CAROL CHADWICK, P.E.
Civil Engineer
1208 S.W. Fairfax Glen
Lake City FL 32025
307.680.1772
ccpewyo@gmail.com
www.carolchadwickpe.com

September 9, 2019

Kevin Bedenbaugh, Jr.
Plumb Level Construction
386.365.5264
plumblevelconstruction@gmail.com

re: NAILING SCHEDULE – HUNTER RESIDENCE, LAKE CITY, FL

- 7/16" O.S.B. NAILED WITH 8d @ 6" O.C. IN FIELD & 4" O.C. ON EDGE

Should you have any questions, please don't hesitate to contact me

Respectfully,

CAROL J. CHADWICK LICENSE No. 82560 STATE OF FLORIDA PROFESSIONAL ENGINEER 9/9/19

Carol Chadwick, P.E.

COLUMBIA COUNTY BUILDING DEPARTMENT Received for Code Compliance FILE COPY PLANS EXAMINER

CC Job #FL19076

A&B Well Drilling, Inc.

5673 NW Lake Jeffery Road
Lake City, FL 32055
Telephone: (386) 758-3409
Cell: (386) 623-3151
Fax: (386) 758-3410
Owner: Bruce Park

August 21, 2019

To: Columbia County Building Department

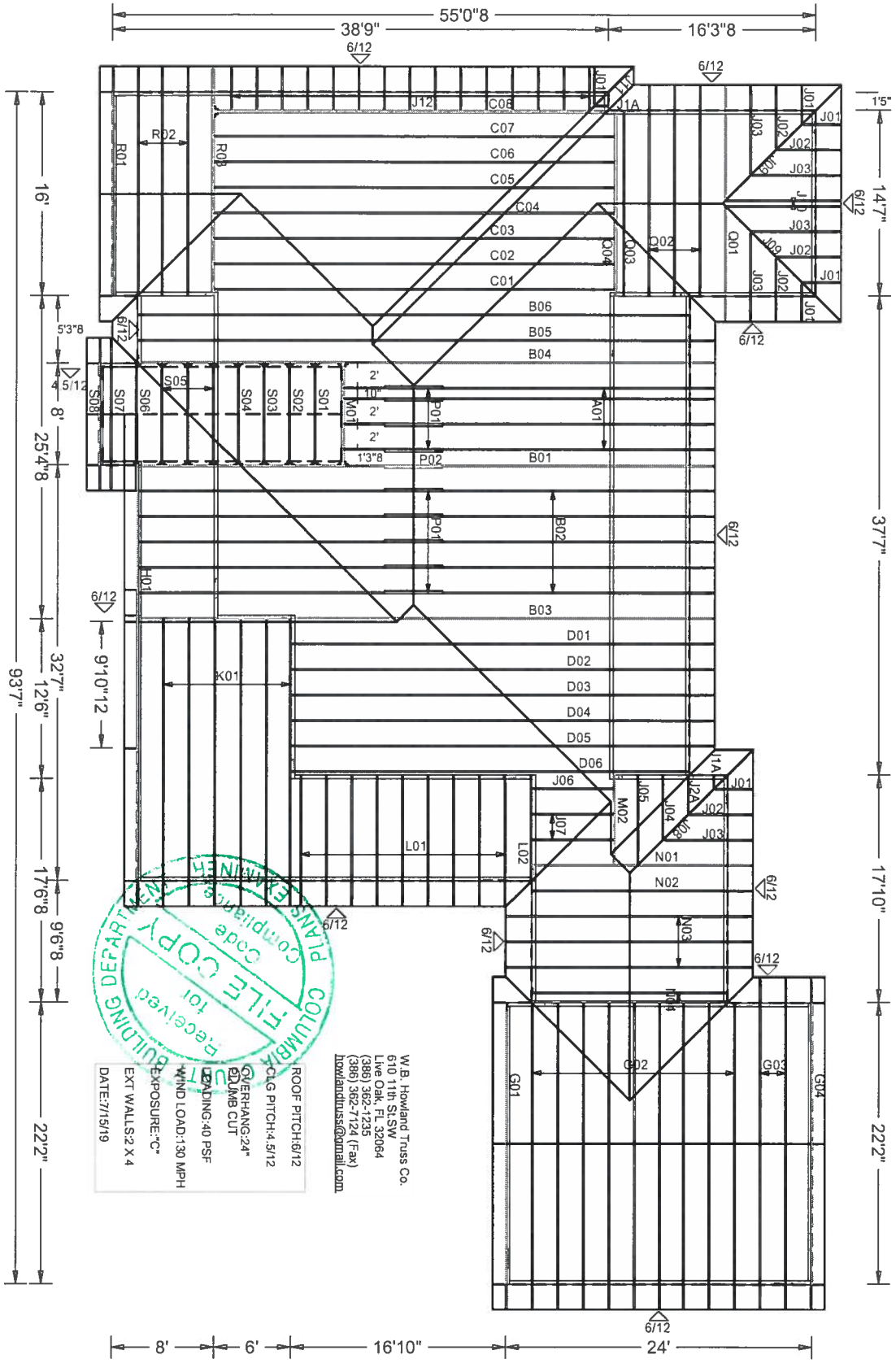
Description of Well to be installed for ___Customer Plumb Level Construction_____

Located @ Address: ___590 NW High Point Dr_____

1 HP 20 GPM submersible pump, 11/4" drop pipe, 85 gallon captive tank, and backflow prevention. With SRWMD permit.

_Bruce Park_____

Sincerely,
Bruce N. Park
President



W.B. Howland Truss Co.
610 11th St SW
Live Oak, FL 32064
(386) 362-1235
(386) 362-7124 (Fax)
howlandtruss@gmail.com

ROOF PITCH:6/12
CLG PITCH:4.5/12
OVERHANG:24"
BIRDS MB CUT
LOADING:40 PSF
WIND LOAD:130 MPH
EXPOSURE:"C"
EXT WALLS:2 X 4
DATE:7/15/19

PAGE NO: 1 OF 1	JOB NO: 19-3333	Job Name: WESLEY & LISA HUNTER RES. Customer: Plumb Level Construction Designer: Lynn Bell ADDRESS: SALESMAN: BW : <Not Found>	JOB #: 19-3333	WB HOWLAND

Load Short Form
Entire House
SHATTO HEATING & AIR, INC.

Job: HUNTER RESIDENCE
Date: AUGUST 15, 2019
By: KIM SHATTO

595 W. MAIN ST., LAKE BUTLER, FL 32054 Phone: 386-496-8224 Fax: 386-496-9065 Email: SERVICE@SHATTOAIR.COM Web: WWW.SHATTOAIR.COM License: CACO57875

Project Information

For: PLUMB LEVEL CONSTRUCTION
232 NW CHADLEY LANE, LAKE CITY, FL 32055
Phone: 386-365-5264

Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	70	75
Design TD (°F)	37	17
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	33	52

Infiltration	
Method	Simplified
Construction quality	Semi-loose
Fireplaces	0

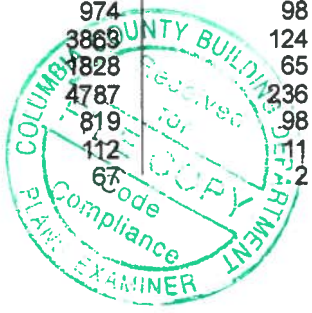
HEATING EQUIPMENT

Make	THE TRANE COMPANY
Trade	XR 14 WEATHERTON
Model	4TWR4060A1000A
AHRI ref	
Efficiency	8.2 HSPF
Heating input	
Heating output	45500 Btuh @ 47°F
Temperature rise	26 °F
Actual air flow	1600 cfm
Air flow factor	0.038 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	THE TRANE COMPANY
Trade	XR 14 WEATHERTON
Cond	4TWR4060A1000A
Coil	TEM4A0C60A1000A
AHRI ref	
Efficiency	12.2 EER, 14 SEER
Sensible cooling	36401 Btuh
Latent cooling	15601 Btuh
Total cooling	52002 Btuh
Actual air flow	1600 cfm
Air flow factor	0.037 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.83

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
LVNG/DIN/KIT	1015	14096	19125	534	712
BATH	78	941	1001	36	37
BDRM	252	7226	6583	274	245
BDRM 1	156	3194	3793	121	141
FOYER	60	2590	974	98	36
MST BDRM	276	3270	3869	124	144
UTILITY	54	1724	1828	65	68
MST BATH	228	6232	4787	236	178
WIC	77	2581	819	98	31
HALL	18	301	112	11	4
HALL 1	30	46	67	2	3



Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Entire House	2244	42201	42951	1600	1600
Other equip loads		0	0		
Equip. @ 0.97 RSM			41663		
Latent cooling			8530		
TOTALS	2244	42201	50192	1600	1600

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

FLORIDA BUILDING CODE, ENERGY CONSERVATION
Residential Building Thermal Envelope Approach

FORM R402-2017 **Climate Zone ☐ 2**

Scope: Compliance with Section R401.2(1) of the *Florida Building Code, Energy Conservation*, shall be demonstrated by the use of Form R402 for single- and multiple-family residences of three stories or less in height, additions to existing residential buildings, alterations, renovations and building systems in existing buildings, as applicable. To comply, a building must meet or exceed all of the energy efficiency requirements on Table R402A and all applicable mandatory requirements summarized in Table R402B of this form. If a building does not comply with this method, or by the UA Alternative method, it may still comply under Section R405 of the *Florida Building Code, Energy Conservation*.

PROJECT NAME AND ADDRESS: Hunter Residence 590 NW High Point Place Lake City, FL 32055	**BUILDER:** Plumb Level
OWNER: Wesley Hunter	**PERMITTING OFFICE:**
	JURISDICTION NUMBER:
	PERMIT NUMBER:

General Instructions:

1. Fill in all the applicable spaces of the "To Be Installed" column on Table R402A with the information requested. All "To Be Installed" values must be equal to or more efficient than the required levels.
2. Complete page 1 based on the "To Be Installed" column information.
3. Read the requirements of Table R402B and check each box to indicate your intent to comply with all applicable items.
4. Read, sign and date the "Prepared By" certification statement at the bottom of page 1. The owner or owner's agent must also sign and date the form.

1.	**New construction, addition, or existing building**	1.	NEW
2.	**Single-family detached or multiple-family attached**	2.	SF
3.	**If multiple-family, number of units covered by this submission**	3.	—
4.	**Is this a worst case? (yes/no)**	4.	NO
5.	**Conditioned floor area (sq. ft.)**	5.	2242
6.	**Windows, type and area**		
	a) *U*-factor:	6a.	.40
	b) Solar Heat Gain Coefficient (SHGC)	6b.	.25
	c) Area	6c.	347 SF
7.	**Skylights**		
	a) *U*-factor:	7a.	—
	b) Solar Heat Gain Coefficient (SHGC)	7b.	—
8.	**Floor type, area or perimeter, and insulation:**		
	a) Slab-on-grade (*R*-value)	8a.	NR
	b) Wood, raised (*R*-value)	8b.	—
	c) Wood, common (*R*-value)	8c.	—
	d) Concrete, raised (*R*-value)	8d.	—
	e) Concrete, common (*R*-value)	8e.	—
9.	**Wall type and insulation:**		
	a) Exterior: 1. Wood frame (Insulation *R*-value)	9a1.	R-13
	2. Masonry (Insulation *R*-value)	9a2.	—
	b) Adjacent: 1. Wood frame (Insulation *R*-value)	9b1.	R-13
	2. Masonry (Insulation *R*-value)	9b2.	—
10.	**Ceiling type and insulation**		
	a) Attic (Insulation R-value)	10a.	R-38
	b) Single assembly (Insulation *R*-value)	10b.	—
11.	**Air distribution system:**		
	a) Duct location, insulation	11a.	Attic ≥ R8
	b) AHU location	11b.	Garage
	c) Total duct leakage. Test report attached.	11c.	≤ 4 cfm/100 s.f. Yes ☐ No ☐
12.	**Cooling system:** a) type	12a.	Central
	b) efficiency	12b.	SEER 14
13.	**Heating system:** a) type	13a.	Heat Pump
	b) efficiency	13b.	HSPF 8.2 min
14.	**HVAC sizing calculation: attached**	14.	Yes ☑ No ☐
15.	**Water heating system:** a) type	15a.	Gas
	b) efficiency	15b.	50 gal, 58

I hereby certify that the plans and specifications covered by this form are in compliance with the *Florida Building Code, Energy Conservation.*
PREPARED BY: [signature] **Date** 8-20-17

I hereby certify that this building is in compliance with the *Florida Building Code, Energy Conservation.*
OWNER/AGENT: [signature] **Date:** 8-20-17

Review of plans and specifications covered by this form indicate compliance with the *Florida Building Code, Energy Conservation.* Before construction is complete, this building will be inspected for compliance in accordance with Section 553.908, F.S.
CODE OFFICIAL: _____
Date: _____

TABLE R402A

BUILDING COMPONENT	PRESCRIPTIVE REQUIREMENTS[1]		INSTALLED VALUES
	Climate Zone 1	Climate Zone 2	
Windows Skylights	*U*-Factor = NR SHGC = 0.25 *U*-factor = 0.75 SHGC = 0.30	*U*-Factor = 0.40[2] SHGC = 0.25 *U*-factor = 0.65 SHGC = 0.30	*U*-Factor = .40 SHGC = .25 *U*-factor = — SHGC = —
Doors: Exterior door	*U*-factor = NR	*U*-factor = 0.40[3]	*U*-factor= .40
Floors: Slab-on-Grade Over unconditioned spaces[4]	 NR R-13	 NR R-13	 *R*-Value = NR
Walls[4]: Ext. and Adj. Frame Mass Insulation on wall interior Insulation on wall exterior	 R-13 R-4 R-3	 R-13 R-6 R-4	 *R*-Value = 13 *R*-Value = — *R*-Value = —
Ceilings[5]	R=30	R=38	*R*-Value = R-38
Air infiltration	Blower door test is required on the building envelope to verify leakage ≤ 1 ACH; test report provided to code official.		Total leakage = ACH ≤5 Test report attached? Yes ☐ No ☑
Air distribution system[5]: Air handling unit Duct *R*-value Air leakage[5]: Duct test Ducts in conditioned space	 Not allowed in attic *R*-value ≥ R-8 (supply in attics) or ≥ R-6 (all other duct locations) Postconstruction test Total leakage ≤ 4 cfm/100 s.f. Rough-in test Total leakage ≤ 4 cfm/100 s.f. (air handler installed) Total leakage ≤ 3 cfm/100 s.f. (air handler not installed) Test not required if all ducts and AHU are in conditioned space		Location: GARAGE *R*-Value = R-8 supply R-6 drops Total leakage = ≤ 4 cfm/100s.f. Test report Attached? Yes ☐ No ☑ Location: ATTIC
Air conditioning system: Central system ≤ 65,000 Btu/h Room unit or PTAC Other:	Minimum federal standard required by NAECA[6]: SEER 14.0 EER [from Table C403.2.3(3)] See Tables C403.2.3(1)-(11)		SEER = 14 EER = —
Heating system: Heat pump ≤ 65,000 Btu/h Gas furnace, non-weatherized Oil furnace, non-weatherized Other:	Minimum federal standard required by NAECA[6]: HSPF 8.2 AFUE 80% AFUE 83%		HSPF = 8.2 AFUE = — AFUE = —
Water heating system (storage type): Electric[7] Gas fired[8] Other (describe):	Minimum federal standard required by NAECA[6]: 40 gal: EF = 0.92 50 gal: EF = 0.90 40 gal: EF = 0.59 50 gal: EF = 0.58		Gallons = — EF = — Gallons = 50 EF = .58

NR = No requirement.

(1) Each component present in the As Proposed home must meet or exceed each of the applicable performance criteria in order to comply with this code using this method.

(2) For impact rated fenestration complying with Section R301.2.1.2 of the *Florida Building Code, Residential* or Section 1609.1.2 of the *Florida Building Code, Building*, the maximum *U*-factor shall be 0.65 in Climate Zone 2. An area-weighted average of *U*-factor and SHGC shall be accepted to meet the requirements, or up to 15 square feet of glazed fenestration area are exempted from the *U*-factor and SHGC requirement based on Sections R402.3.1, R402.3.2 and R402.3.3.

(3) One side-hinged opaque door assembly up to 24 square feet is exempted from this *U*-factor requirement.

(4) *R*-values are for insulation material only as applied in accordance with manufacturer's installation instructions. For mass walls, the "interior of wall" requirement must be met except if at least 50 percent of the insulation required for the "exterior of wall" is installed exterior of, or integral to, the wall.

(5) Ducts & AHU installed "substantially leak free" per Section R403.3.2. Test required by either individuals as defined in Section 553.993(5) or (7), *Florida Statutes*, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), *Florida Statutes*. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope.

(6) Minimum efficiencies are those set by the *National Appliance Energy Conservation Act* of 1987 for typical residential equipment and are subject to NAECA rules and regulations. For other types of equipment, see Tables C403.2.3(1-11) of the Commercial Provisions of the *Florida Building Code, Energy Conservation*.

(7) For other electric storage volumes, minimum EF = 0.97 - (0.00132 * volume).

(8) For other natural gas storage volumes, minimum EF = 0.67 - (0.0019 * volume).

TABLE R402B MANDATORY REQUIREMENTS			
Component	**Section**	**Summary of Requirement(s)**	**Check**
Air leakage	R402.4	To be caulked, gasketed, weatherstripped or otherwise sealed per Table R402.4.1.1. Recessed lighting: IC-rated as having ≤ 2.0 cfm tested to ASTM E 283. Windows and doors: 0.3 cfm/sq. ft. (swinging doors: 0.5 cfm/sf) when tested to NFRC 400 or AAMA/WDMA/CSA 101/I.S. 2/A440. Fireplaces: Tight-fitting flue dampers & outdoor combustion air.	✓
Programmable thermostat	R403.1.2	A programmable thermostat is required for the primary heating or cooling system.	✓
Air distribution system	R403.3.2 R403.3.4	Ducts shall be tested as per Section R403.3.2 by either individuals as defined in Section 553.993(5) or (7), *Florida Statutes*, or individuals licensed as set forth in Section 489.105(3) (f), (g) or (i), *Florida Statutes*. Air handling units are not allowed in attics.	✓
Water heaters	R403.5	Comply with efficiencies in Table C404.2. Hot water pipes insulated to ≥ R-3 to kitchen outlets, other cases. Circulating systems to have an automatic or accessible manual OFF switch. Heat trap required for vertical pipe risers.	✓
Swimming pools & spas	R403.10	Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency is 82%. Heat pump pool heaters minimum COP is 4.0.	—
Cooling/heating equipment	R403.7	Sizing calculation performed & attached. Special occasion cooling or heating capacity requires separate system or variable capacity system.	✓
Lighting equipment	R404.1	At least 75% of permanently installed lighting fixtures shall be high-efficacy lamps.	✓