

**GENERAL NOTES:**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
- ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
- STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
- DO NOT SCALE PLANS. DRAWING SCALE MAY BE DISTORTED DUE TO CORNER IMPERFECTIONS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.

**SQUARE FOOTAGE**

HEATED SQUARE FOOTAGE		UNHEATED SQUARE FOOTAGE	
FIRST FLOOR*	N/A	GARAGE*	N/A
SECOND FLOOR*	N/A	FRONT PORCH*	N/A
THIRD FLOOR*	N/A	SCREEN PORCH*	N/A
BASEMENT*	473	DECK*	N/A
		STORAGE*	N/A

TOTAL HEATED = 473

TOTAL UNHEATED = N/A

**CRAWL SPACE VENTILATION CALCULATIONS**

VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/300 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)

N/A SQ. FT. OF CRAWL SPACE/N/A

N/A SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: 3 VENTS AT 0.45 SQ. FT. NET FREE VENTILATION EACH = 1.35 SQ. FT. OF VENTILATION

\*FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.

**ATTIC VENTILATION CALCULATIONS**

-CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY EAVE VENTS.

-CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

473 SQ. FT. OF ATTIC/300= 1.58 EACH OF INLET AND OUTLET REQUIRED.

**WALL AND ROOF CLADDING DESIGN VALUES**

-WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

-ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

\*\* MEAN ROOF HEIGHT 30' OR LESS

**STRUCTURAL NOTES**

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE. IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.

2) DESIGN LOADS

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (DL & LL)
ALL FLOORS	40	10	L/360
ATTIC (24" MIN. ROOF)	20	10	L/360
ATTIC (18" MIN. ROOF)	10	5	L/360
EXTERNAL BALCONY*	60	10	L/360
ROOF	20	10	L/720
ROOF TRUSS	20	20	L/720
WIND LOAD	BASED ON 115 MPH (3 SECOND GUST)		

3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF

4) CONCRETE SHALL HAVE A MINIMUM 7 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLOPE OF FIVE INCHES UNLESS NOTED OTHERWISE (L/80).

5) MAXIMUM DEPTH OF UNBALANCED FULL-BAY FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT UNBID SUPPORTIVE WALL BRACING. REFER TO SECTION 404 OF 2018 NC RESIDENTIAL BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.

6) ALL FRAMING LUMBER SHALL BE 2X4 OR 2X6 UNLESS NOTED.

7) ALL LOAD BEARING HEADERS SHALL BE 2X10 UNLESS ALL WINDOW AND DOOR HEADERS SHALL BE SUPPORTED BY (1) JACK STUD AND (2) KING STUD AT EACH END UNLESS NOTED. ALL OTHER BEAMS SHALL BE SUPPORTED BY 2 STUDS OR THE AMOUNT OF STUDS REQUIRED FOR FULL BEARING AT EACH END UNLESS NOTED. POINT LOADS (STPP ANVLS, ETC.) SHALL CONSIST OF 2 STUDS UNLESS NOTED. ALL SUPPORTS OF 2 STUDS OR MORE SHALL BE TRANSFERRED THROUGH EACH FLOOR TO THE FOUNDATION.

8) ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 1/2" ROOF STRUCTURAL PANELS FASTENED WITH 8D NAILS @ 6" O.C. AT EDGES AND 12" O.C. AT INT. SUPPORTS. BLOCKING SHALL BE INSTALLED AT LEAST 50 PERCENT OF THE WALL LENGTH & BREADED. WHERE BLOCKING IS NOTED, ALL PANELS SHALL BE FASTENED AT 7" O.C. AT EDGES AND 9" O.C. AT INT. SUPPORTS.

9) ALL STRUCTURAL STEEL SHALL BE WITH A 36 STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2 INCHES AND FULL FLANGE WIDTH PROVIDE SOLE BEARING FROM BEAM SUPPORT TO FOUNDATION BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER AND 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 4" O.C.

10) ANCHOR BOLT PLACEMENT PER SECTION 404.18. 1/2" DIAMETER ANCHOR BOLTS SPACED AT 6" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION.

11) FOUNDATION DRAINAGE-GAMP PROOFING OR WATERPROOFING PER SECTION 404 AND 406 OF 2018 NC RESIDENTIAL BUILDING CODE.

12) WALL AND ROOF CLADDING VALUES:

13) WALL CLADDING SHALL BE DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

14) ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS/SQ FT FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS/SQ FT FOR ROOF PITCHES OF 2.25/12 TO 7/12

21 LBS/SQ FT FOR ROOF PITCHES OF 7/12 TO 12/12

\*\* MEAN ROOF HEIGHT 30' OR LESS

15) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 1/2" GEL PAPER.

16) IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQ. FTG. CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SQ. FTG. ERRORS ONCE CONSTRUCTION BEGINS.

**TABLE N1102.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT**

CLIMATE ZONE	MINIMUM U-FACTOR	MINIMUM R-VALUE					
		CEILING	WALLS	FLOORS	BASEMENT WALLS	SLAB PERIMETER	CRAWL SPACE WALLS
3	.26	R-38 or R-32	R-13	R-19	R-9/13	R-2	R-9/13
4	.30	R-38 or R-32	R-13	R-19	R-10/15	R-10	R-10/15



**LEFT ELEVATION**

1/4" = 1'-0"



**REAR ELEVATION**

1/4" = 1'-0"

NO. 19-140
DATE 06/25/19
DESIGNED BY K&A
CHECKED BY
SCALE 3/16"=1'-0"

REVISIONS		
No.	Date	Amount

9101 Ten-Ten Rd.  
Raleigh, NC 27603  
Office: (919) 302-0693



Email: Kent@KandAHomeDesigns.com Website: www.KandAHomeDesigns.com

**Makowski**  
In-law Suite

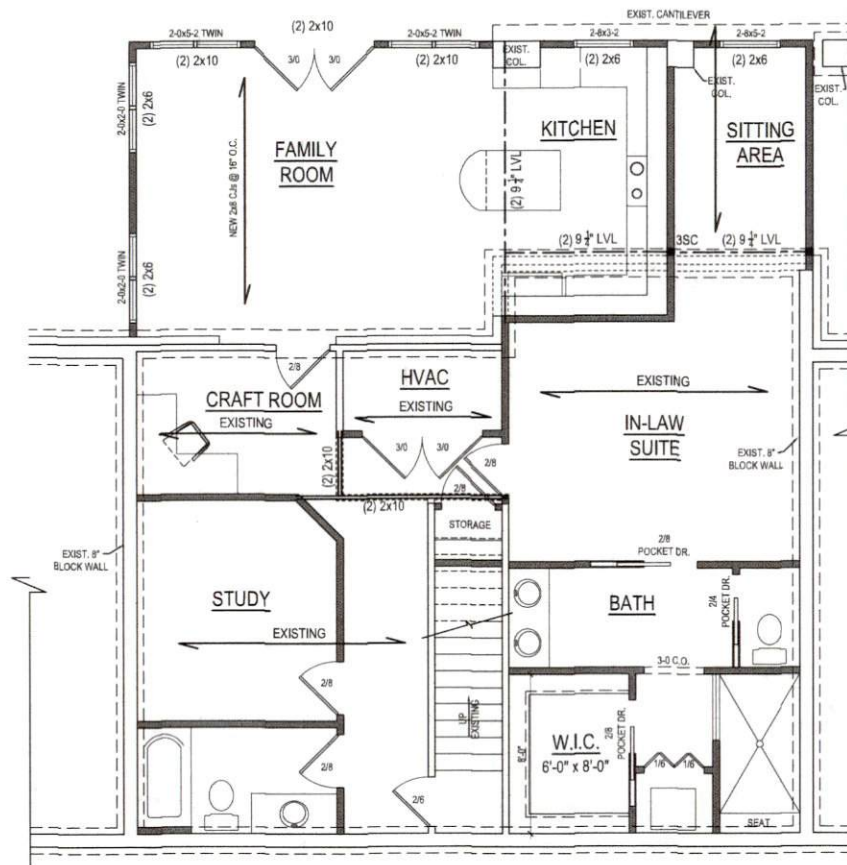
**Anita Makowski**  
81 Sandra Ct.  
Angier, NC 27501

ELEVATIONS

Sheet Number

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of 2



**BASEMENT STRUCTURAL PLAN**  
 1/4" = 1'-0"  
 CEILING HT. = MATCH EXISTING

--- = DEMO EXISTING WALL  
 - - - = EXISTING WALL  
 - - - = NEW WALL

Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.  
 Any deviations or discrepancies on plans are to be brought to the attention of Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE. Seal.  
 Please review these documents carefully.  
 Mark E. Jones, PE will interpret and all dimensions, recommendations, all information in these documents were deemed acceptable once construction.

Professional Seal: Mark E. Jones, PE, License No. 032702, Exp. 8-27-19, State of North Carolina.

**Mark E. Jones, PE**  
 6425 Glen Dean Court  
 Raleigh, NC 27603  
 (919) 395-5618

**Makowski**  
 In-law Suite

**Anita Makowski**  
 81 Sandra Ct.  
 Angier, NC 27501

DATE	19-182
DATE	8-27-19
CONTRACT NO.	
SCALE	1/4"=1'-0"

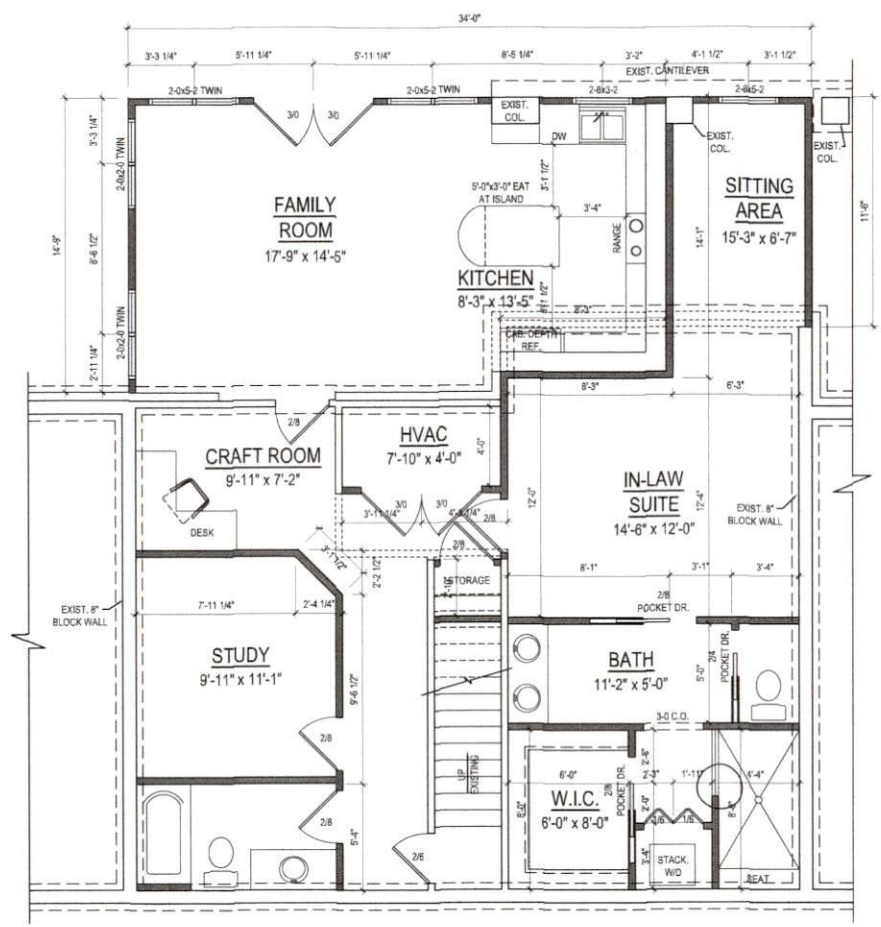
REVISIONS		
No.	Date	Revised

STRUCTURAL

Sheet Number  
**S1**  
 of 2

DATE	19-140
DATE	06/25/19
DESIGNER	KBB
SCALE	1/4"=1'-0"

REVISIONS		
No.	Date	Revised
1		
2		
3		



**BASEMENT PLAN**  
 1/4" = 1'-0" CEILING HT. = MATCH EXISTING

= DEMO EXISTING WALL  
 = EXISTING WALL  
 = NEW WALL

9101 Ten-Ten Rd.  
 Raleigh, NC 27603  
 Office: (919) 302-0693



Email: Kent@KandAHomeDesigns.com Website: www.KandAHomeDesigns.com

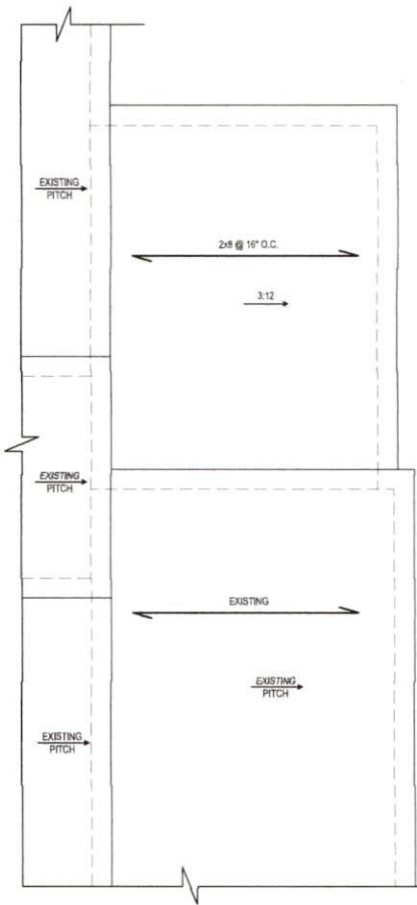
**Makowski**  
**In-law Suite**

**Anita Makowski**  
 81 Sandra Ct.  
 Angier, NC 27501

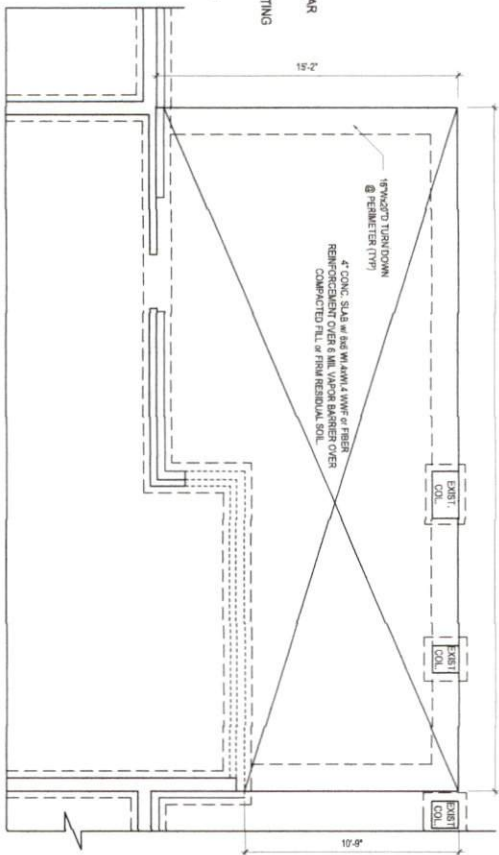
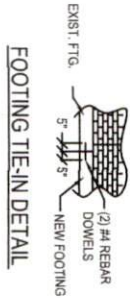
FLOOR PLAN

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 of 2





**ROOF PLAN**  
1/4" = 1'-0"



**FOUNDATION PLAN**  
1/4" = 1'-0"

**S2**  
of 2

NO.	DATE	REVISION
1	8-27-19	FOUNDATION ROOF

DATE	BY	CHKD.
8-27-19	AM	MEJ

**Anita Makowski**  
81 Sandra Ct.  
Angier, NC 27501

**Makowski**  
In-law Suite

**Mark E. Jones, PE**  
6425 Glen Dean Court  
Raleigh, NC 27603  
(919) 395-5618

Professional Engineer Seal for Mark E. Jones, PE, State of North Carolina, License No. 922702, dated 9-27-19.