHER INFORMATION ON THE FOLLOWING AREAS:

-R502.7 LATERAL RESTRAINT AT SUPPORTS.
-R502.8 CUTTING, DRILLING AND NOTCHING.
-R502.9 FASTENING.
-R502.10 FRAMING OF OPENINGS.
-R502.11 WOOD TRUSSES.
-R502.12 DRAFTSTOPPING REQUIRED.
-R502.13 FIREBLOCKING REQUIRED.

REFER TO THE IRC FOR THE FOLLOWING SECTIONS:

SECTION 503 FLOOR SHEATHING
SECTION 504 PRESSURE PRESERVATIVE TREATED WOOD FLOORS
SECTION 505 COLD-FORMED STEEL FLOOR FRAMING

SECTION R506 CONCRETE FLOORS (ON GROUND)

R506.1 GENERAL.
CONCRETE SLAB-ON-GROUND FLOORS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION OR ACI 332. FLOORS SHALL BE A MINIMUM 3 1/2 INCHES (89 MM) THICK (FOR EXPANSIVE SOILS, SEE SECTION R403.1.8). THE SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS SET FORTH IN SECTION R402.2.

R506.2 SITE PREPARATION.
THE AREA WITHIN THE FOUNDATION WALLS SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED.

R506.2.1 FILL.
FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ENSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24 INCHES (610 MM) FOR CLEAN SAND OR GRAVEL AND 8 INCHES (203 MM) FOR EARTH.

living concepts
7400 Carmel Executive Park
Suite 150
Charlotte, North Carolina 28226
1-800-617-6105
www.livingconcepts.com

SHEET NO.
IRC-3
OF

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

NOTES

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A118

Scale	1/4" = 1'-0"

R506.2.2 BASE.
A 4-INCH-THICK (102 MM) BASE COURSE CONSISTING OF CLEAN GRADED SAND, GRAVEL, CRUSHED STONE, CRUSHED CONCRETE OR CRUSHED BLAST-FURNACE SLAG PASSING A 2- INCH (51 MM) SIEVE SHALL BE PLACED ON THE PREPARED SUBGRADE WHERE THE SLAB IS BELOW GRADE.

NOTE: SEE SECTION 506.2.2 FOR EXCEPTION

R506.2.3 VAPOR RETARDER.
A 10-MIL (0.010 INCH; 0.254 MM) VAPOR RETARDER CONFORMING TO ASTM E1745 CLASS A REQUIREMENTS WITH JOINTS LAPPED NOT LESS THAN 6 INCHES (152 MM) SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUBGRADE WHERE A BASE COURSE DOES NOT EXIST.

NOTE: SEE SECTION R506.2.3 FOR EXCEPTIONS

R506.2.4 REINFORCEMENT SUPPORT.
WHERE PROVIDED IN SLABS-ON-GROUND, REINFORCEMENT SHALL BE SUPPORTED TO REMAIN IN PLACE FROM THE CENTER TO UPPER ONE-THIRD OF THE SLAB FOR THE DURATION OF THE CONCRETE PLACEMENT.

SECTION R507 DECKS

R507.1 DECKS.
WOOD-FRAMED DECKS SHALL BE IN ACCORDANCE WITH THIS SECTION. DECKS SHALL BE DESIGNED FOR THE LIVE LOAD REQUIRED IN SECTION R301.5 OR THE GROUND SNOW LOAD INDICATED IN TABLE R301.2, WHICHEVER IS GREATER. FOR DECKS USING MATERIALS AND CONDITIONS NOT PRESCRIBED IN THIS SECTIONS, REFER TO SECTION R301.

R507.2 MATERIALS.
MATERIALS USED FOR THE CONSTRUCTION OF DECKS SHALL COMPLY WITH THIS SECTION.

R507.2.1 WOOD MATERIALS.
WOOD MATERIALS SHALL BE NO. 2 GRADE OR BETTER LUMBER ,PRESERVATIVE-TREATED IN ACCORDANCE WITH SECTION R317, OR APPROVED, NATURALLY DURABLE LUMBER, AND TERMITE PROTECTED WHERE REQUIRED IN ACCORDANCE WITH SECTION R318. WHERE DESIGN IN ACCORDANCE WITH SECTION R301 IS PROVIDED, WOOD STRUCTURAL MEMBERS SHALL BE DESIGNED USING THE WET SERVICE FACTOR DEFINED IN AWC NDS. CUTS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE TREATED WOOD MEMBERS SHALL BE TREATED IN ACCORDANCE WITH SECTION R317.1.1. ALL PRESERVATIVE-TREATED WOOD PRODUCTS IN CONTACT WITH THE GROUND SHALL BE LABELED FOR SUCH USAGE.

R507.2.1.1 ENGINEERED WOOD PRODUCTS.
ENGINEERED WOOD PRODUCTS SHALL BE IN ACCORDANCE WITH SECTION R502.

R507.2.2 PLASTIC COMPOSITE DECK BOARDS, STAIR TREADS, GUARDS, OR HANDRAILS.
PLASTIC COMPOSITE EXTERIOR DECK BOARDS, STAIR TREADS, GUARDS AND HANDRAILS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM D7032 AND SECTION R507.3. SEE SECTIONS R507.2.2.1 THROUGH R507.2.2.5 AND SECTIONS R507.2.3 THOUGHT R507.2.5 FOR FURTHER SPECIFICATIONS.

R507.2.3 FASTENERS AND CONNECTORS.
METAL FASTENERS AND CONNECTORS USED FOR ALL DECKS SHALL BE IN ACCORDANCE WITH SECTION R317.3 AND TABLE R507.2.3.

R507.3 FOOTINGS
DECKS SHALL BE SUPPORTED ON CONCRETE FOOTINGS OR OTHER APPROVED STRUCTURAL SYSTEMS DESIGNED TO ACCOMMODATE ALL LOADS IN ACCORDANCE WITH SECTION R301. DECK FOOTINGS SHALL BE SIZED TO CARRY THE IMPOSED LOADS FROM THE DECK STRUCTURE TO THE GROUND AS SHOWN IN FIGURE R507.3.

NOTE: SEE SECTION R507.3 FOR EXCEPTION

R507.4 DECK POSTS.
FOR SINGLE-LEVEL DECKS, WOOD POST SIZE SHALL BE IN ACCORDANCE WITH TABLE R507.4.

R507.4.1 DECK POST TO FOOTING CONNECTION.
WHERE POSTS BEAR ON CONCRETE FOOTINGS IN ACCORDANCE WITH SECTION R403 AND FIGURE R507.4.1, LATERAL RESTRAINT SHALL BE PROVIDED BY MANUFACTURED CONNECTORS OR A MINIMUM POST EMBEDMENT OF 12 INCHES (305 MM) IN SURROUNDING SOILS OR CONCRETE PIERS. OTHER FOOTING SYSTEMS SHALL BE PERMITTED.

NOTE: SEE SECTION R507.4.1 FOR EXCEPTIONS

R507.5 DECK BEAMS.
MAXIMUM ALLOWABLE SPANS FOR WOOD DECK BEAMS, AS SHOWN IN FIGURE R507.5, SHALL BE IN ACCORDANCE WITH TABLES R507.5(1) THROUGH R507.5(4). BEAM PLIES SHALL BE FASTENED TOGETHER WITH TWO ROWS OF 10D (3-INCH X 0.128-INCH) NAILS MINIMUM AT 16 INCHES (406 MM) ON CENTER ALONG EACH EDGE. BEAMS SHALL BE PERMITTED TO CANTILEVER AT EACH END UP TO ONE-FOURTH OF THE ACTUAL BEAM SPAN. DECK BEAMS OF OTHER MATERIALS SHALL BE PERMITTED WHERE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES.

R507.7 DECKING.
MAXIMUM ALLOWABLE SPACING FOR JOISTS SUPPORTING WOOD DECKING, EXCLUDING STAIRWAYS, SHALL BE IN ACCORDANCE WITH TABLE R507.7. WOOD DECKING SHALL BE ATTACHED TO EACH SUPPORTING MEMBER WITH NOT LESS THAN TWO 8D THREADED NAILS OR TWO NO. 8 WOOD SCREWS. MAXIMUM ALLOWABLE SPACING FOR JOISTS SUPPORTING PLASTIC COMPOSITE DECKING SHALL BE IN ACCORDANCE WITH SECTION R507.2. OTHER APPROVED DECKING OR FASTENER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS.

R507.8 VERTICAL AND LATERAL SUPPORTS.
WHERE SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL, DECKS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL. FOR DECKS WITH CANTILEVERED FRAMING MEMBERS, CONNECTION TO EXTERIOR WALLS OR OTHER FRAMING MEMBERS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST UPLIFT RESULTING FROM THE FULL LIVE LOAD SPECIFIED IN TABLE R301.5 ACTING ON THE CANTILEVERED PORTION OF THE DECK. WHERE POSITIVE CONNECTION TO THE PRIMARY BUILDING STRUCTURE CANNOT BE VERIFIED DURING INSPECTION, DECKS SHALL BE SELF-SUPPORTING.

CHAPTER 6 :: WALL CONSTRUCTION

SECTION R601 GENERAL

R601.1 APPLICATION.
THE PROVISIONS OF THIS CHAPTER SHALL CONTROL THE DESIGN AND CONSTRUCTION OF WALLS AND PARTITIONS FOR BUILDINGS.

R601.2 REQUIREMENTS.
WALL CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS IMPOSED IN ACCORDANCE WITH SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING STRUCTURAL ELEMENTS.

SECTION R602 WOOD WALL FRAMING

R602.1 GENERAL.
WOOD AND WOOD-BASED PRODUCTS USED FOR LOAD SUPPORTING PURPOSES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION. SEE SECTIONS 602.6.1 THROUGH 502.6.11 FOR FURTHER SPECIFICATIONS.

R602.2 GRADE.
STUDS SHALL BE A MINIMUM NO. 3, STANDARD OR STUD GRADE LUMBER.

NOTE: SEE SECTION 506.2.2 FOR EXCEPTION

R602.3 DESIGN AND CONSTRUCTION.
EXTERIOR WALLS OF WOODFRAME CONSTRUCTION SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER AND FIGURES R602.3(1) AND R602.3(2), OR IN ACCORDANCE WITH AWC NDS. COMPONENTS OF EXTERIOR WALLS SHALL BE FASTENED IN ACCORDANCE WITH TABLES R602.3(1) THROUGH R602.3(4). WALL SHEATHING SHALL BE FASTENED DIRECTLY TO FRAMING MEMBERS AND, WHERE PLACED ON THE EXTERIOR SIDE OF AN EXTERIOR WALL, SHALL BE CAPABLE OF RESISTING THE WIND PRESSURES LISTED IN TABLE R301.2(2) ADJUSTED FOR HEIGHT AND EXPOSURE USING TABLE R301.2(3) AND SHALL CONFORM TO THE REQUIREMENTS OF TABLE R602.3(3). WALL SHEATHING USED ONLY FOR EXTERIOR WALL COVERING PURPOSES SHALL COMPLY WITH SECTION R703. STUDS SHALL BE CONTINUOUS FROM SUPPORT AT THE SOLE PLATE TO A SUPPORT AT THE TOP PLATE TO RESIST LOADS PERPENDICULAR TO THE WALL. THE SUPPORT SHALL BE FOUNDATION OR FLOOR, CEILING OR ROOF DIAPHRAGM OR SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

NOTE: SEE SECTION 506.2.3 FOR EXCEPTION

SEE SECTIONS 602.3.1 THROUGH 603.3.5 FOR FURTHER SPECIFICATIONS.

REFER TO THE IRC FOR FURTHER INFORMATION ON THE FOLLOWING AREAS:

R602.4 INTERIOR LOAD-BEARING WALLS.
R602.5 INTERIOR NONBEARING WALLS.
R602.6 DRILLING AND NOTCHING OF STUDS.
R602.7 HEADERS.
R602.8 FIREBLOCKING REQUIRED.
R602.9 CRIPPLE WALLS.

R602.10 WALL BRACING.
BUILDINGS SHALL BE BRACED IN ACCORDANCE WITH THIS SECTION OR, WHEN APPLICABLE, SECTION R602.12. WHERE A BUILDING, OR PORTION THEREOF, DOES NOT COMPLY WITH ONE OR MORE OF THE BRACING REQUIREMENTS IN THIS SECTION, THOSE PORTIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION R301.1.

REFER TO SECTIONS 602.10.1 THROUGH 602.10.10 FOR BRACED WALL PANELS, DESIGN AND CRITERIA.

REFER TO THE IRC FOR THE FOLLOWING SECTIONS:

SECTION 603 COLD-FORMED STEEL WALL FRAMING
SECTION 604 WOOD STRUCTURAL PANELS
SECTION 605 PARTICLEBOARD
SECTION 606 GENERAL MASONRY CONSTRUCTION
SECTION 607 GLASS UNIT MASONRY
SECTION 608 EXTERIOR CONC. WALL CONSTRUCTION
SECTION 609 (SEE BELOW)
SECTION R610 STRUCTURAL INSULATED PANEL WALL CONSTRUCTION

SECTION R609 EXTERIOR WINDOWS AND DOORS.

R609.1 GENERAL.
THIS SECTION PRESCRIBES PERFORMANCE AND CONSTRUCTION REQUIREMENTS FOR EXTERIOR WINDOWS AND DOORS INSTALLED IN WALLS. WINDOWS AND DOORS SHALL BE INSTALLED IN ACCORDANCE WITH THE FENESTRATION MANUFACTURER'S WRITTEN INSTRUCTIONS. WINDOW AND DOOR OPENINGS SHALL BE FLASHED IN ACCORDANCE WITH SECTION R703.4. WRITTEN INSTALLATION INSTRUCTIONS SHALL BE PROVIDED BY THE FENESTRATION MANUFACTURER FOR EACH WINDOW OR DOOR.

R609.2 PERFORMANCE. EXTERIOR WINDOWS AND DOORS SHALL BE CAPABLE OF RESISTING THE DESIGN WIND LOADS SPECIFIED IN TABLE R301.2(2) ADJUSTED FOR HEIGHT AND EXPOSURE IN ACCORDANCE WITH TABLE R301.2(3) OR DETERMINED IN ACCORDANCE WITH ASCE 7 USING THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS OF ASCE 7. FOR EXTERIOR WINDOWS AND DOORS TESTED IN ACCORDANCE WITH SECTIONS R609.3 AND R609.5, REQUIRED DESIGN WIND PRESSURES DETERMINED FROM ASCE 7 USING THE ULTIMATE STRENGTH DESIGN (USD) ARE PERMITTED TO BE MULTIPLIED BY 0.6. DESIGN WIND LOADS FOR EXTERIOR GLAZING NOT PART OF A LABELED ASSEMBLY SHALL BE PERMITTED TO BE DETERMINED IN ACCORDANCE WITH CHAPTER 24 OF THE IRC. DESIGN WIND LOADS FOR EXTERIOR GLAZING NOT PART OF A LABELED ASSEMBLY SHALL BE PERMITTED TO BE DETERMINED IN ACCORDANCE WITH CHAPTER 24 OF THE INTERNATIONAL BUILDING CODE.

R609.4 GARAGE DOORS.
GARAGE DOORS SHALL BE TESTED IN ACCORDANCE WITH EITHER ASTM E330 OR ANSI/DASMA 108, AND SHALL MEET THE ACCEPTANCE CRITERIA OF ANSI/DASMA 108.

CHAPTER 7 :: WALL COVERING

R702.1 GENERAL.
INTERIOR COVERINGS OR WALL FINISHES SHALL BE INSTALLED IN ACCORDANCE WITH THIS CHAPTER AND TABLE R702.1(1), TABLE R702.1(2), TABLE R702.1(3) AND TABLE R702.3.5. INTERIOR MASONRY VENEER SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R703.7.1 FOR SUPPORT AND SECTION R703.7.4 FOR ANCHORAGE, EXCEPT AN AIRSPACE IS NOT REQUIRED. INTERIOR FINISHES AND MATERIALS SHALL CONFORM TO THE FLAME SPREAD AND SMOKE DEVELOPMENT REQUIREMENTS OF SECTION R302.9.
SEE SECTIONS 702.2 THROUGH 702.7 FOR FURTHER SPECIFICATIONS.

SECTION R703 EXTERIOR COVERING

R703.1 GENERAL.
EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN SECTION R703.4.

R703.2 WATER-RESISTIVE BARRIER.
NOT FEWER THAN ONE LAYER OF WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS WITH FLASHING AS INDICATED IN SECTION R703.4, IN SUCH A MANNER AS TO PROVIDE A CONTINUOUS WATER-RESISTIVE BARRIER BEHIND THE EXTERIOR WALL VENEER. THE WATER-RESISTIVE BARRIER MATERIAL SHALL BE CONTINUOUS TO THE TOP OF WALLS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES IN A MANNER TO MEET THE REQUIREMENTS OF THE EXTERIOR WALL ENVELOPE AS DESCRIBED IN SECTION R703.1. WATER-RESISTIVE BARRIER MATERIALS SHALL COMPLY WITH ONE OF THE FOLLOWING:
1. NO. 15 FELT COMPLYING WITH ASTM D226, TYPE 1.
2. ASTM E2568, TYPE 1 OR 2.
3. ASTM E331 IN ACCORDANCE WITH SECTION R703.1.1.
4. OTHER APPROVED MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

NO.15 ASPHALT FELT AND WATER-RESISTIVE BARRIERS COMPLYING WITH ASTM E2556 SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES (51 MM), AND WHERE JOINTS OCCUR, SHALL BE LAPPED NOT LESS THAN 6 INCHES (152 MM).

R703.3.3 FASTENERS.
EXTERIOR WALL COVERINGS AND ROOF OVERHANG SOFFITS SHALL BE SECURELY FASTENED WITH ALUMINUM, GALVANIZED, STAINLESS STEEL OR RUST-PREVENTATIVE COATED NAILS OR STAPLES IN ACCORDANCE WITH TABLE R703.3(1) OR WITH OTHER APPROVED CORROSION- RESISTANT FASTENERS IN ACCORDANCE WITH THE WALL COVERING MANUFACTURER'S INSTALLATION INSTRUCTIONS. NAILS AND STAPLES SHALL COMPLY WITH ASTM F1667. NAILS SHALL BE T-HEAD, MODIFIED ROUND HEAD, OR ROUND HEAD WITH SMOOTH OR DEFORMED SHANKS. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH (11.1 MM) OUTSIDE DIAMETER AND BE MANUFACTURED OF MINIMUM 16-GAGE WIRE. WHERE FIBERBOARD, GYPSUM, OR FOAM PLASTIC SHEATHING BACKING IS USED, NAILS OR STAPLES SHALL BE DRIVEN INTO THE STUDS. WHERE WOOD OR WOOD STRUCTURAL PANEL SHEATHING IS USED, FASTENERS SHALL BE DRIVEN INTO STUDS UNLESS OTHERWISE PERMITTED TO BE DRIVEN INTO SHEATHING IN ACCORDANCE WITH EITHER THE SIDING MANUFACTURER'S INSTALLATION INSTRUCTIONS OR TABLE R703.3.2.

R703.4 FLASHING.
APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED SHINGLE-FASHION IN A MANNER TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS. SELF-ADHERED MEMBRANES USED AS FLASHING SHALL COMPLY WITH AAMA 711. FLUID-APPLIED MEMBRANES USED AS FLASHING IN EXTERIOR WALLS SHALL COMPLY WITH AAMA 714. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH. APPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:

1. EXTERIOR WINDOW AND DOOR OPENINGS. FLASHING AT EXTERIOR WINDOW AND DOOR OPENINGS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R703.4.1.
2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION WITH FRAME OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO COPINGS.
3. UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS.
4. CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM.
5. WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOODFRAME CONSTRUCTION.
6. AT WALL AND ROOF INTERSECTIONS.
7. AT BUILT-IN GUTTERS.

-R703.5 WOOD, HARDBOARD AND WOOD STRUCTURAL PANEL SIDING.
-R703.6 WOOD SHAKES AND SHINGLES.
-R703.7 EXTERIOR PLASTER (STUCCO).
-R703.8 ANCHORED STONE AND MASONRY VENEER, GENERAL.
-R703.9 EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)/EIFS WITH DRAINAGE.
-R703.10 FIBER CEMENT SIDING.
-R703.11 VINYL SIDING.
-R703.12 ADHERED MASONRY VENEER INSTALLATION.
-R703.13 INSULATED VINYL SIDING.
-R703.14 POLYPROPYLENE SIDING.
-R703.15 CLADDING ATTACHMENT OVER FOAM SHEATHING TO WOOD FRAMING.
-R703.16 CLADDING ATTACHMENT OVER FOAM SHEATHING TO COLD-FORMED STEEL FRAMING.
-R703.17 CLADDING ATTACHMENT OVER FOAM SHEATHING TO MASONRY OR CONCRETE WALL CONSTRUCTION.

CHAPTER 8 :: ROOF-CEILING CONSTRUCTION

SECTION 802 WOOD ROOF FRAMING

R802.1 GENERAL.
WOOD AND WOOD-BASED PRODUCTS USED FOR LOAD SUPPORTING PURPOSES SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THIS SECTION.

SEE SECTIONS 802.1.1 THROUGH 802.1.8 FOR FURTHER SPECIFICATIONS.

R802.2 DESIGN AND CONSTRUCTION.
THE FRAMING DETAILS REQUIRED IN SECTION R802 APPLY TO ROOFS HAVING A MINIMUM SLOPE OF THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE) OR GREATER. ROOF-CEILINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER AND FIGURES R606.11(1), R606.11(2) AND R606.11(3) OR IN ACCORDANCE WITH AWC NDS. COMPONENTS OF ROOF-CEILINGS SHALL BE FASTENED IN ACCORDANCE WITH TABLE R602.3(1).

R802.3 RIDGE.
A RIDGE BOARD USED TO CONNECT OPPOSING RAFTERS SHALL BE NOT LESS THAN 1 INCH (25 MM) NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. WHERE CEILING JOIST OR RAFTER TIES DO NOT PROVIDE CONTINUOUS TIES ACROSS THE STRUCTURE AS REQUIRED BY SECTION R802.5.2, THE RIDGE SHALL BE SUPPORTED BY A WALL OR RIDGE BEAM DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE AND SUPPORTED ON EACH END BY A WALL OR COLUMN.

R802.4 RAFTERS.
RAFTERS SHALL BE IN ACCORDANCE WITH THIS SECTION.

R802.4.1 RAFTER SIZE.
RAFTERS SHALL BE SIZED BASED ON THE RAFTER SPANS IN TABLES R802.4.1(1) THROUGH R802.4.1(8). RAFTER SPANS SHALL BE MEASURED ALONG THE HORIZONTAL PROJECTION OF THE RAFTER. FOR OTHER GRADES AND SPECIES AND FOR OTHER LOADING CONDITIONS, REFER TO THE AWC STJR.

R802.4.2 FRAMING DETAILS.
RAFTERS SHALL BE FRAMED OPPOSITE FROM EACH OTHER TO A RIDGE BOARD, SHALL NOT BE OFFSET MORE THAN 1 1/2 INCHES (38 MM) FROM EACH OTHER AND SHALL BE CONNECTED WITH A COLLAR TIE OR RIDGE STRAP IN ACCORDANCE WITH SECTION R802.4.6 OR DIRECTLY OPPOSITE FROM EACH OTHER TO A GUSSET PLATE IN ACCORDANCE WITH TABLE R602.3(1). RAFTERS SHALL BE NAILED TO THE TOP WALL PLATES IN ACCORDANCE WITH TABLE R602.3(1) UNLESS THE ROOF ASSEMBLY IS REQUIRED TO COMPLY WITH THE UPLIFT REQUIREMENTS OF SECTION R802.11.

R802.4.3 HIPS AND VALLEYS.
HIP AND VALLEY RAFTERS SHALL BE NOT LESS THAN 2 INCHES (51 MM) NOMINAL IN THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. HIP AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A BRACE TO A BEARING PARTITION OR BE DESIGNED TO CARRY AND DISTRIBUTE THE SPECIFIC LOAD AT THAT POINT.

R802.4.4 RAFTER SUPPORTS.
WHERE THE ROOF PITCH IS LESS THAN 3:12 (25-PERCENT SLOPE), STRUCTURAL MEMBERS THAT SUPPORT RAFTERS, SUCH AS RIDGES, HIPS AND VALLEYS, SHALL BE DESIGNED AS BEAMS, AND BEARING SHALL BE PROVIDED FOR RAFTERS IN ACCORDANCE WITH SECTION R802.6.

REFER TO THE IRC FOR FURTHER INFORMATION ON THE FOLLOWING AREAS:

R802.5 ALLOWABLE RAFTER SPANS.
R802.6 BEARING.
R802.7 CUTTING, DRILLING AND NOTCHING.
R802.8 LATERAL SUPPORT.
R802.9 FRAMING OF OPENINGS.
R802.10 WOOD TRUSSES.

R802.10.1 TRUSS DESIGN DRAWINGS. TRUSS DESIGN DRAWINGS, PREPARED IN CONFORMANCE TO SECTION R802.10.1, SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. TRUSS DESIGN DRAWINGS SHALL BE PROVIDED WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. TRUSS DESIGN DRAWINGS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:

REFER TO SECTION 802 10.1 (1-12 FOR MINIMUM INFORMATION)

R802.10.2 DESIGN.
WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. THE DESIGN AND MANUFACTURE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI 1. THE TRUSS DESIGN DRAWINGS SHALL BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL WHERE REQUIRED BY THE STATUTES OF THE JURISDICTION IN WHICH THE PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION R106.1.

R802.10.3 BRACING.
TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS FOR THE BUILDING AND ON THE INDIVIDUAL TRUSS DESIGN DRAWINGS. IN THE ABSENCE OF SPECIFIC BRACING REQUIREMENTS, TRUSSES SHALL BE BRACED IN ACCORDANCE WITH ACCEPTED INDUSTRY PRACTICE SUCH AS THE SBCA BUILDING COMPONENT SAFETY INFORMATION (BDSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.

R802.10.4 ALTERATIONS TO TRUSSES.
TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOAD SUCH AS HVAC EQUIPMENT WATER HEATER THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSS SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

R802.11 ROOF TIE UPLIFT RESISTANCE.
ROOF ASSEMBLIES SHALL HAVE UPLIFT RESISTANCE IN ACCORDANCE WITH SECTIONS R802.11.1.1 AND R802.11.1.2.

NOTE: SEE SECTION 802.11 FOR EXCEPTION

R802.11.1 TRUSS UPLIFT RESISTANCE.
TRUSSES SHALL BE ATTACHED TO SUPPORTING WALL ASSEMBLIES BY CONNECTIONS CAPABLE OF RESISTING UPLIFT FORCES AS SPECIFIED ON THE TRUSS DESIGN DRAWINGS FOR THE ULTIMATE DESIGN WIND SPEED AS DETERMINED BY FIGURE R301.2(5)A AND LISTED IN TABLE R301.2(1) OR AS SHOWN ON THE CONSTRUCTION DOCUMENTS. UPLIFT FORCES SHALL BE PERMITTED TO BE DETERMINED AS SPECIFIED BY TABLE R802.11, IF APPLICABLE, OR AS DETERMINED BY ACCEPTED ENGINEERING PRACTICE.

R802.11.2 RAFTER UPLIFT RESISTANCE.
INDIVIDUAL RAFTERS SHALL BE ATTACHED TO SUPPORTING WALL ASSEMBLIES BY CONNECTIONS CAPABLE OF RESISTING UPLIFT FORCES AS DETERMINED BY TABLE R802.11 OR AS DETERMINED BY ACCEPTED ENGINEERING PRACTICE. CONNECTIONS FOR BEAMS USED IN A ROOF SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

REFER TO THE IRC FOR THE FOLLOWING SECTIONS:

SECTION 803 ROOF SHEATHING
SECTION 804 COLD-FORMED STEEL ROOF FRAMING

SECTION 805 CEILING FINISHES

R805.1 CEILING INSTALLATION.
CEILINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS FOR INTERIOR WALL FINISHES AS PROVIDED IN SECTIONS R702.1 THROUGH R702.6.

SECTION R806 ROOF VENTILATION

R806.1 VENTILATION REQUIRED.
ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES, AND OTHER SIMILAR CREATURES.

R806.2 MINIMUM VENT AREA.
THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.

NOTE: SEE SECTION 806.2 FOR EXCEPTION

R806.3 VENT AND INSULATION CLEARANCE.
WHERE EAVE OR CORNICE VENTS ARE INSTALLED, BLOCKING, BRIDGING, AND INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. NOT LESS THAN A 1-INCH (25 MM) SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AND AT THE LOCATION OF THE VENT.

R806.4 INSTALLATION AND WEATHER PROTECTION.
VENTILATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALLATION OF VENTILATORS IN ROOF SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION R903. INSTALLATION OF VENTILATORS IN WALL SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION R703.1.

R806.5 UNVENTED ATTIC AND UNVENTED ENCLOSED RAFTER ASSEMBLIES.
UNVENTED ATTICS AND UNVENTED ENCLOSED ROOF FRAMING ASSEMBLIES CREATED BY CEILINGS THAT ARE APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS AND STRUCTURAL ROOF SHEATHING APPLIED DIRECTLY TO THE TOP OF THE ROOF FRAMING MEMBERS/RAFTERS, SHALL BE PERMITTED WHERE ALL THE FOLLOWING CONDITIONS ARE MET:

SEE CONDITIONS 806.5 (1 THROUGH 5)

SECTION R807 ATTIC ACCESS

R807.1 ATTIC ACCESS.
BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES (762 MM) OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET (2.8 M2). THE VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.

THE ROUGH-FRAMED OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER LOCATION WITH READY ACCESS. WHERE LOCATED IN A WALL, THE OPENING SHALL BE NOT LESS THAN 22 INCHES WIDE BY 30 INCHES HIGH (559 MM WIDE BY 762 MM HIGH). WHERE THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES (762 MM) AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.

CHAPTER 9 :: ROOF ASSEMBLIES

SECTION R901 GENERAL

R901.1 SCOPE. THE PROVISIONS OF THIS CHAPTER SHALL GOVERN THE DESIGN, MATERIALS, CONSTRUCTION AND QUALITY OF ROOF ASSEMBLIES.

CHAPTER 10 :: CHIMNEYS & FIREPLACES

R1001.1 GENERAL.
MASONRY FIREPLACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THIS SECTION AND THE APPLICABLE PROVISIONS OF CHAPTERS 3 AND 4.

living concepts
7400 Carmel Executive Park
Suite 150
Charlotte, North Carolina 28226
1-800-617-6105
www.livingconcepts.com

SHEET NO.
IRC-4
OF

PLEASE BE ADVISED THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION BEING A PROFESSIONAL ENGINEER, AND I TAKE FULL RESPONSIBILITY FOR THE CONTENTS OF THESE PLANS. THE DESIGN SPECIFICATION COMPLY WITH CITY, PARISH, AND STATE BUILDING CODE REQUIREMENTS TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS REVIEW DOES NOT ATTAEST TO COMPLIANCE WITH ZONING, ENVIRONMENTAL OR SUBSOIL FOUNDATION REQUIREMENTS. I WILL NOT ADMINISTER THE CONSTRUCTION WORK.

No.	Description	Date

FARN

NOTES

Project number	LEO - 187
Date	MM/DD/YYYY
Drawn by	Numan
Checked by	Numan

A119

Scale	1/4" = 1'-0"