C 1 | 52156 | SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

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

COUNTY NUMBER

ST/CO USE ONLY
DATE Received MM 12 DD 20 YY 17
8 13

DATE WELL COMPLETED MM 12 DD 6 YY 17
15 20

Depth of Well 22 175 26 (TO NEAREST FOOT)

OK 12/29/17 SC

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO 17 - 0191
28 29 30 31 32 33 34 35 36 37

OWNER Williamsburg Group (last name / first name)

WELL SITE ADDRESS Scaggsville RD TOWN Highland

SUBDIVISION Estates @ Schooly Mill SECTION LOT 6

WELL LOG
Not required for driven wells

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

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Dark Brown mica	0	90	
Gray schist	90	165	
White	165	167	✓
Gray schist	167	200	

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

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, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 009

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ 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 (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM (45 46) BENTONITE CLAY BC (45 46)

NO. OF BAGS 38 NO. OF POUNDS 3972

GALLONS OF WATER 228

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48 TOP 52) ft. to 102 (54 BOTTOM 58) ft.

(enter 0 if from surface)

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)
ST (60 61)	06 (63 64)	104 (66 70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below

ST STEEL | BR BRASS BRONZE | HO OPEN HOLE | PL PLASTIC | OT OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN		from	to
1	HO (8 9)	104 (11 15)	175 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ (56 60) (NEAREST INCH)

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

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 3 (8 9)

PUMPING RATE (gal. per min.) 12. (11 15)

METHOD USED TO MEASURE PUMPING RATE 1 gal

WATER LEVEL (distance from land surface)

BEFORE PUMPING 18 (17 20) ft.

WHEN PUMPING 40 (22 25) ft.

TYPE OF PUMP USED (for test)

A air (27) | P piston (27) | T turbine (27)
C centrifugal (27) | R rotary (27) | O other (describe below) (27)
J jet (27) | S submersible (27)

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

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. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)

PUMP HORSE POWER (37 41)

PUMP COLUMN LENGTH (nearest ft.) (43 47)

CASING HEIGHT (circle appropriate box and enter casing height)

+ (49) above / – (49) below LAND SURFACE

02 (nearest foot) (50 51)

LATITUDE 39.1688690

LONGITUDE 76.9528961

(DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryand 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 pulic and other governmental agencies, if not protected by federal or state law.

COUNTY

EMERGENCY/TEMP NO. IF ANY

TAG: 12/29/17 (SC)

B 1 — SEQUENCE NO. (MDE USE ONLY): 56871

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL

please type

STATE PERMIT NUMBER: Ho - 17 - 0191

fill in this form completely

Date Received (APA): 09/11/17

OWNER INFORMATION

Last Name / Owner: Williamsburg Group
First Name:
Street or RFD: 5485 Harpers Farm Rd
Town: Columbia
State: Md
Zip: 21044

DRILLER INFORMATION

Driller's Name: Allen Compton
License No.: M S D 009
Firm Name: Foales Well Drilling
Address: P.O. Box 202 Woodbine Md 21797
Signature: Allen Compton
Date: 9-8-17

B 2 — WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): 5
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500

B 3 — LOCATION OF WELL

COUNTY: Howard
SUBDIVISION: Estates at Schooly Hill
SECTION:
LOT: 6
NEAREST TOWN: Highland

B 4

SOURCES OF DRILLING WATER
1. Well water
2.
3.

STREET ADDRESS: Scaggsville Rd

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH (N), WEST (W), SOUTH (S), EAST (E)

DISTANCE FROM ROAD: 300 Ft (ENTER FT OR MI)

TAX MAP: 40 BLK: 11 PARCEL: 93

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- (D) DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- [F] FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- [I] INDUSTRIAL, COMMERCIAL, DEWATERING
- [P] PUBLIC WATER SUPPLY WELL
- [T] TEST, OBSERVATION, MONITORING
- [O] OPEN LOOP GEOTHERMAL
- [C] CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Howard (13) COUNTY NO.
STATE SIGNATURE: _____ INSERT S →
DATE ISSUED: 10/10/17 CO-SIGNATURE: [signature] EXP. DATE: 10/10/18

DON: 12/4/17 (SC) DOG: 12/6/17 (SC) DOY: 12/6/17 (SC)

APPROXIMATE DEPTH OF WELL: 360 FEET

APPROXIMATE DIAMETER OF WELL: 6 NEAREST INCH

METHOD OF DRILLING (circle one)

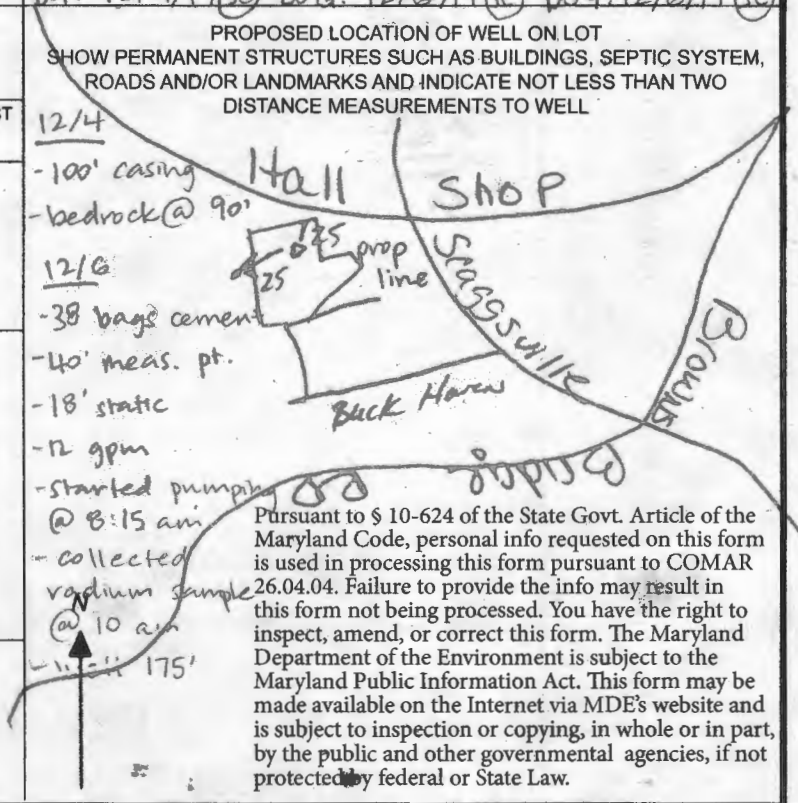
BORED (or Augered) — JETTED — Jetted & DRIVEN
AIR-ROTary — AIR-PERcussion — ROTARY (Hydraulic Rotary)
CABLE — REVerse-ROTary — DRive-POINT
other

REPLACEMENT OR DEEPENED 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 DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE): _ _ - _ _ - _ _ _ _ _

PROPOSED LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL



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Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER: _ _ _ _ _ G _ _ _

PERMIT No.: Ho - 17 - 0191

SPECIAL CONDITIONS
NOTE: APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

See attached memo.

MDE/WMA/PER.071

② COUNTY

Date: December 6, 2017, 2017

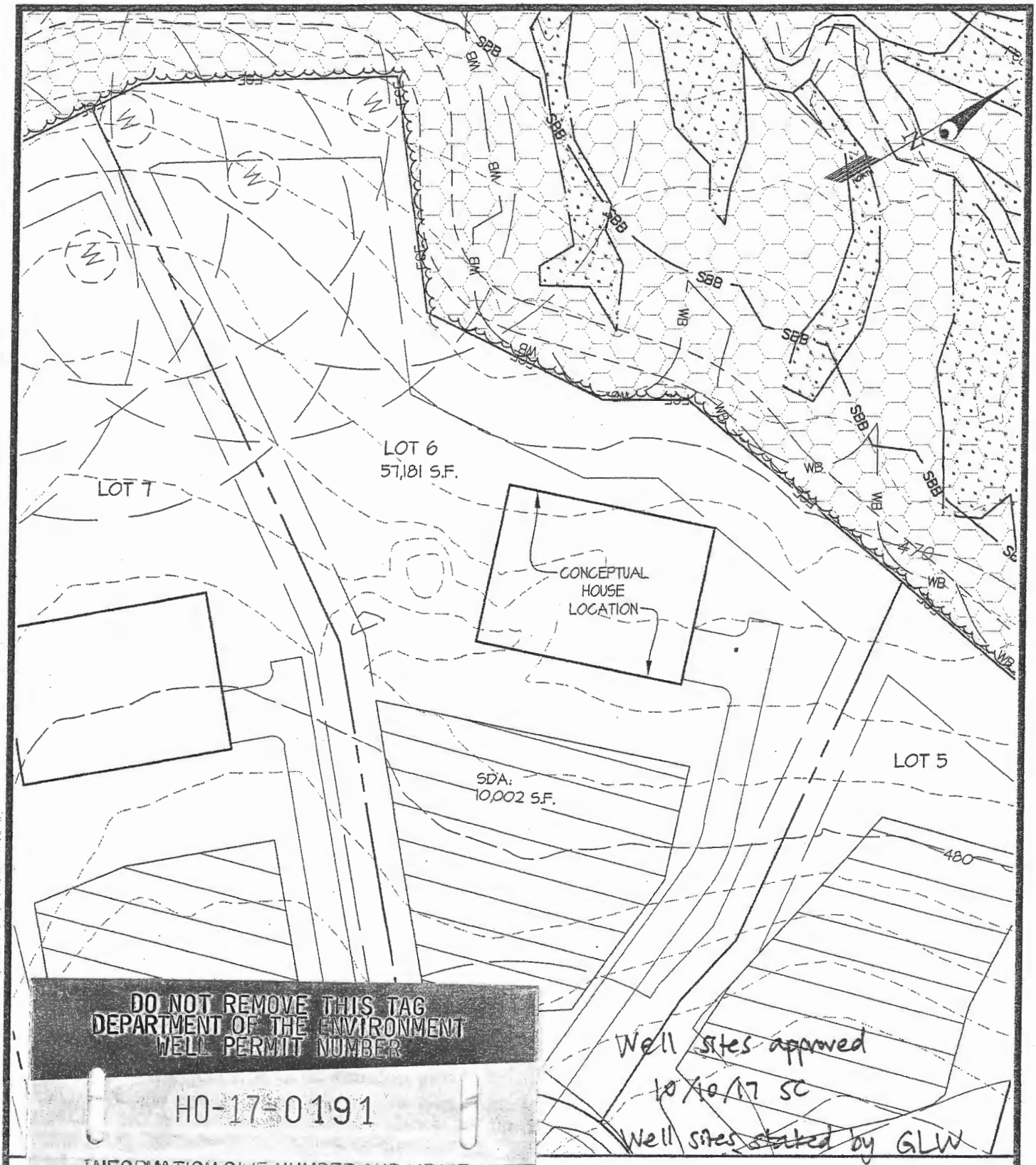
FIELD DATE SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO-17-0191
Location of Property: Scaggsville Rd Highland, Md 20777
Subdivision: Estates @ Schooly Mill Lot: 6
Well Driller: Andrew Houseman Owner: Williamsburg Group

Depth of Well: 175'
Distance of measuring point (M.P.) above ground: 3'
Static water level (S.W.L.) below M.P.: 18'
High rate pumping –reservoir Drawdown
Time pump started: 8:15 Pumping rate: 12 gpm
Total time 30 Mins to reach pumping water level 40 ft. below M.P.

Recovery pump test data – observations to be recorded every 15 minutes

TIME (in 15 minute intervals)	WATER LEVEL Below M.P.	PUMPING RATE Time to fill 1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
8:15	18'	5 Seconds		12 gpm
8:30	36'	5 Seconds		12 gpm
8:45	40'	5 Seconds		12 gpm
9:00	40'	5 Seconds		12 gpm
9:15	40'	5 Seconds		12 gpm
9:30	40'	5 Seconds		12 gpm
9:45	40'	5 Seconds		12 gpm
10:00	40'	5 Seconds		12 gpm
10:15	40'	5 Seconds		12 gpm
10:30	40'	5 Seconds		12 gpm
10:45	40'	5 Seconds		12 gpm
11:00	40'	5 Seconds		12 gpm
11:15	40'	5 Seconds		12 gpm
11:30	40'	5 Seconds		12 gpm



DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER

H0-17-0191

INFORMATION-GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE MARYLAND 21230

Well sites approved
10/10/17 SC
Well sites staked by GLW

ESTATES AT SCHOOLEY MILL
LOT 6

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

L:\CADD\DRAWINGS\14067\PLANS BY GLW\WELL SITE PLANS\LOT 6.dwg

DES.	dds
DRN.	gt
CHK.	

PREPARED FOR :
WILLIAMSBURG GROUP, LLC
5485 HARPERS FARM RD., SUITE 200
COLUMBIA, MD 21044
ATTN.: BOB CORBETT
410-997-8800

G. L. W. No.	14067
ZONING	RR-DEO
TAX MAP/GRID	40-11
DATE	SEPTEMBER, 2017
SCALE	1"=50'
SHEET	1 OF 1

Howard County Health Department

Bureau of Environmental Health
8930 Stanford Blvd, Columbia, MD 21045
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org

Maura J. Rossman, M.D., Health Officer

MEMORANDUM

DATE: October 10, 2017

TO: Allen Compten (MSD 009)
Fogle's Well Drilling

FROM: Sarah Collins, L.E.H.S. SEC
Howard County Health Department

RE: Estates at Schooley Mill
Well Permits

Please note the following special conditions for the wells at the Estates at Schooley Mill:

1. All wells require 50' of steel casing or 10' into competent bedrock, whichever is deeper.
2. All wells require a radium sample at the yield test.
3. Wells on lots 1 and 2 require volatile organic compounds (VOCs) sampling at the yield test.
4. Wells on lots 1, 3, 4, 7, and 9 require sodium, chloride, and total dissolved solids (TDS) sampling at the yield test.

Cc: File

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

Maura J. Rossman, M.D., Health Officer

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Fogleswell Pump & water Treatment LLC Telephone #: 410 795 5670
Address: 580 Obrecht Rd
Sykesville, MD 21784
Must circle one: Licensed Plumber / Licensed Well Driller / Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): David C Fogle License# MSP226
***A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.**

Name of Property Owner: Williamsburg Group Telephone #:
Subdivision: Estates @ Schooley Mill Lot #: 16 Well Tag #: HO-17-0191
Site Address: 7425 Haven Ct
Highland, MD 20777

04/17/2020 (+)

Submersible Pump Data	**Pitless Adapter**	**Well Cap and Electric Conduit**
Make: Grundfos	Make: Campbell +	Two piece watertight cap: YES
Model #: 15SQE07-140	Model#: NA	Screened, vented well cap: YES
Pump Capacity 15	GPM Depth: 36" (36" min)	Cap secured to casing: YES
Well Yield: 12	GPM NSF/WSC approved: YES	Conduit min 18" B.G.: YES
Depth of well encountered at time of pump installation: 175 (feet)		Conduit secured to well cap: YES

If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Must circle one: Torque arrestors / Cable guards / Other acceptable method used
Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing NA

Piping to house	**House Connection**
Type: 1" poly pipe	PVC sleeve to undisturbed soil at wall penetration: YES
PSI: 200 (160 psi min)	Length of sleeve(5' minimum from foundation): 6'
Depth of supply line: 36" (36" min)	Sleeve sealed properly: YES

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation — date: 4/16/2020

For Health Department Use Only – Not to be completed by Installer

Date Insp. Requested: 04/17/2020 Date Insp. Approved: 04/17/2020 Inspector: (+)

Inspection Data:

Pitless adapter watertight & water supply line at least 36" below grade	✓ 42" 04/17/2020 (+)
Two piece cap installed and attached to casing securely	✓
Elec. conduit extends at least 18" below grade/attached to cap properly	✓ 31" 04/17/2020 (+)
Safety rope not outside of well cap/casing	✓
Correct well tag attached properly and casing 8" above finished grade	✓ 36" 04/17/2020 Q
Water supply line sleeved adequately at house connection	*
Adequate grout observed below pitless adapter	✓

04/17/2020 Q
CHANGED TO UNDER FOOTER SLEEVE RECOMMENDED

(Revised form 10/24/2018)

HOWARD COUNTY
HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

Maura J. Rossman, M.D., Health Officer

INTERIM CERTIFICATE OF POTABILITY
PERMANENT DEVIATION FOR RADIUM

Expiration Date – January 22, 2021

July 22, 2020

Homeowner
7425 Haven Court
Highland, MD 20777

RE: Est. @ Schooley Mill, Lot 6
7425 Haven Court
Building Permit: B19002868
Well Permit: HO-17-0191

Dear Homeowner:

This is to advise you that the septic system installation and water well construction for the above referenced property have been inspected and approved. Final approval of the septic system was granted on **6/30/2020.** Final approval of the well line connection to the dwelling was granted on **4/17/2020.** The well construction was completed on **12/6/2017.** Water samples were collected on 6/11/2020, 6/16/2020, 6/29/2020.

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking.

Gross Alpha and Beta samples were also collected on **12/6/2017**. Results showed a Gross Alpha level of **17.2 ± 2.9 pCi/L** and a Gross Beta level of **11.6 ± 2.2 pCi/L**. **This exceeds the maximum contaminant level (MCL) combined Radium 226 and 228 of 5.0 pCi/L.**

After installation of a radionuclide removal device (Water Softener), post-treatment water samples were collected on **7/7/2020** and indicated a combined Radium 226/228 level of **<1.1** pCi/L which is below the MCL of 5 pCi/L.

This Department will grant a **permanent deviation** to the Interim Certificate of Potability on condition that the radionuclide removal system effectively maintains a Gross Alpha level of less than **15 pCi/L**, a Gross Beta level of less than **50 pCi/L**, and a Radium 226/228 level of less than **5 pCi/L**.

Furthermore, it will be necessary for you to comply with the following conditions:

1. The system must be properly operated and maintained continuously in accordance with the service contract for the life of the residence.

2. It is recommended that a Maryland certified water laboratory certified for radionuclide analysis perform a yearly radionuclide analysis.

HOWARD COUNTY
HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
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Maura J. Rossman, M.D., Health Officer

3. If you decide to sell or rent your home in the future, you must make any potential buyer/tenant aware of this permanent deviation. **A person who fails to make this disclosure is subject to the penalties set out in COMAR 26.04.04.12F *Enforcement* and Environment Article 9-1311, Annotated Code of Maryland.**

This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit HO-17-0191. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies.

This Interim Certificate of Potability will expire **six months** from the date of issuance. Submission of a second bacteriological test indicating the water is free of coliform and fecal coliform bacteria is required prior to the expiration date, after which time a Final Certificate of Potability will be issued. **Failure to submit an additional sample and obtain a Final Certificate of Potability will result in a Notice of Violation and is punishable as a misdemeanor under the *Annotated Code of Maryland, Environment Article, 9-1311,* subject to a fine of up to $500 or imprisonment not to exceed three months.**

Please contact (410) 313-1773 to schedule a final water sample appointment or contact a Maryland certified water quality laboratory to schedule a water sample. A list of laboratories certified by the state of Maryland may be found at the following website:
http://www.mde.state.md.us/assets/document/WSP-Labs-2010apr16.pdf

In closing, please refer to our "Homeowner Fact Sheet" which illustrates a better understanding for your onsite sewage disposal system. You will also find a link to Maryland Department of the Environments website which describes in further detail operation and maintenance of your septic system.

Approving Authority,

Kevin M Wolf, L.E.H.S., R.E.H.S./RS, Supervisor
Groundwater Management Section
Well & Septic Program

cc: Howard County Dept. of Inspections, Licenses, and Permits
Community Hygiene Program
File

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	138338		Account #:	4470
Reference:	Estates at Schooley Mill Lot 6		Company:	Williamsburg Homes LLC
Location:	7425 Haven Court		Requested By:	Bill McBride
	Highland, MD 20777		Source:	Well Water
Date/ Time Collected:	7/7/2020	1420	Site:	Kitchen Sink Tap
Date/Time Rec'd:	7/7/2020	1522	Treatment:	Softener/Neutralizer
Chlorine ppm:	Free: ND	Total: ND	pH:	5.8
Collected By:	J. Yeager	0819JY	Well #:	HO-17-0191

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	<2.2	pCi/L	15	900.0	7/10/2020 / 0636 / MJN
Gross Beta, Short Term	<3.0	pCi/L	50	900.0	7/10/2020 / 0636 / MJN
Gross Alpha, Long Term	<1.8	pCi/L	15	900.0	7/17/2020 / 0742 / MJN
Gross Beta, Long Term	<2.8	pCi/L	50	900.0	7/17/2020 / 0742 / MJN
Radium-226	<0.2	pCi/L	****	903.1	7/15/2020 / 1046 / MJN
Radium-228	<0.9	pCi/L	****	Ra-05	7/15/2020 / 1046 / SN

NOTES

1. ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
2. Long Term Gross Alpha Detection Limit: 1.8 pCi/L; Long Term Gross Alpha Error: +/- 1.3 pCi/L
3. Long Term Gross Beta Detection Limit: 2.8 pCi/L; Long Term Gross Beta Error: +/- 1.7 pCi/L
4. pCi/L = picocuries per liter
5. Radium 226 Detection Limit: 0.2 pCi/L; Radium 226 Error: +/- 0.1 pCi/L
6. Radium 228 Detection Limit: 0.9 pCi/L; Radium 228 Error: +/- 0.6 pCi/L
7. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
8. Short Term Gross Alpha Detection Limit: 2.2 pCi/L; Short Term Gross Alpha Error: +/- 1.5 pCi/L
9. Short Term Gross Beta Detection Limit: 3.0 pCi/L; Short Term Gross Beta Error: +/- 1.8 pCi/L
10. ND:None Detected
11. Visual well check: Sealed, vented cap
12. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19002868

Date Reported: 7/20/2020

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	138337	Account #:	4470
Reference:	Estates at Schooley Mill Lot 6	Company:	Williamsburg Homes LLC
Location:	7425 Haven Court	Requested By:	Bill McBride
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	7/7/2020 1430	Site:	Pressure Tank
Date/Time Rec'd:	7/7/2020 1522	Treatment:	**
Chlorine ppm:	Free: ND Total: ND	pH:	5.8
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0191

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Gross Alpha, Short Term	18.2	pCi/L	15	900.0	7/10/2020 / 0636 / MJN
Gross Beta, Short Term	19.2	pCi/L	50	900.0	7/10/2020 / 0636 / MJN
Gross Alpha, Long Term	6.7	pCi/L	15	900.0	7/17/2020 / 0742 / MJN
Gross Beta, Long Term	14.4	pCi/L	50	900.0	7/17/2020 / 0742 / MJN
Radium-226	3.7	pCi/L	****	903.1	7/15/2020 / 1046 / MJN
Radium-228	2.7	pCi/L	****	Ra-05	7/15/2020 / 1036 / SN

NOTES

1. ****Radium 226 and Radium 228 combined have a reference of 5 pCi/L
2. Long Term Gross Alpha Detection Limit: 2.1 pCi/L; Gross Alpha Error: +/- 2.1 pCi/L
3. Long Term Gross Beta Detection Limit: 2.8 pCi/L; Gross Beta Error: +/- 2.3 pCi/L
4. pCi/L = picocuries per liter
5. pH & chlorine tested on site
6. Radium 226 Detection Limit: 0.1 pCi/L; Radium 226 Error: +/- 0.3 pCi/L
7. Radium 228 Detection Limit: 0.9 pCi/L; Radium 228 Error: +/- 0.8 pCi/L
8. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
9. Short Term Gross Alpha Detection Limit: 2.0 pCi/L; Gross Alpha Error: +/- 3.3 pCi/L
10. Short Term Gross Beta Detection Limit: 3.0 pCi/L; Gross Beta Error: +/- 2.7 pCi/L
11. ND:None Detected
12. Visual well check: Sealed, vented cap
13. **Sample collected prior to Softener & Neutralizer

Reason for Test : Use & Occupancy
Building Permit # : B19002868

Date Reported: 7/20/2020

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	137775	Account #:	4470
Reference:	Estates at Schooley Mill Lot 6	Company:	Williamsburg Homes LLC
Location:	7425 Haven Court	Requested By:	Bill McBride
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	6/11/2020 1325	Site:	Pressure Tank
Date/Time Rec'd:	6/11/2020 1530	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	5.9
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0191

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	6/12/2020 / 1030 / BCD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	6/12/2020 / 1030 / BCD
Nitrate	4.91	mg/L	10	601	6/11/2020 / 1550 / CRS
Turbidity	20.3	NTU	<10	SM20 2130B	6/11/2020 / 1645 / CRS
Sand	ND	mg/L	5	Visual/Gravimetric	6/12/2020 / 0830 / CRS

NOTES

1. mg/L = milligrams per liter (also, parts per million)
2. MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
3. NTU = Nephelometric Turbidity Units
4. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
5. ND:None Detected
6. Visual well check: Sealed, vented cap
7. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19002868

Date Reported: 6/12/2020

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	137850	Account #:	4470
Reference:	Estates at Schooley Mill Lot 6	Company:	Williamsburg Homes LLC
Location:	7425 Haven Court Highland, MD 20777	Requested By:	Bill McBride
		Source:	Well Water
Date/ Time Collected:	6/16/2020 1202	Site:	Pressure Tank
Date/Time Rec'd:	6/16/2020 1448	Treatment:	None
Chlorine ppm:	Free: ND Total: ND	pH:	6.1
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0191

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Turbidity	28.5	NTU	<10	SM20 2130B	6/16/2020 / 1640 / BCD
Iron	2.64	mg/L	0.3*	FR, 45 (126)	6/18/2020 / 0930 / CRS

NOTES

1. *SMCL = Secondary Maximum Contaminant Level
2. mg/L = milligrams per liter (also, parts per million)
3. NTU = Nephelometric Turbidity Units
4. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
5. ND:None Detected
6. Visual well check: Sealed, vented cap
7. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19002868

Date Reported: 6/19/2020

MD State Certification # 133

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554 FAX (410) 848-0298

REPORT OF ANALYSIS

Laboratory ID #:	138147	Account #:	4470
Reference:	Estates at Schooley Mill Lot 6	Company:	Williamsburg Homes LLC
Location:	7425 Haven Court	Requested By:	Bill McBride
	Highland, MD 20777	Source:	Well Water
Date/ Time Collected:	6/29/2020 1220	Site:	Kitchen Corner Sink
Date/Time Rec'd:	6/29/2020 1445	Treatment:	Softener/Neutralizer
Chlorine ppm:	Free: ND Total: ND	pH:	6.8
Collected By:	J. Yeager 0819JY	Well #:	HO-17-0191

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Iron	0.13	mg/L	0.3*	FR, 45 (126)	6/30/2020 / 1520 / CRS
Turbidity	1.04	NTU	<10	SM20 2130B	6/30/2020 / 1030 / BCD

NOTES

1. *SMCL = Secondary Maximum Contaminant Level
2. NTU = Nephelometric Turbidity Units
3. Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
4. ND:None Detected
5. Visual well check: Sealed, vented cap
6. pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B19002868

Date Reported: 6/30/2020

MD State Certification # 133

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

Maura J. Rossman, M.D., Health Officer

April 20, 2018

Williamsburg Group LLC
5485 Harpers Farm Road
Columbia, Maryland 21044

RE: Estates at Schooley Mill Lot 6
Scaggsville Road
Well Tag: HO - 17 – 0191

Dear Williamsburg Group:

A sample was collected during a yield test on December 6, 2017 and submitted to the Maryland Department of Health Laboratories to assess the possible presence of **Gross Alpha** and **Gross Beta** in the future well water supply. **Gross Alpha** and **Gross Beta** measure the total alpha and beta particle activity in a water supply. These naturally occurring radioactive nuclides have been demonstrated to be present in a certain type of geologic formation known as the Baltimore Gneiss which exists in your area of development within the County.

Results from this screening revealed a **Gross Alpha** of **17.2 ± 2.9 picocuries/liter (pCi/L)**, while the **Gross Beta** level was **11.6 ± 2.2 pCi/L.** The **Gross Alpha** result was above its **maximum contaminant level (MCL)** of **15 pCi/L,** while the **Gross Beta** level was below its targeted standard of **50 pCi/L** (roughly equivalent to the **annual dose rate** of **4 millirems/year**).

At the time of testing and with respect to these parameters, the well water supply **does not meet** EPA regulatory standards. Additional testing **for these parameters** will be required to secure the future Use & Occupancy. Additional raw water samples for **short and long term Gross Alpha and Gross Beta,** plus **Radium 226 / 228** will be needed to assess any future treatment needs. Alternatively, treatment such as a water softener system or point of use reverse osmosis (R/O) could be considered. If installed, post-treated sampling for **short and long term Gross Alpha**, **Gross Beta** and **Radium 226 / 228** will be needed. Please **note** that other standard testing parameters (bacteria, nitrate, turbidity and sand) will still be required to help secure Use & Occupancy.

A copy of the test results is enclosed for your information. Please call this office at **410-313-1773** if you have any further questions or to schedule additional testing.

Sincerely,

Bert Nixon, Director
Bureau of Environmental Health

Enclosure
cc: Property file

SEND REPORT TO: Bert Nixon
Howard County Health Dept
Bureau of Environmental Health
8930 Stanford Blvd
Columbia, MD 21045

State of Maryland
DHMH - Laboratories Administration
Division of Environmental Sciences
RADIATION LABORATORY
1770 Ashland Avenue
Baltimore, Maryland 21205

Lab No. 1109-17

LABORATORY ANALYSIS REQUEST FORM

Plant/Site Name: Estates @ Schooley Mill - Lot 6 County: Howard

Sample Source: Scaggsville Rd. Highland Location: HO-17-0191
(Well no., lab sink, sample tap, etc.)

Radon-222 Bottle A _____ Radon-222 Field Blank Bottle A _____
Bottle B _____ Bottle B _____

County 1 3 Plant No.

CHECK (one per Box)

Type		Service		Point of Collection		Testing	
Drinking Water	☑	Community	☐	Source (Raw)	☑	Emergency	☐
Landfill	☐	Non-Community	☐	Distribution (treated)	☐	Routine	☑
Stream	☐	Private	☑	MCL	☐	Recheck	☐
Other _____	☐	Other _____	☐			Special	☐

Submitters Code: Federal Project: S

Collector: S. Collins Telephone No.: 410-313-6287

Date Collected: 12/6/17 Time Collected: 10 a.m. _____ p.m.

Field pH: _____ Field Chlorine: _____

Nitric Acid Preserved: Yes ✓ No ☐ Iced: Yes ✓ No ☐

Remarks: Sample collected during yield test

☑	TEST	EPA Code	Lab No.	Method No.	Results (pCi/L)	Date Analyzed	Analyst	Date Reported
☑	Gross Alpha	4000	1109	EPA 900.0	17.2 ± 2.9	12/8/17	RH	12/12/17
☑	Gross Beta	4100	1109	EPA 900.0	11.6 ± 2.2	12/8/17	RH	12/12/17
☐	Radium-226	4020						
☐	Radium-228	4030						
☐	Total Uranium	4006						
☐	Radon-222 (Bottle A)	4004						
☐	Radon-222 (Bottle B)	4004						
☐	Radon Field Blank A	4004						
☐	Radon Field Blank B	4004						
☐	Tritium							
☑	Gross Alpha - Conf		1109	EPA 900.0	18.7 ± 3.3	12/11/17	JT	12/12/17
☑	Gross Beta - Conf		1109	EPA 900.0	15.8 ± 2.5	12/11/17	JT	12/12/17

Date Received: 12/7/17 Received By: JM JT

Data Release Signature: _____ Date: 12 12 17

Lab Use Only	Yes	No	N/A
Sample Intact upon arrival?	✓		
Sample pH <2.0?	✓		
Received within holding time?	✓		

•Tel. No.: (443) 681-3766 •Fax No.: (443) 681-4507

FORM REVISED 05/15
DHMH 4540 05/17

PROGRAM COPY

Hinkle Property

FILE INQUIRY NOTES

Lot 6

DATE	RESULTS OF REVIEW FOR FILE
7/27/15	The Well installed on this lot must have steel casing installed to at least 50 feet depth, OR 10 feet into competent bedrock, WHICHEVER IS DEEPER.
	10/11/17 Discussed special conditions on well permit with Allen Compton via phone. SC
	R Bucker
7/27/15	The Septic System on this Lot must include a BAT unit and all drainfields (any) must have LPD design or equivalent
	R Bucker