



HOWARD COUNTY HEALTH DEPARTMENT

Den 3/11/20

67924

DATE
1/13/20

105

Received From

Chesapeake

PHONE #

707-502

Geosystem

For

well permit /

3653

Valley Rd

CASH

CHECK

NO.

40739

One hundred sixty

Dollars

\$

100.00

Received By

J King

C1 63066

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

COUNTY NUMBER

ST/CO USE ONLY

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-20-0036

DATE RECEIVED MM 05 2013

09 18 2020 APPROVED 02/01/2022 320 (TO NEAREST FOOT)

OWNER Collins last name 3653 Valley Rd first name Quinn TOWN Ellicott City SUBDIVISION Macalpine SECTION LOT 20

WELL LOG Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Includes entries for Top Soil, Clay, silt, dry, stiff, Weathered Rock, Rock, Hard Blue/Grey.

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES (Y) NO (N)

CIRCLE APPROPRIATE LETTER A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO. 1 MVD 598 Wally A Wally DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO. 1 D

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box) YES (Y) NO (N)

TYPE OF GROUTING MATERIAL (Circle one) CEMENT (CM) BENTONITE CLAY (BC) NO. OF BAGS 3 NO. OF POUNDS 650 GALLONS OF WATER 312 DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 320 ft.

CASING RECORD casing types insert appropriate code below (ST STEEL, CO CONCRETE, PL PLASTIC, OT OTHER)

MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch) Total depth of main casing (nearest foot)

OTHER CASING (if used) diameter inch depth (feet) from to

SCREEN RECORD screen type or open hole (ST STEEL, BR BRASS, HO OPEN HOLE, PL PLASTIC, OT OTHER)

DEPTH (nearest ft.)

Table with columns: A, C, H, S, C, R, E, N and values for depth intervals.

DIAMETER OF SCREEN (NEAREST INCH) from 56 to 60

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q

TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3 PUMPING TEST

HOURS PUMPED (nearest hour) N/A PUMPING RATE (gal. per min.) N/A METHOD USED TO MEASURE PUMPING RATE N/A WATER LEVEL (distance from land surface) BEFORE PUMPING 30 ft. WHEN PUMPING N/A ft. TYPE OF PUMP USED (for test) A air, P piston, T turbine, C centrifugal, R rotary, O other, J jet, S submersible

PUMP INSTALLED DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES (N)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29 CAPACITY: GALLONS PER MINUTE (to nearest gallon) PUMP HORSE POWER PUMP COLUMN LENGTH (nearest ft.) CASING HEIGHT (circle appropriate box and enter casing height) LAND SURFACE

CASING HEIGHT (+ above, - below) LAND SURFACE 3 (nearest foot)

LATITUDE 39.268822 LONGITUDE 76.828369 (DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed.

B 1 62989

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

Ho-20-0036 fill in this form completely 79

507924 please type

OWNER INFORMATION: Date Received (ABA) 07/31/20, Collins, Quinn, 3653 Valley Rd, Ellicott City, MD 21042

LOCATION OF WELL: Howard, Macalpine, Ellicott City

DRILLER INFORMATION: Wesley Wolfe, Chesapeake Ecosystems Inc, 6700 Ft Smallwood Rd, Baltimore, MD 21226

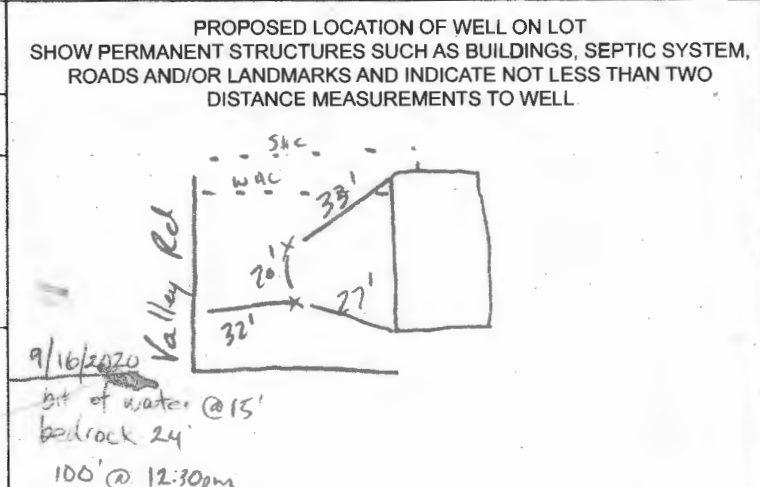
SOURCES OF DRILLING WATER: Public, 3653 Valley Rd, ON WHICH SIDE OF ROAD, DISTANCE FROM ROAD, TAX MAP: 0024, PARCEL 0435

WELL INFORMATION: APPROX. PUMPING RATE N/A, AVERAGE DAILY QUANTITY NEEDED N/A

USE FOR WATER: [D] DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION, [F] FARMING, [I] INDUSTRIAL, [P] PUBLIC WATER SUPPLY WELL, [T] TEST, [O] OPEN LOOP GEOTHERMAL, [C] CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL: Howard, County No. 21, DATE ISSUED 08/26/2020, CO SIGNATURE, EXP. DATE 08/26/2021

APPROXIMATE DEPTH OF WELL 320 FEET, APPROXIMATE DIAMETER OF WELL 6 INCH



METHOD OF DRILLING (circle one): BORED (or Augered), JETTED, ROTARY (Hydraulic Rotary), DRIVE-POINT

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX): [N] THIS WELL WILL NOT REPLACE AN EXISTING WELL, [Y] THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED, [S] THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS, [D] THIS WELL WILL DEEPEAN AN EXISTING WELL

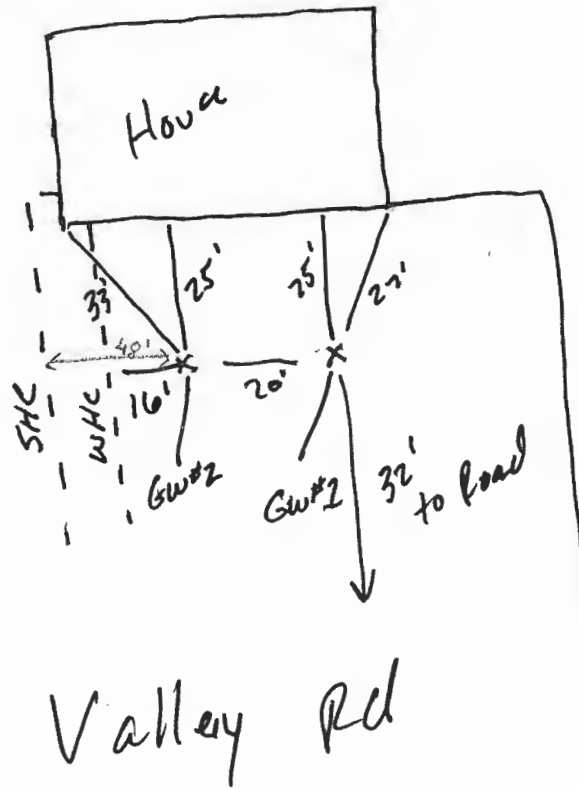
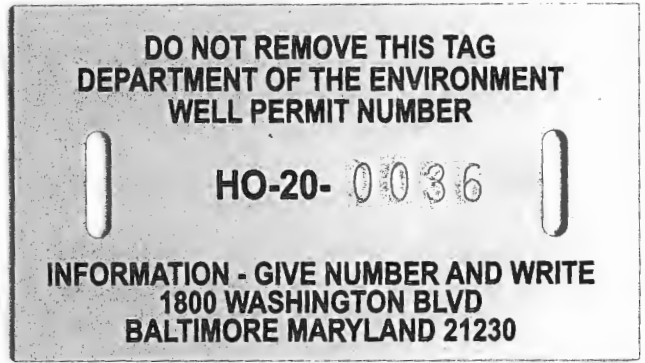
Not to be filled in by driller (MDE OR COUNTY USE ONLY): APPROP. PERMIT NUMBER G, PERMIT No. Ho-20-0036

SPECIAL CONDITIONS

Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.

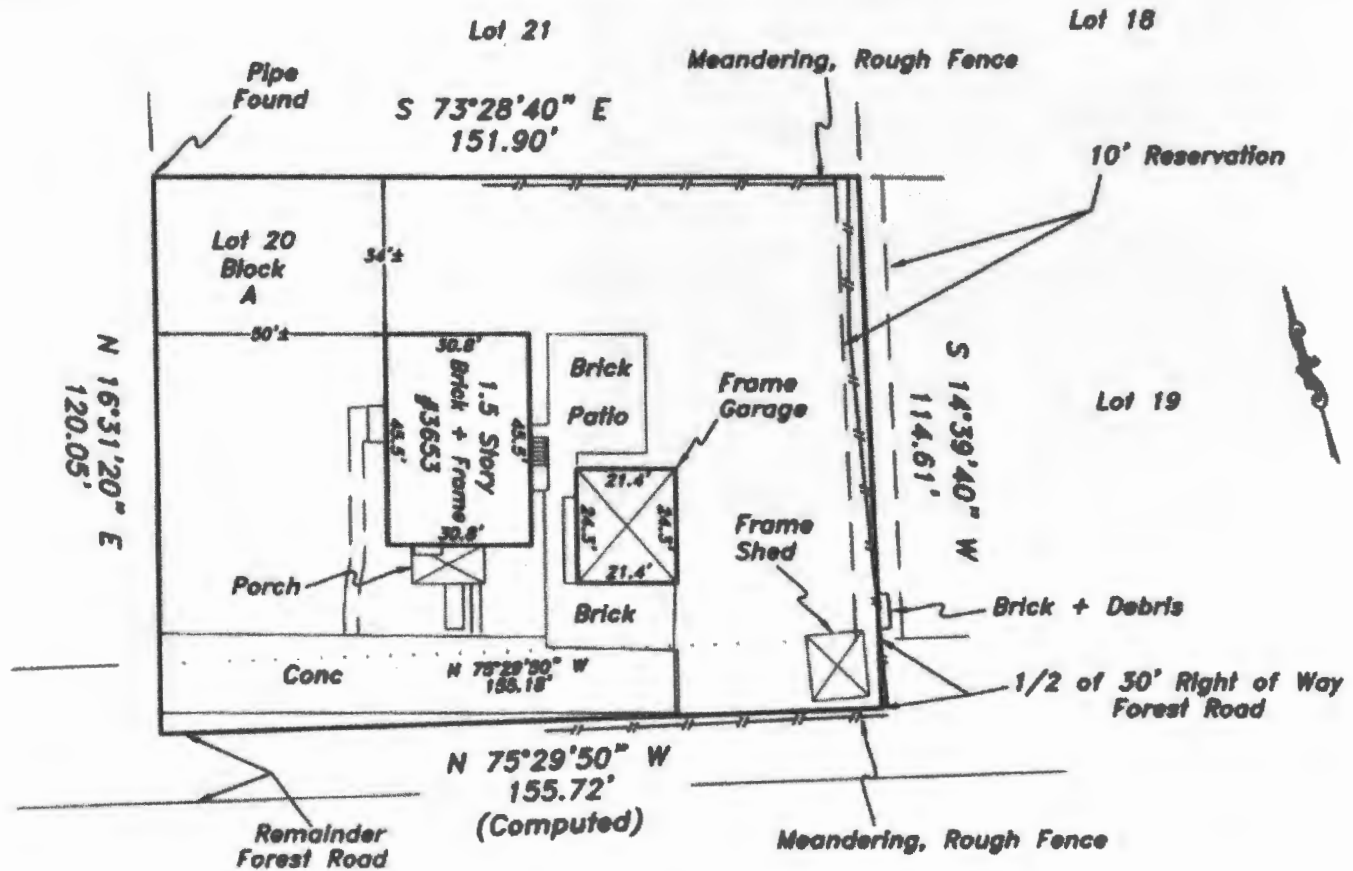
Collins Residence
3653 Valley Rd
Ellicott City Md 21642

2 wells @ 320' each
1.25" closed loop geothermal



APPROVED 08/26/2020
STAKED BY DRILLER
GEOTHERMAL (2) CLUST

Valley Road



The purpose of this drawing is to locate, describe, and represent the positions of buildings and substantial improvements affecting the property shown hereon, being known as:
 Lot 20, Block A, and the Northernmost 1/2 of Forest Road,
 Shown on a Plat of "MACALPINE"
 recorded among the land records of Howard County, Maryland in
 Plat Book 5 Plat 35

PREPARED FOR:

GREATER MARYLAND TITLE, LLC
 An Affiliate of Title Alliance, Ltd.
 An Equal Opportunity Company

This is page one of a two page document. The advice found on the affixed page is an integral part of this drawing, and is not valid without all pages.



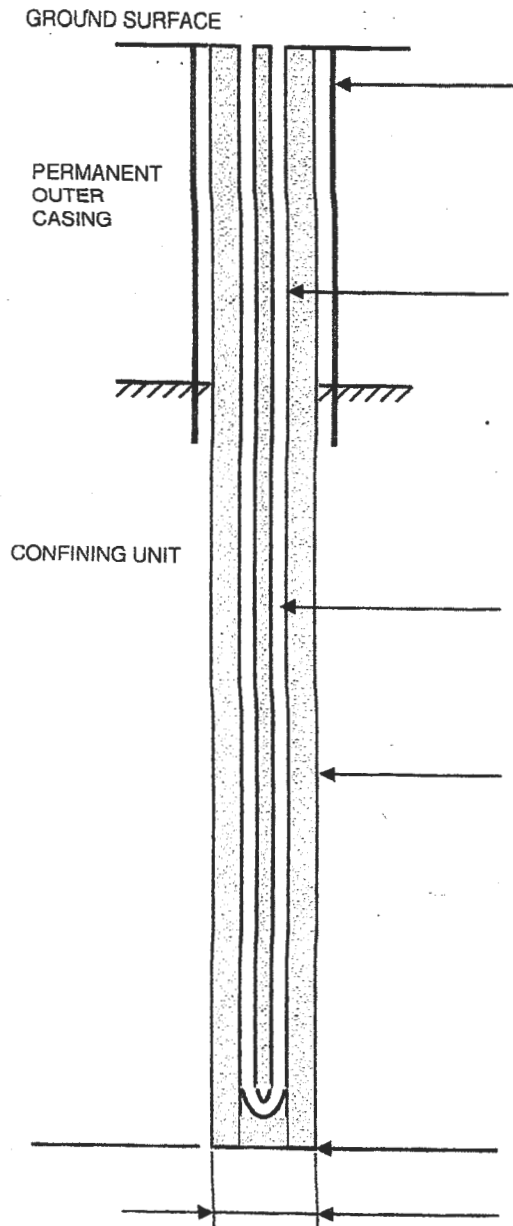
James Carl Hudgins
 Property Line Surveyor #96
 Expiration Date: 3/11/18

LOCATION DRAWING
 3653 Valley Road
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

NTT Associates, Inc.
 16205 Old Frederick Rd.
 Mt. Airy, Maryland 21771
 Phone: (410) 442-2031
 Fax: (410) 442-1315
 www.nttsurveyors.com

Scale: 1" = 40'
 Date: 7-31-17
 Field By: DR
 Drawn By: DR
 File No.: 652-001667
 Page No.: 1 of 2

WELL SCHEMATIC FORM



PERMANENT OUTER CASING (if area contaminated)

MATERIAL _____
 DIAMETER _____
 LENGTH _____
 DEPTH INTO CONFINING UNIT _____

TUBE CASING (if not regular, single loop)

ATTACH HORIZONTAL SCHEMATIC
 NUMBER OF TUBES PER BOREHOLE _____
 DIAMETER OF TUBES _____
 MATERIAL _____
 SHAPE AND LENGTH _____
 TUBE CONNECTION METHOD _____
 TUBE CONNECTION MATERIAL _____

LOOP PIPE CASING (regular, single loop)

MATERIAL HDPE? YES NO
 DIAMETER 1.25"
 LENGTH 320

GROUT

MATERIAL Bentonite
 PERMEABILITY 2.5×10^{-8}
 WATER / GROUT RATIO 27 / 50
 PERCENT SOLIDS 20%
 TREMIE GROUTED FROM BOTTOM OF BOREHOLE? YES NO
 USING A POSITIVE DISPLACEMENT PUMP? YES NO

DEPTH TO THE BOTTOM OF HOLE

320

DIAMETER OF BOREHOLE

6

WELL ADDRESS

3653 Valley Rd
Ellicott City Md 21042

LOT NUMBER:

20

SQUARE NUMBER:

WELL OWNER:

Quinn Collins

OWNER ADDRESS:

3653 Valley Rd
Ellicott City Md 21042

Department of Inspections Licenses and Permits 3430 Court House Drive Ellicott City, MD 21043 Permits (410) 313-2455 Opt. #4 Inspections (410) 313-1840	HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION	HVACR PERMIT # <u>M20000737</u> BUILDING PERMIT #
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SITE BUILDING ADDRESS: <u>3653 Valley Rd</u> SUITE/APT: _____ SUBDIVISION: _____ TYPE OF IMPROVEMENTS: <u>Install (1) Waterfurnace geothermal system.</u> USE: _____	OWNERS NAME: <u>Quinn Collins</u> ADDRESS: <u>3653 Valley Rd</u> CITY: <u>Ellicott City</u> STATE: <u>MD</u> ZIP CODE: <u>21042</u> HOME PHONE: <u>704-641-7700</u> CELL PHONE: _____
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<u>CHECK ONE</u>	<u>HOW MANY</u>	COMPANY NAME: <u>Total Comfort Heating & AC</u>
SINGLE FAMILY DWELLING <input type="checkbox"/>	<u>1</u> ZONES	LICENSEE NAME: <u>James E. Aaron</u>
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	_____ ZONES	ADDRESS: <u>12009 Margaret Dr.</u>
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	_____ ROOMS	CITY: <u>Hagerstown</u>
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	_____ ROOMS	STATE: <u>MD</u> ZIP CODE: <u>21742</u> PHONE: <u>301-745-3700</u> HVACR LICENSE NO: <u>5833-01</u>

<u>New Construction</u> <input type="checkbox"/> Heating and Air Conditioning <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Heating	<u>Additions and Alterations</u> <input type="checkbox"/> Heating <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Heating and Air Conditioning	<input checked="" type="checkbox"/> Geo Thermal System <input type="checkbox"/> Gas Conversion (Make and Model of Equipment) <input type="checkbox"/> Ductless Mini Splits <input type="checkbox"/> Thru The Wall Systems <input type="checkbox"/> Other Work (Describe):
<u>Replacement</u> <input type="checkbox"/> Heating <input type="checkbox"/> Air Conditioning <input checked="" type="checkbox"/> Heating and Air Conditioning <u>Remove old HVAC equipment & install (1) Waterfurnace geothermal system.</u>		
Make and Model of Equipment is required ****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****		

<u>Zones</u>	<u>Rooms</u>
Permit Fee = # of Zones x \$40 = <u>40.00</u> Technology Fee (10% of Permit Fee) = <u>4.00</u> Plus Application Fee <u>\$50.00</u> Total Fees Due = <u>94.00</u>	Permit Fee = # of Rooms x \$80 = _____ Technology Fee (10% of Permit Fee) = _____ Plus Application Fee \$50 <u>\$50.00</u> Total Fees Due = _____

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVAC LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

James E. Aaron 10/8/2020
 SIGNATURE OF LICENSEE DATE
James E. Aaron
 PRINT NAME OF LICENSEE
Jim@tchvacinet
 Email Address

Validation	
Check Number: <u>9588</u>	Money Order#: _____
Invoice Number: <u>6355602</u>	

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

OK Knew

M20066737



Load Short Form
Entire House
TOTAL COMFORT HTG. & A/C, INC.

Job:
 Date: 2016
 By:

12009 MARGARET DRIVE, HAGERSTOWN, MD 21742 Phone: 301-745-3700

Project Information

For: COLLINS RESIDENCE
 3653 VALLEY RD., ELLICOTT CITY, MD

Design Information

	Htg	Clg	Method	Infiltration	Simplified
Outside db (°F)	12	91	Construction quality		Average
Inside db (°F)	70	75	Fireplaces		0
Design TD (°F)	58	16			
Daily range	-	M			
Inside humidity (%)	30	50			
Moisture difference (gr/lb)	25	24			

HEATING EQUIPMENT

COOLING EQUIPMENT

Make WaterFurnace
 Trade 5 SERIES OUTDOOR SPLITS
 Model NDS049J1
 AHRI ref 203471279

Efficiency 4 COP
 Heating input 11.6 kW
 Heating output 39564 Btuh
 Temperature rise 3 °F
 Actual air flow 11500 cfm
 Air flow factor 0.177 cfm/Btuh
 Static pressure 0.50 in H2O
 Space thermostat
 Capacity balance point = 0 °F

Make WaterFurnace
 Trade 5 SERIES OUTDOOR SPLITS
 Cond NDS049J1
 Coil SAH048*
 AHRI ref 203471279

Efficiency 17.73 EER
 Sensible cooling 32210 Btuh
 Latent cooling 13804 Btuh
 Total cooling 46015 Btuh
 Actual air flow 11500 cfm
 Air flow factor 0.290 cfm/Btuh
 Static pressure 0.50 in H2O
 Load sensible heat ratio 0.89

Backup:
 Input = 13 kW, Output = 45611 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
FIRST FLOOR	1536	15907	8786	2812	2552
SECOND FLOOR	1200	39829	29937	7042	8695
BASEMENT	1536	9312	872	1646	253
Entire House	4272	65047	39595	11500	11500
Other equip loads		0	0		
Equip. @ 0.96 RSM			38170		
Latent cooling			4926		
TOTALS	4272	65047	43096	11500	11500

Bold/italic values have been manually overridden

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

