

7/10

DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS
3430 COURT HOUSE DRIVE
ELLCOTT CITY, MD 21043
PERMITS (410)313-2455
INSPECTIONS (410)313-1850

HOWARD COUNTY RESIDENTIAL HEATING-VENTILATION-AIR CONDITIONING AND REFRIGERATION PERMIT APPLICATION

HVACR PERMIT #
M10001245
BUILDING PERMIT #

BUILDING ADDRESS: SUITE/APT:
13710 Old River Rd
West Friendship, Md 21794
SUBDIVISION:
CENSUS TRACT: SECTION: AREA:
LOT: TAX MAP: PARCEL:
BLOCK: ZONE:
PROPERTY ID: MAP COORDINATES:
TYPE OF IMPROVEMENT: USE:

OWNERS NAME: MARVIN Schneider
ADDRESS: 13710 Old River Rd
CITY: West Friendship
STATE: md ZIP CODE: 21794
HOME PHONE: 443 266 7279 WORK PHONE:

CHECK ONE	HOW MANY
SINGLE FAMILY DWELLING <input type="checkbox"/>	<u>1</u> ZONES
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___ ZONES
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___ UNITS

COMPANY NAME: Clean Air Heating + AC Co Inc.
LICENSEE NAME: Gerald Bondyra
ADDRESS: 1911 Portal St
CITY: Baltimore
STATE: md ZIP CODE: 21224
PHONE: 410-633-8350 HVACR LICENSE NO: 2452

New

Heating and Air Conditioning Heating System Only Other Work (Describe):

Replacement

Heating Air Conditioning Heating and Air Conditioning

Additions and Alterations

Heating Air Conditioning Heating and Air Conditioning

12/15/2010
O.K. BB

EXACT REPLACEMENT Geo THERMAL 49,000 BTU UNIT for existing main house. No manuals needed
PER AVIS CORBIN

Zones

Permit Fee = # of Zones x \$40 = 40

Technology Fee (10% of Permit Fee) = 4

Plus Application Fee \$50

Total Fees Due = 94.00

Units

Permit Fee = # of Units x \$80 = _____

Technology Fee (10% of Permit Fee) = _____

Plus Application Fee \$50

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 HVACR LICENSED PERSON(S) INSURED TO CONTRACT WORK, AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY AND THE STATE OF MARYLAND.

Gerald Bondyra
SIGNATURE OF LICENSED CONTRACTOR
Gerald Bondyra
PRINT NAME

12/12/10
DATE

Validation

Check Number: 410067

Cash: _____

Receipt Number: 226360

M1000245

13710 Old Rover Rd
West Friendship, Md 21794

Original permit # M1000582
Finalized 8/30/10

Exact replacement 49,000
BTL existing unit

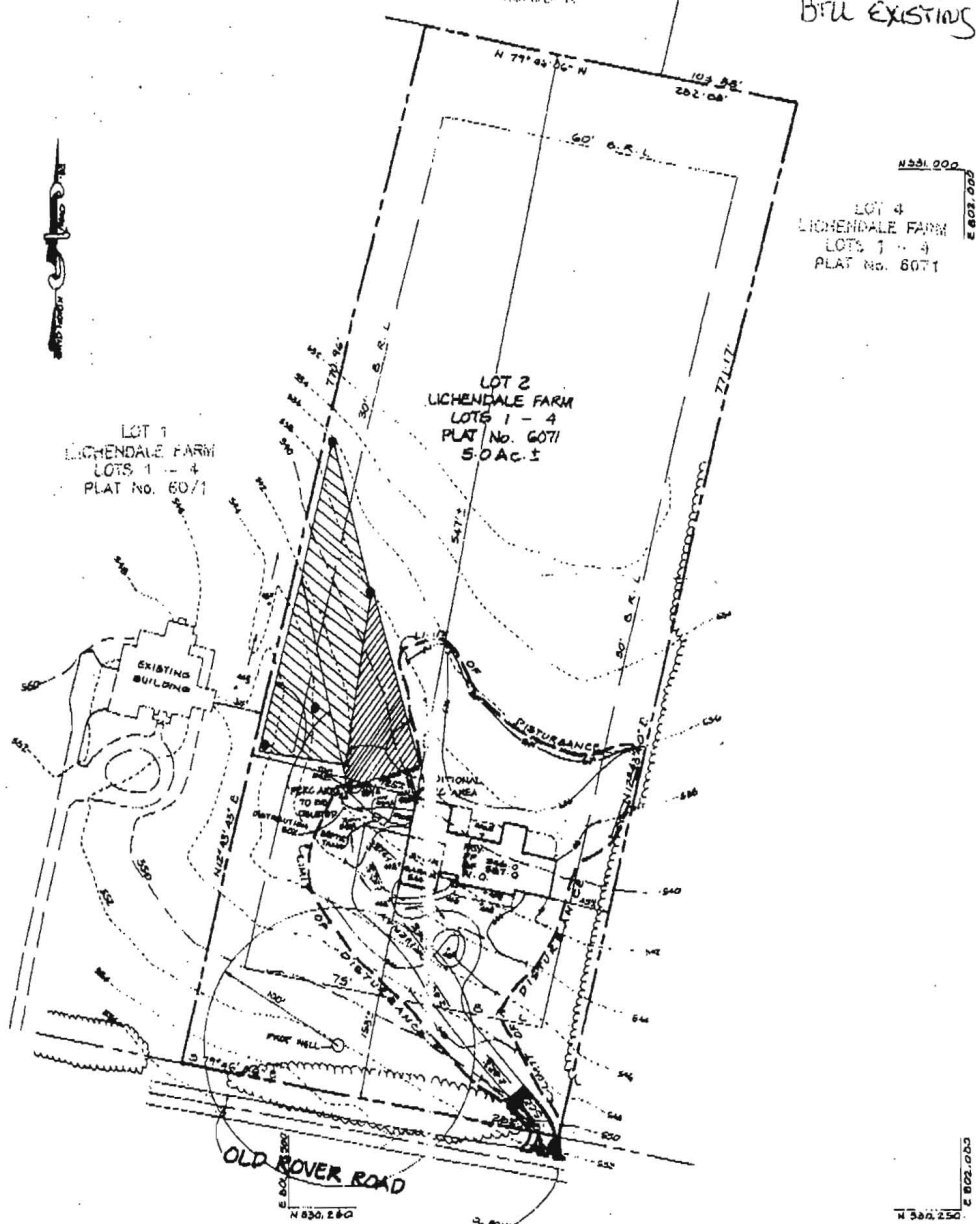
NOTE: EXISTING TOPOGRAPHY WAS TAKEN FROM
A FIELD RUN SURVEY BY FISHER, COLLINS
& CARTER, INC. ON OR ABOUT APRIL, 2002.

LOT 3
LICHENDALE FARM
LOTS 1 - 4
PLAT No. 6071
ZONED R

LOT 4
LICHENDALE FARM
LOTS 1 - 4
PLAT No. 6071

LOT 1
LICHENDALE FARM
LOTS 1 - 4
PLAT No. 6071

LOT 2
LICHENDALE FARM
LOTS 1 - 4
PLAT No. 6071
50 AC.±



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 3430 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043
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 INSPECTIONS (410)313-1850

**HOWARD COUNTY
 RESIDENTIAL
 HEATING-VENTILATION-AIR
 CONDITIONING AND
 REFRIGERATION PERMIT
 APPLICATION**

HVACR PERMIT #
 M10000582
 BUILDING PERMIT #
 B10000561

BUILDING ADDRESS: 13710 Old Rover Rd
 West Friendship, Md. 21794
 SUITE/APT:
 SUBDIVISION:
 CENSUS TRACT: SECTION: AREA:
 LOT: TAX MAP: PARCEL:
 BLOCK: ZONE:
 PROPERTY ID: MAP COORDINATES:
 TYPE OF IMPROVEMENT: USE:

OWNERS NAME: Marvin Schneider
 ADDRESS: 13710 Old Rover Rd
 CITY: West Friendship
 STATE: Md ZIP CODE: 21794
 HOME PHONE: 443-266-7279
 WORK PHONE:

CHECK ONE	HOW MANY
SINGLE FAMILY DWELLING <input type="checkbox"/>	<u>1</u> ZONES
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___ ZONES
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___ UNITS

COMPANY NAME: Clean Air Htg. + A.C. Co INC
 LICENSEE NAME: Gerald Bondyra
 ADDRESS: 1911 Portal ST.
 CITY: Baltimore
 STATE: Md ZIP CODE: 21224
 PHONE: 410-633-8350 HVACR LICENSE NO:
 2452

- New**
- Heating and Air Conditioning Heating System Only Other Work (Describe):
- Replacement**
- Heating Air Conditioning Heating and Air Conditioning
- Additions and Alterations**
- Heating Air Conditioning Heating and Air Conditioning

38,000 Btu geo thermal w/ permit + new duct system for 2nd floor addition

Zones

Permit Fee = # of Zones x \$40 = 40

Technology Fee (10% of Permit Fee) = 4

Plus Application Fee \$50

Total Fees Due = 94

Units

Permit Fee = # of Units x \$80 = _____

Technology Fee (10% of Permit Fee) = _____

Plus Application Fee \$50

Total Fees Due = _____

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

SIGNATURE OF LICENSED CONTRACTOR

6/15/10
 DATE

PRINT NAME

Gerald Bondyra

Validation

Check Number: 45645
 Cash: _____
 Receipt Number: 209157

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
 C:\Chieftp\HVACR4.WPD REV 6/17/04

OK Jim Wolf 7/8/10



Air Conditioning Contractors of America

Form J-1 (Seventh Edition) Including Calculation Procedure A, B, C, D

© Copyright by the Air Conditioning Contractors of America 2800 Shirlington Road, Suite 300 Arlington, VA 22206 703-575-4477 FAX 703-575-4449

Printed in U.S.A. 2003

Plan No. _____ Date _____ Calculated by _____

2nd addition only ductwork

WORKSHEET FOR MANUAL J (Seventh Edition)

LOAD CALCULATIONS FOR RESIDENTIAL AIR CONDITIONING

For: Name Marvin Schneider
 Address 13710 Old Rover Rd
 City and State or Province West Friendship, Md. 21794
 By: Contractor Clean Air Heating & Air Conditioning Co. Inc
 Address 1911 Portal Street
 City Baltimore, Md 21224

Design Conditions

Winter		Summer	
Outside db <u>0</u> °F	Inside db <u>70</u> °F	Outside db <u>95</u> °F	Inside db <u>75</u> °F
Winter Design Temperature Difference <u>70</u> °F		Summer Design Temperature Difference <u>20</u> °F	
		Room RH <u>50%</u>	Daily Range <u>nd</u>

Heating Summary

Total Heat Loss for Entire House (Line 15) = 23972 Btuh
 Ventilation CFM = _____ Winter Design Temperature Difference = 70 °F
 Heat Required for Ventilation Air = 1.1 X _____ CFM X _____ °F = _____ Btuh
 Design Heating Load Requirement = 23972 (house) _____ (Vent) = 23972 Btuh

Cooling Summary

Total Sensible Gain 12476 Btuh (Calculation Procedure D) Design Temperature Swings _____
 Total Latent Gain + 3002 Btuh (Calculation Procedure D) Normal 3° () 4.5° ()
 Total = Sens. + Lat. = 15478 Btuh Ventilation CFM = _____

Equipment Summary

Make Climate MASTER Model TTV038 Type geo thermal unit
 Heating Input (Btuh) _____ Heating Output (Btuh) _____ Efficiency _____
 Sensible Cooling (Btuh) _____ Latent Cooling (Btuh) _____ Total (Btuh) _____
 COPI/EER/SEER/HSPF R410A Cooling CFM _____ Heating CFM _____
 Space Thermostat Heat () Cool () Heat/Cool () Night Setback ()

Construction Data

Windows <u>double pane insulated</u>	Floor <u>over conditioned space + garage</u>
Doors _____	Partitions _____
Walls <u>R13</u>	Basement Walls _____
Roof _____	Ground Slab _____
Ceiling <u>R36</u>	_____

File

NOTE: USE CALCULATION PROCEDURE D TO CALCULATE THE EQUIPMENT DESIGN LOADS

DO NOT WRITE IN SHAL

Name of Room		Entire House		1 Bed 2 + WIC		2 Bathroom		3 Hall + Laundry		4 MSTR Bed + WIC		5 MSTR Bath									
Running Ft Exposed Wall				48		14		-		51		30									
Room Dimensions, Ft				12x16 4x4		15x9 9x5		7x8 4x9 4x12		17x25		9x12									
Ceiling Ht, Ft	Directions Room Faces			8		8		8		8		8									
TYPE OF EXPOSURE	Const. No.	HTM		Area or Length	Btuh		Area or Length	Btuh		Area or Length	Btuh		Area or Length	Btuh							
		Htg	Clg		Htg	Clg		Htg	Clg		Htg	Clg		Htg	Clg						
Gross Exposed Walls and Partitions	a	129					384			112			408			240					
	b																				
	c																				
	d																				
Windows and Glass	a	30	42.6				15	639		30	1278		-	-		30	1278		30	1278	
	b																				
Doors (Heating)	c																				
	d																				
Windows and Glass (Cooling)	North																				
	E & W or NE & NW		59				15		985	30		1770	-		-	30		1770	30		1770
Doors (Cooling)	South or SE & SW																				
Other																					
Other Doors																					
Net Exposed Walls and Partitions	a	129	4.6	1.5			369	1697	553	82	377	123	-	-	-	378	1738	567	210	9166	315
	b																				
	c																				
	d																				
Ceilings	a	164	1.8	1.1			208	374	228	180	374	198	172	309	189	425	765	467	108	194	118
	b																				
Floors	a	205	3.4	.7			208	707	145												
	b																				
Infiltration HTM		98.56	15.28				15	1403	229	30	2806	458	-	-	-	30	2806	458	30	2806	458
Sub Tot. Btuh Loss = 6+8+9+10+11+12								4820			4835			309			6587			5244	
Duct Btuh Loss			%					482			483			30			658			524	
Total Btuh Loss = 13+14								23972			5302			339			7245			5768	
People @ 300 and Appliances 1200									600									600			
Sensible Btuh Gain = 7+8+9+10+11+12+16									2640			2547		189			3863			2661	
Duct Btuh Gain			%						132			127		9			193			133	
Total Sen. Gain = 17+18								12496			2773			194			41651			2221	

Calculation Procedures A,B,C,D

Procedure A - Winter Infiltration HTM Calculation

1. Winter Infiltration CFM	<u>0.7</u> AC/HR x <u>10912</u> Cu. FT. x 0.0167 = <u>127.57</u> CFM
	Volume
2. Winter Infiltration Btuh	1.1 x <u>127.57</u> CFM x <u>70</u> Winter TD = <u>9823</u> Btuh
3. Winter Infiltration HTM	<u>9823</u> Btuh ÷ <u>105</u> Total Window = <u>93.56</u> HTM
	& Door Area

Procedure B - Summer Infiltration HTM Calculation

1. Summer Infiltration CFM	<u>0.4</u> AC/HR x <u>10912</u> Cu. FT. x 0.0167 = <u>72.90</u> CFM
	Volume
2. Summer Infiltration Btuh	1.1 x <u>72.90</u> CFM x <u>20</u> Summer TD = <u>1603</u> Btuh
3. Summer Infiltration HTM	<u>1603</u> Btuh ÷ <u>105</u> Total Window = <u>15.28</u> HTM
	& Door Area

Procedure C - Latent Infiltration Gain

0.68 x <u>42</u> gr. diff. x <u>72.90</u> Summer CFM = <u>2082</u> Btuh

Procedure D - Equipment Sizing Loads

1. Sensible Sizing Load			
Sensible Ventilation Load			
1.1 x	_____ Vent. CFM x	_____ Summer TD	= _____ Btuh
			+ _____ Btuh
			= _____ Btuh
			x _____ RSM
			= _____ Btuh
2. Latent Sizing Load			
Latent Ventilation Load			
0.68 x	_____ Vent. CFM x	_____ gr. diff.	= _____ Btuh
			+ <u>920</u> Btuh
			+ <u>2082</u> Btuh
			= <u>3002</u> Btuh

* Refer to Table 6



Air Conditioning Contractors of America

Form J-1 (Seventh Edition)
Including Calculation Procedure A, B, C, D

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2800 Shirlington Road, Suite 300
Arlington, VA 22206
703-575-4477 FAX 703-575-4449

Printed in U.S.A.
2003

SITE INSPECTION SHEET

OWNER: _____ PHONE #: _____

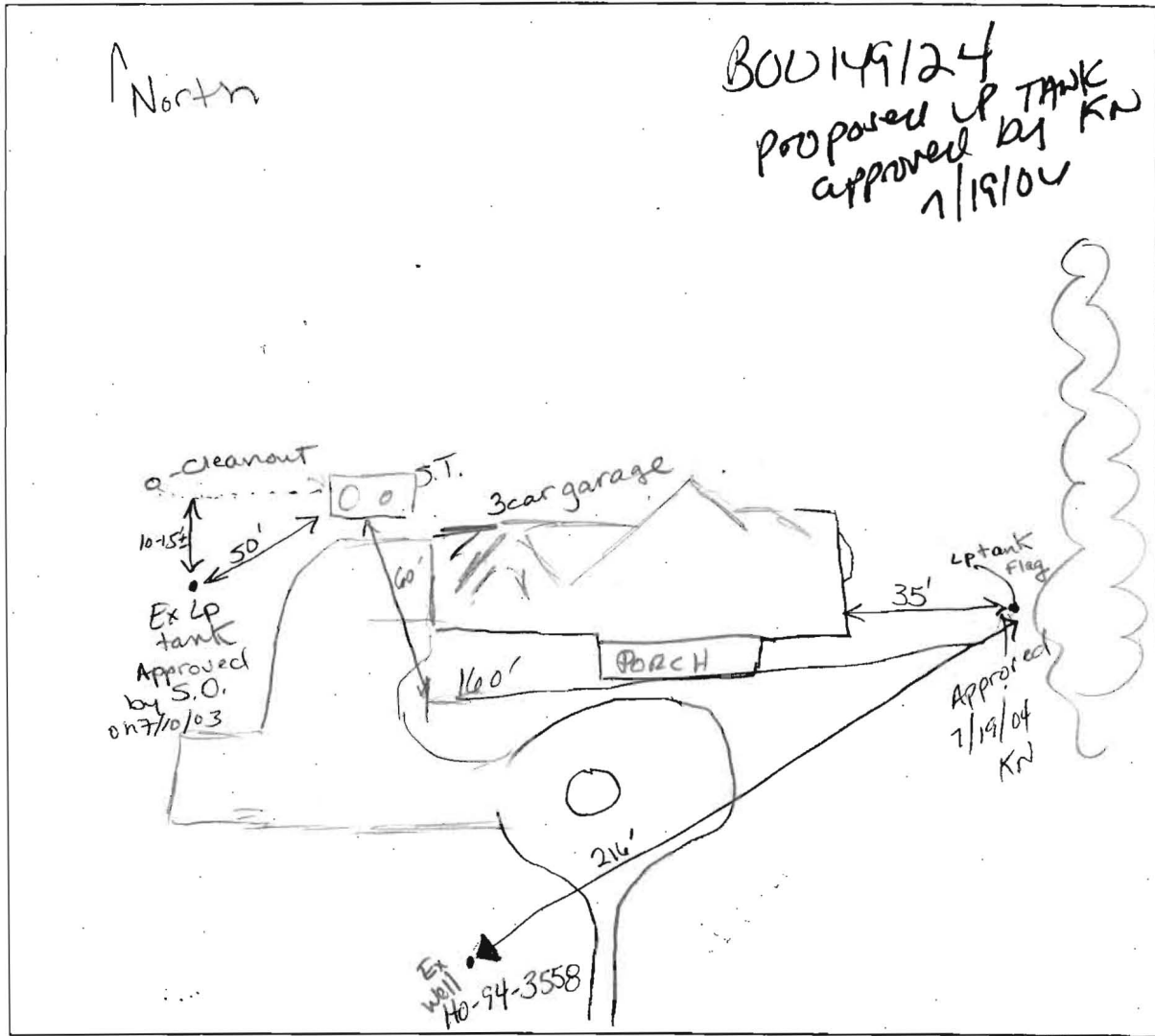
ADDRESS: 13710 Old Rover Rd CONTRACTOR: _____

WELL TAG #: _____

SUBDIVISION: Litchendale Farm LOT: 2 COUNTY #: _____

PROPOSAL: Verify distance for proposed LP tank to well & septic since plan not to scale

LOCATION DIAGRAM



COMMENTS: 7/19/04 LP location ok; discussed needing plan to scale.

KN

DATE: 7/19/04 INSPECTOR: KN