

# STRUCTURAL & MATERIAL SPECIFICATIONS

## DESIGN LOADS

DEAD LOAD	LIVE LOAD	USE (LB./ SQUARE FOOT)
10	20	ATTICS ACCESSIBLE BY SCUTTLE OR MEANS OTHER THAN STAIR; CLEAR HEIGHT PERMITS LIMITED STORAGE OF HOUSEHOLD ITEMS
20	20	(SNOW) ROOF
10	10	ALL OTHER ATTIC SPACES, NO STORAGE, ROOF SLOPE 3:12 MAX
10	40	EXTERIOR DECKS
	16.4	WIND PRESSURE: BUILDINGS UP TO 30 FT AT 90 MPH
	90 MPH	WIND SPEED
	2000 PSF	MINIMUM SOIL BEARING PRESSURE

ALLOWABLE DEFLECTIONS H = HEIGHT L = LENGTH

L/180 RAFTERS HAVING SLOPES GREATER THAN 3/12 WITH NO FINISHED CEILING ATTACHED TO RAFTERS

H/180 INTERIOR WALLS AND PARTITIONS

## CONCRETE

ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI)'S MOST RECENT EDITION OF THE FOLLOWING GUIDELINES AND SPECIFICATIONS:

ACI 318.1 BUILDING CODE REQUIREMENTS FOR STRUCTURAL PLAIN CONCRETE ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS

ACI 318 & ACI 318R BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE CAST-IN-PLACE CONCRETE SHALL BE READY MIX ASTM C94; CONCRETE FOR FOOTINGS TO BE F'C = 3,000 PSI; CONCRETE FOR GARAGE SLABS TO BE F'C = 4,000 PSI; ALL OTHER CONCRETE TO BE F'C = 3,500 PSI, ALL STRENGTHS MEASURED AT 28 DAYS.

ALL REINFORCING STEEL TO BE ASTM 615 (GRADE 60) WITH 60,000 PSI (MINIMUM) YIELD TRENTH. ALL WELDED WIRE FABRIC (WWF) SHALL BE ASTM 185. CONCRETE COVER: 3" AT EARTH FORM, 1 1/2" AT FORMWORK, SLABS--MID DEPTH, UNLESS OTHERWISE NOTED.

CONCRETE FORMWORK TO BE ADEQUATELY TIED AND BRACED. FORM SHALL NOT BE STRIPPED UNTIL THE WALL HAS CURED FOR SEVEN DAYS.

ALL CAST-IN-PLACE CONCRETE SHALL BE POURED CONTINUOUSLY WITH NO COLD JOINTS, AND VIBRATED ADEQUATELY TO PREVENT AIR POCKETS AND HONEYCOMB EFFECTS. IF A COLD JOINT CANNOT BE AVOIDED, REINFORCING SHALL EXTEND THROUGH THE COLD JOINT UNLESS OTHERWISE NOTED, COLD JOINTS ARE THE RESPONSIBILITY OF THE CONTRACTOR

ALL CONTINUOUS FOOTINGS ARE TO BE 24" X 10" WITH (2) #5 BARS CONTINUOUS UNLESS OTHERWISE NOTED.

CONCRETE SLABS TO BE 4" THICK, OVER 6 MIL VAPOR BARRIER, OVER 4" MINIMUM WASHED GRAVEL (3/4" MINIMUM DIAMETER) WITH 6 X 6 X10/10 WELDED WIRE FABRIC (WWF) OR #4 BARS AT 24" O.C. EACH WAY UNLESS OTHERWISE NOTED. CONTROL JOINTS TO BE PROVIDED AT 10'-0" O.C. MAXIMUM AND 1" DEEP. SLOPE BASEMENT SLABS TO FLOOR DRAINS. SLOPE GARAGE SLABS 1/8" PER FOOT MINIMUM AND 1/4" PER FOOT MAXIMUM TOWARDS GARAGE DOORS.

BEAM POCKETS TO BE SET TO MATCH DEPTH OF STEEL, TO BE 1" WIDER THAN THE BEAM FLANGES, AND TO HAVE A MINIMUM OF 6" BEAM BEARING AREA INTO THE WIDTH OF THE CONCRETE WALL.

OPENINGS IN CONCRETE WALLS TO HAVE (2) #4 BARS VERTICAL AT EACH SIDE OF OPENING, FULL HEIGHT OF THE CONCRETE POUR. CONCRETE LINTELS TO HAVE (2) #4 BARS DIRECTLY ABOVE THE OPENINGS AND EXTEND 30" PAST OPENING (UNLESS OTHERWISE NOTED). (2) #4 BARS AT TOP OF WALL TO BE CONTINUOUS ACROSS LINTEL AREA.

## WOOD

WALL STUDS TO BE STUD GRADE SO. YELLOW PINE or SPF. ALL OTHER LUMBER TO BE SOUTHERN YELLOW PINE OR SPF #1 MIN. MICRO-LAM MEMBERS TO HAVE AN FB = 2800 PSI; E = 2,000,000 PSI.

PRESSURE TREATED LUMBER TO BE AWPA, WATERBORNE (CCA) TREATED YELLOW PINE, GRADE 2 FOR ABOVE GROUND USE. ALL CONSTRUCTION GRADE WOOD IN CONTACT WITH CONCRETE OR WITHIN 8" OF GRADE TO BE PRESSURE TREATED. ALL BOTTOM PLATES FOR WOOD WALLS RESTING ON CONCRETE TO BE PRESSURE TREATED. ALL STRUCTURAL LUMBER EXPOSED TO EXTERIOR TO BE PRESSURE TREATED OR APPROVED SPECIES.

PLYWOOD TO BE APA PANEL SPECIFICATIONS RATED FOR SPECIES, PANEL GRADE, SPAN RATING, THICKNESS, EXPOSURE CLASSIFICATION, AND MILL LUMBER. PLYWOOD SHALL BE GAPPED AS PER APA RECOMENDATIONS ON WALL, FLOOR AND ROOF SHEATING. USE CLIPS AT ALL FREE EDGES. TYPICAL HEADER SIZE AT THE FRAME OPENING TO BE (2)2X10 UNLESS OTHERWISE NOTED.

ALL DOUBLE 2X HEADERS TO BE FASTENED TOGETHER AT THE TOP AND BOTTOM INTO EACH ADJACENT MEMBER WITH (MINIMUM) 2 ROWS OF 16D NAILS AT 12" O.C., UNLESS OTHERWISE NOTED. FOR HEADERS GREATER THAN TWO MEMBERS WIDE, CONTACT DESIGNER FOR FASTENING, UNLESS NOTED ON PLAN.

LAMINATED VENEER LUMBER (LVL) BEAMS TO BE FASTENED TOGETHER PER MANUFACTURERS SPECIFICATIONS. ALL TJI'S AND LVL BEAMS TO BE INSTALLED, BRACED, JOIST HUNG, ETC., ACCORDING TO MANUFACTURERS' SPECIFICATIONS. BEARING STIFFENERS TO BE ADDED TO ENDS OF ALL T.J.I.'S.

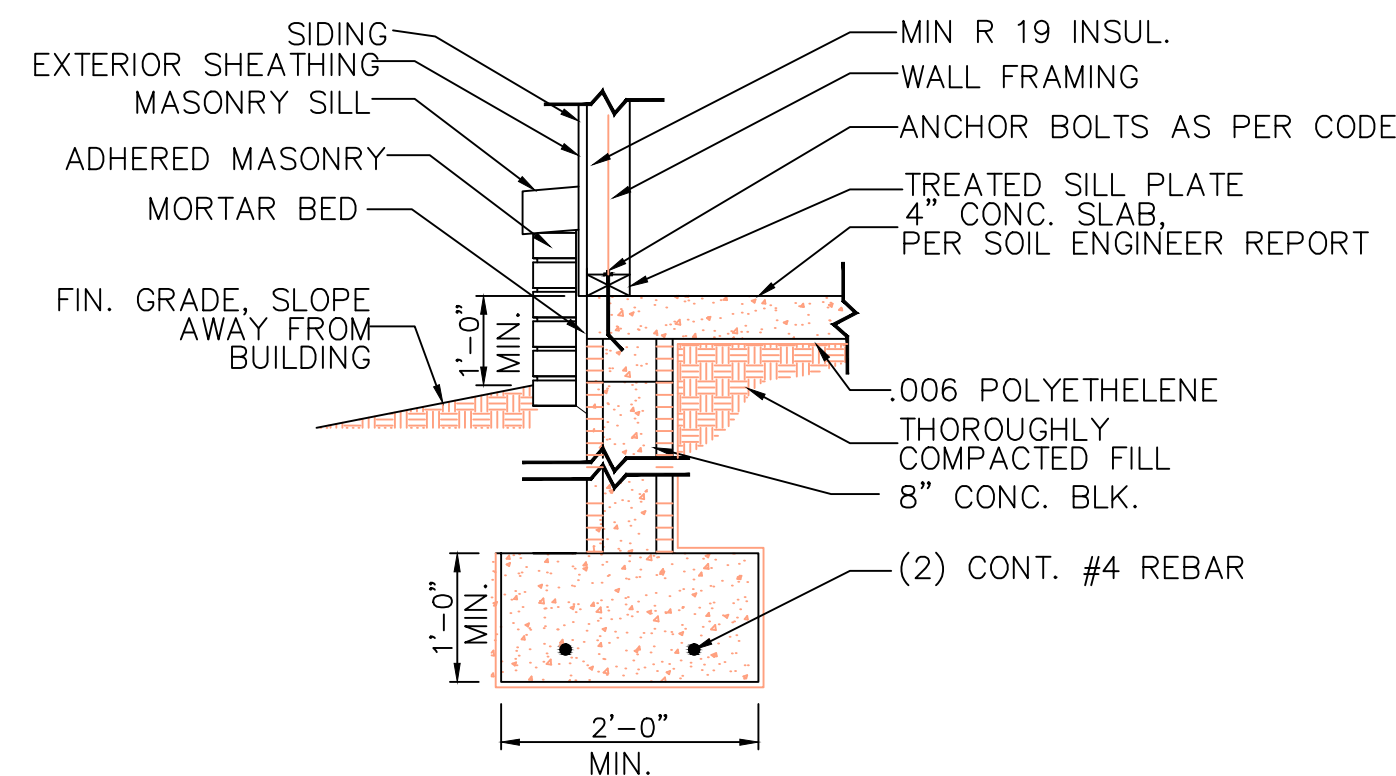
FIRESTOPPING OF TWO INCH NOMINAL LUMBER SHALL BE PROVIDED TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL.

BRIDGING IN FLOOR JOISTS TO BE FABRICATED METAL BRIDGING (SECURED AT BOTH ENDS), OR SOLID BRIDGING OFFSET AND END NAILED. SOLID BRIDGING TO BE MADE OF 2X MATERIAL OF ONE SIZE SMALLER THAN FLOOR JOIST DEPTH. ALIGN BOTTOM CHORDS OF SOLID BRIDGING AND BOTTOM OF FLOOR JOISTS. BRIDGING SHALL NEVER TOUCH BOTTOM OF FLOOR SHEATHING. SET BRIDGING AT 6'0" O.C. MAXIMUM, UNLESS OTHERWISE NOTED.

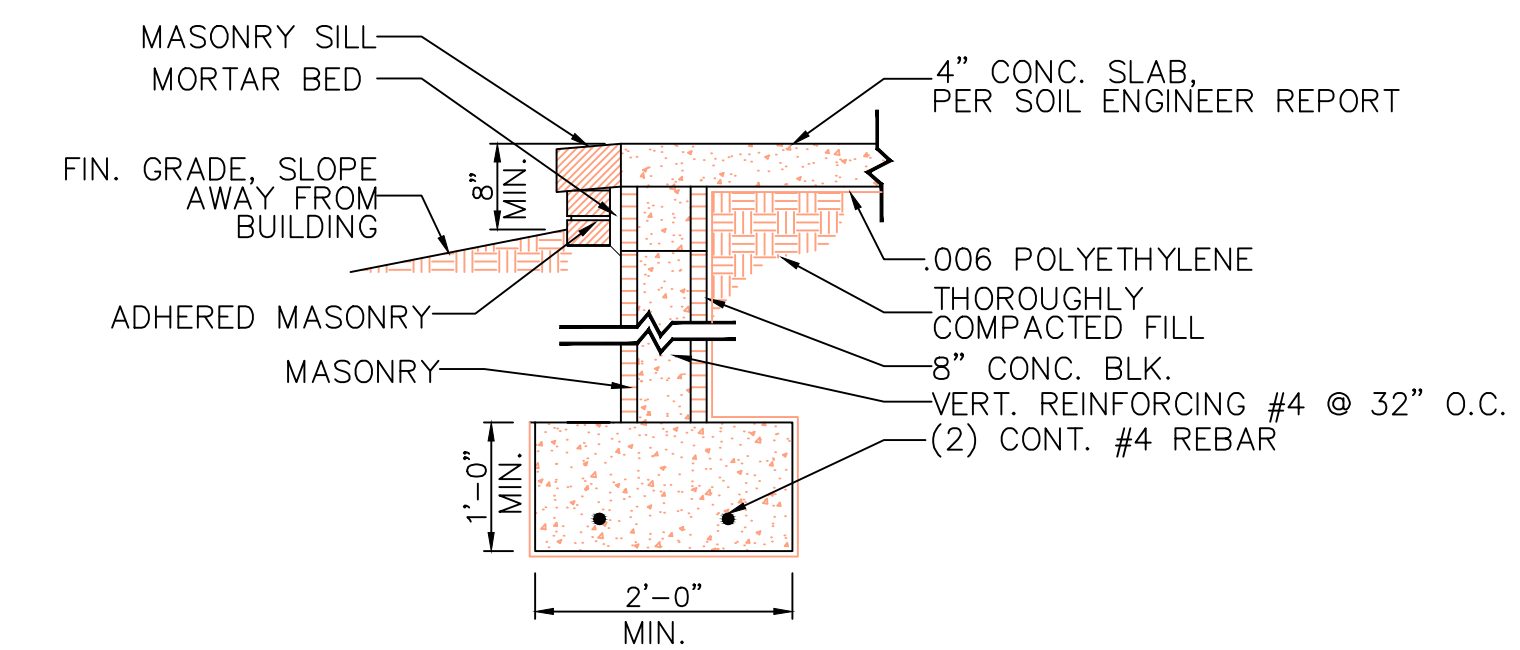
Larry N. Keith  
Architect  
4775 Burdall Road  
Williamsburg, OH 45176  
513-724-3313 voice  
513-536-7149 fax

THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN IS THE PROPERTY OF LARRY N. KEITH ARCHITECT AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF LARRY N. KEITH ARCHITECT. ALL RIGHTS RESERVED.

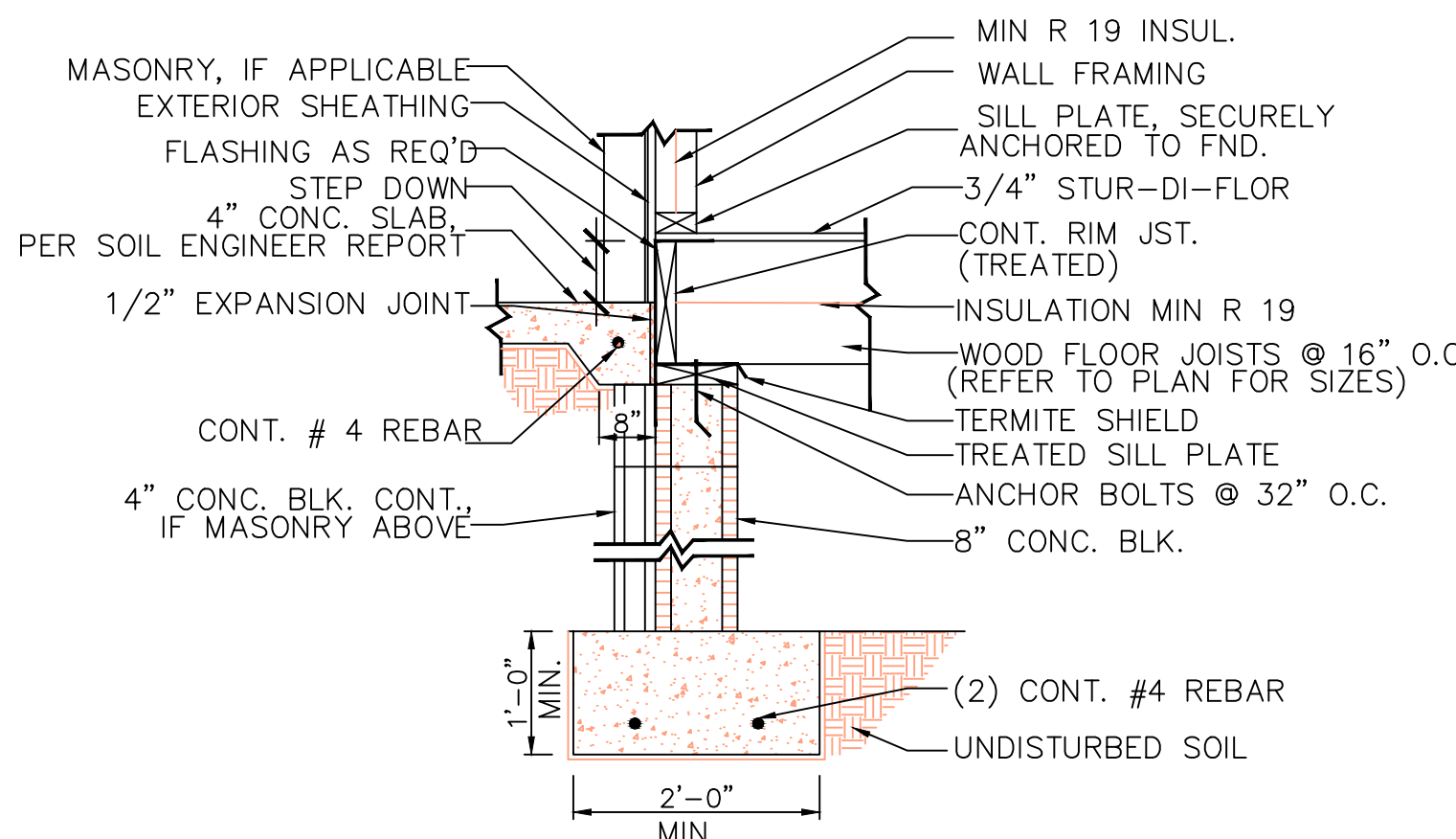
PROPOSED  
RESIDENCE FOR  
ANDREW & ANITA  
RUHLAND  
155 MOCKINGBIRD LANE  
SPRING LAKE, NC 28390



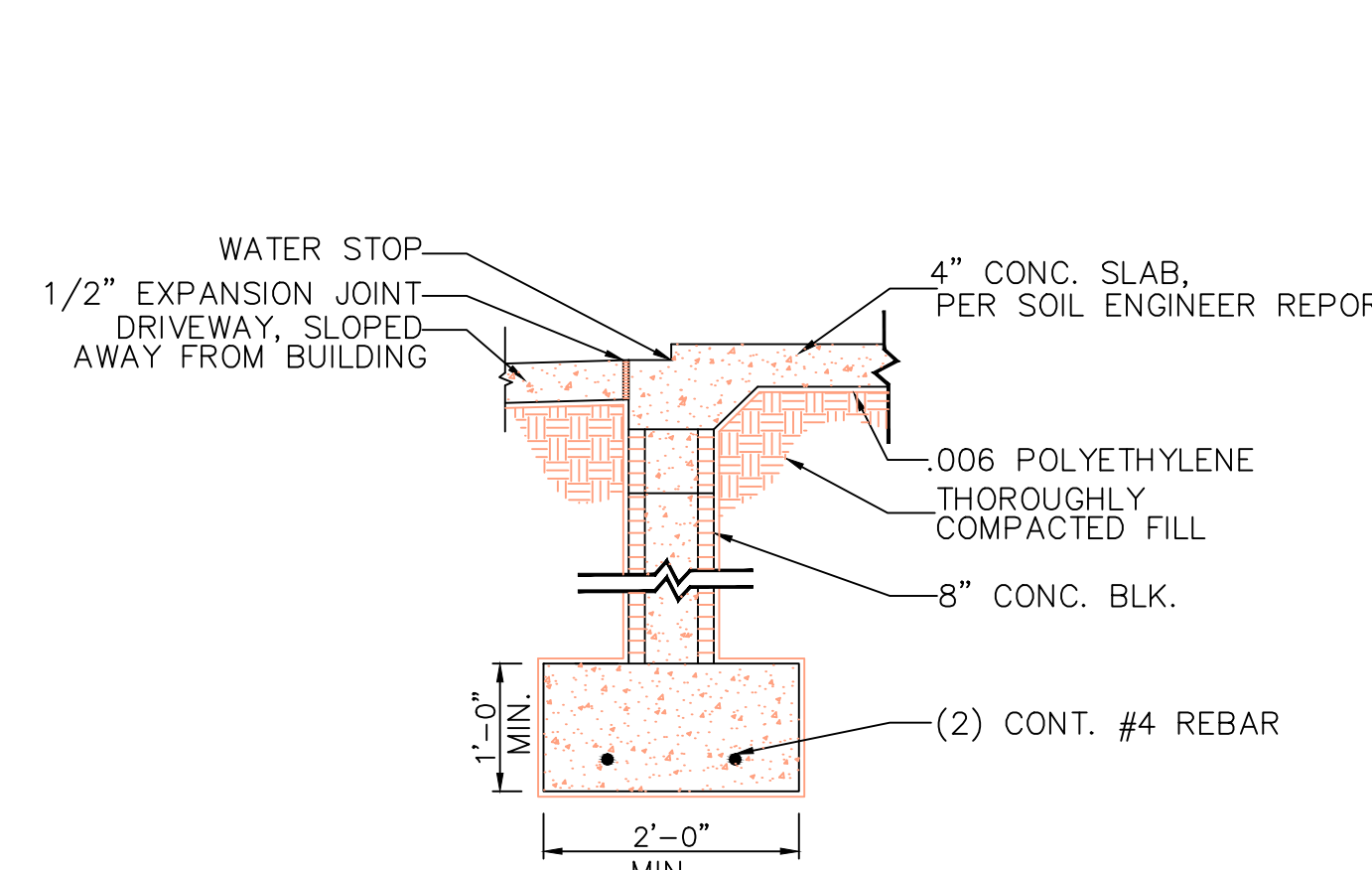
220 FTG. DET.



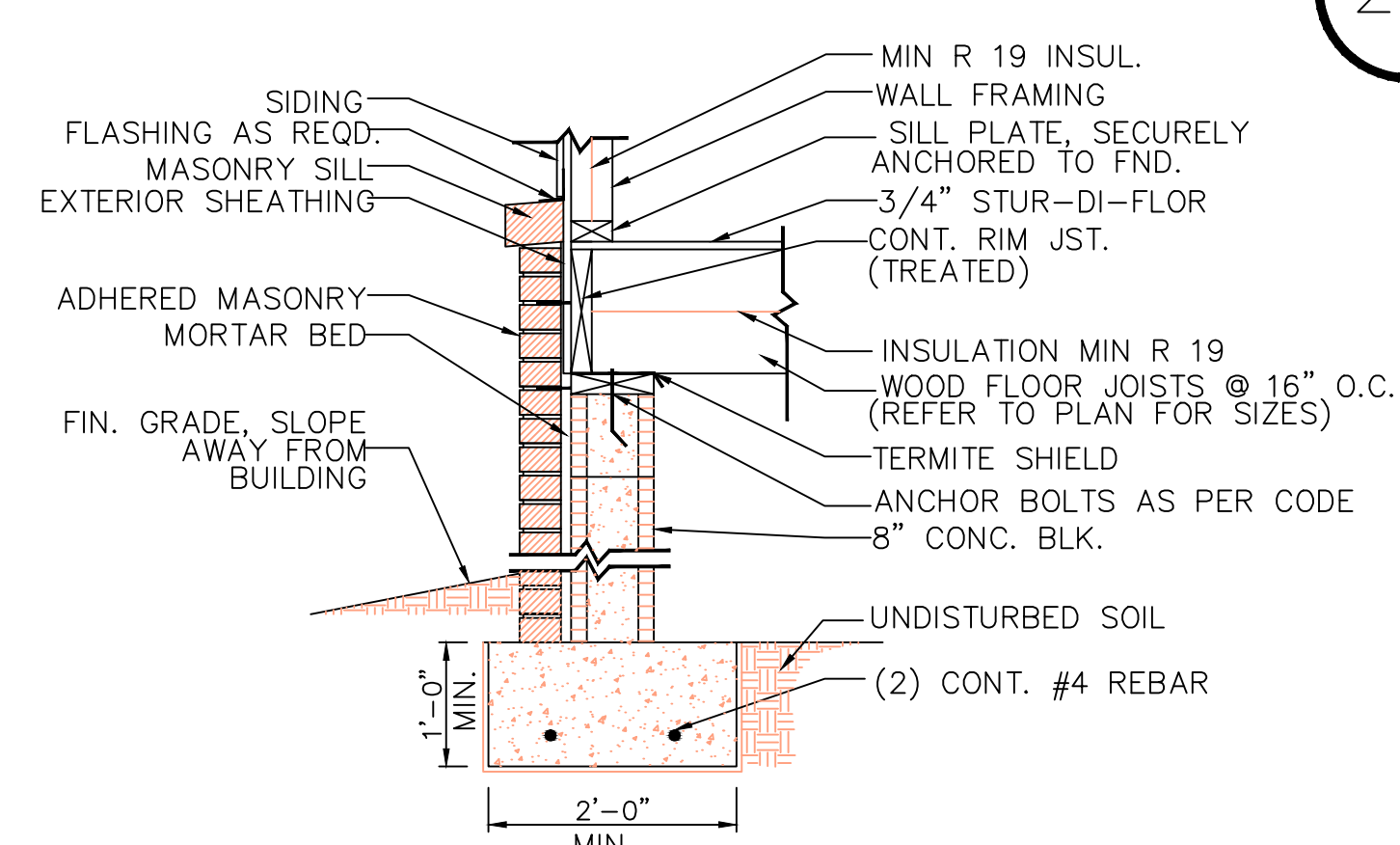
221 FTG. DET.



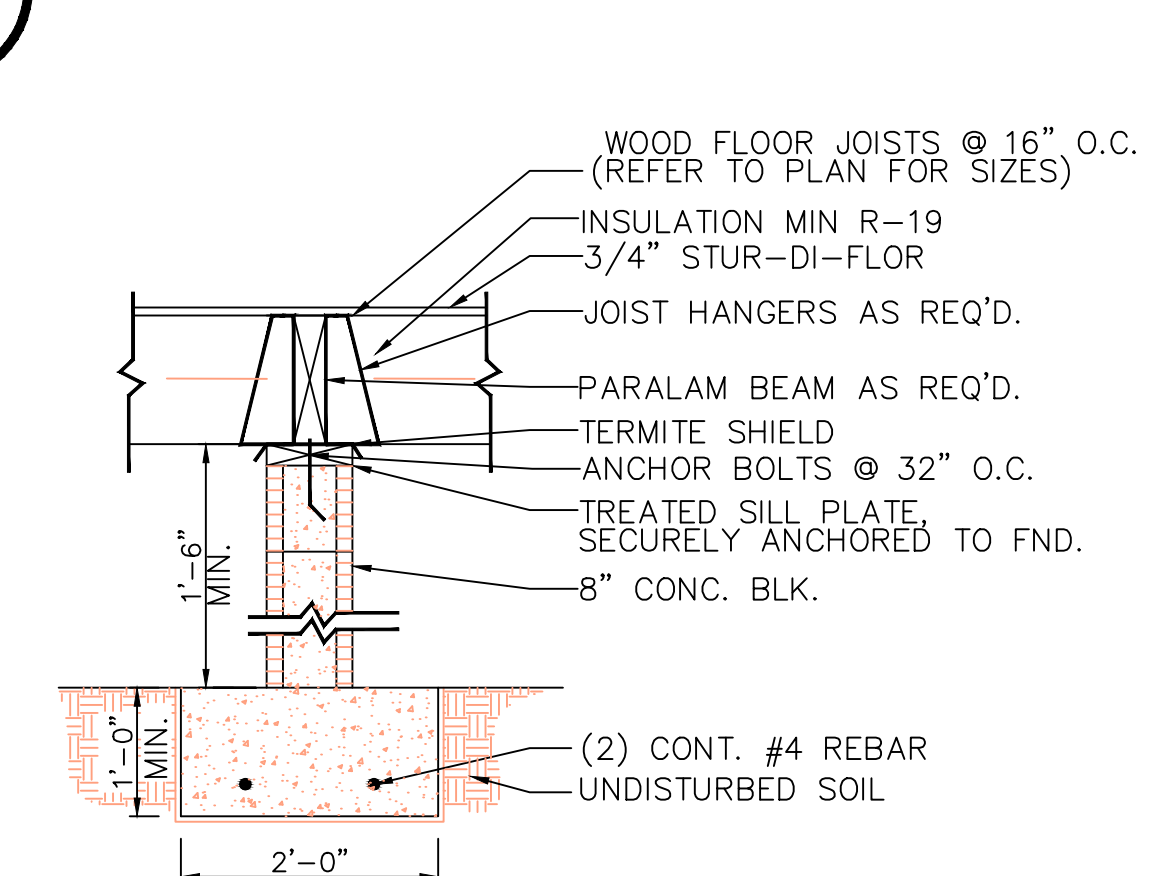
227 FTG. DET.



223 FTG. DET.



230 FTG. DET.



240 FTG. DET.

revisions		
no.	date	for
1	01/21/2021	REVISE FOOTING DETAILS

checked  
issue date 01/06/2021  
scale

## FOUNDATION DETAILS

sheet

PA002