APRIL 29, 1986

APPLICATION

A 12100

P

PERCOLATION TESTING

DISTRICT

DATE

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 461-9933

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Carol McKinley

ADDRESS 10 Strawberry Hill Rd Southboro, Mass. 01772 PHONE

PROSPECTIVE BUYER

ADDRESS PHONE

PROPERTY LOCATION:

SUBDIVISION Greenridge LOT NO. 25 Sec 4

ROAD AND DESCRIPTION Evergreen Way

TAX MAP PARCEL #

SIZE OF LOT 258' x 132' x 150' x 340' x 90' x 65' TYPE BLDG.
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

(SIGNATURE OF APPLICANT)

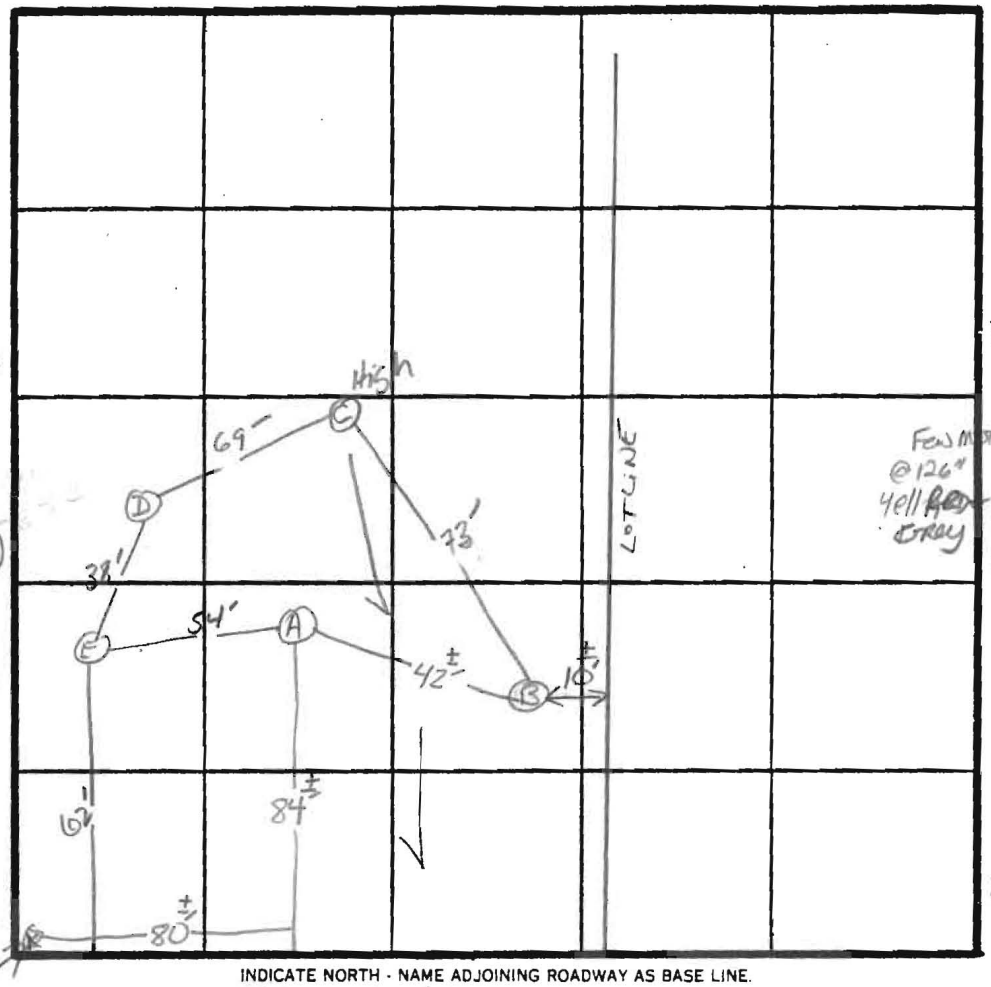
APPROVED BY FOR DATE

REJECTED BY FOR DATE

HOLD PENDING FURTHER TESTS DATE

REASONS FOR REJECTION OR HOLDING

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

EVERGREEN WAY

(A) SOIL PROFILE

0'
- 2-3" — A0-A1
- 3-7" — A2-3
- 7-42" — Yellow BR Silty SAND LOAM CLAY 10-12% Few micaceous FLAKES (B)
- 42-67" — Yell. BR SANDY LOAM CLAY 2-8% Highly COMPACTED Few MED STONES (25" UNSAT. SAND)
- 67-75" — Yell. BR MICACEOUS SANDY LOAM Highly MOTTLED GREY w/ Yellow BR LARGE + SMALL STONES ▽ H_2O

(B)

- 0-2" — A0-A1
- 2-8" — Yell BR, Silty SANDY LOAM CLAY 8-9%
- 8-29" — Yellow BR Silty CLAY LOAM CLAY 12% + slightly micaceous
- 29-46" — Yellow BR SANDY LOAM CLAY <9% Few SMALL STONES (Probable HARDPAN)
- 46-66" — Yellow BROWN SAND, Highly MICACEOUS
- 66-80" — Grey MOTTLES STRONG AT 66" Few SMALL STONES ▽ H_2O

(C)

- 0-73" — STRONG CLAY LAYER TO APPROX. 45" Yellow BROWN SANDY LOAM + CLAY 10-12% PROGRESSIVELY MORE SAND w/ DEPTH + LESS CLAY
- 73-146' — SAND LOAM Yellow BR Few MOTTLES GRAY HIGHLY MICACEOUS PARENT MATERIAL AT BOTTOM Few STONE ± ▽ H_2O

Few MOTTLES @ 126" Yell RED GRAY

(D)

- 0-3" — A0-A1
- 3-9" — A2-3 STRONG BROWN Silty SANDLOAM ± CLAY 10-12%
- 9-26" — Yellow BR SANDY SILT LOAM CLAY 10-12% MICACEOUS
- 26-107" — Yellow BR SANDLOAM Few GREY MOTTLES TOWARD BOTTOM ▽ H_2O

(E)

Similar to Low Hole #A Possible HARD PAN REAPPEARS AS IN HOLE A HARD COMPACTED SOIL AT 45"

120" ▽ H_2O

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME

APRIL 29, 1986

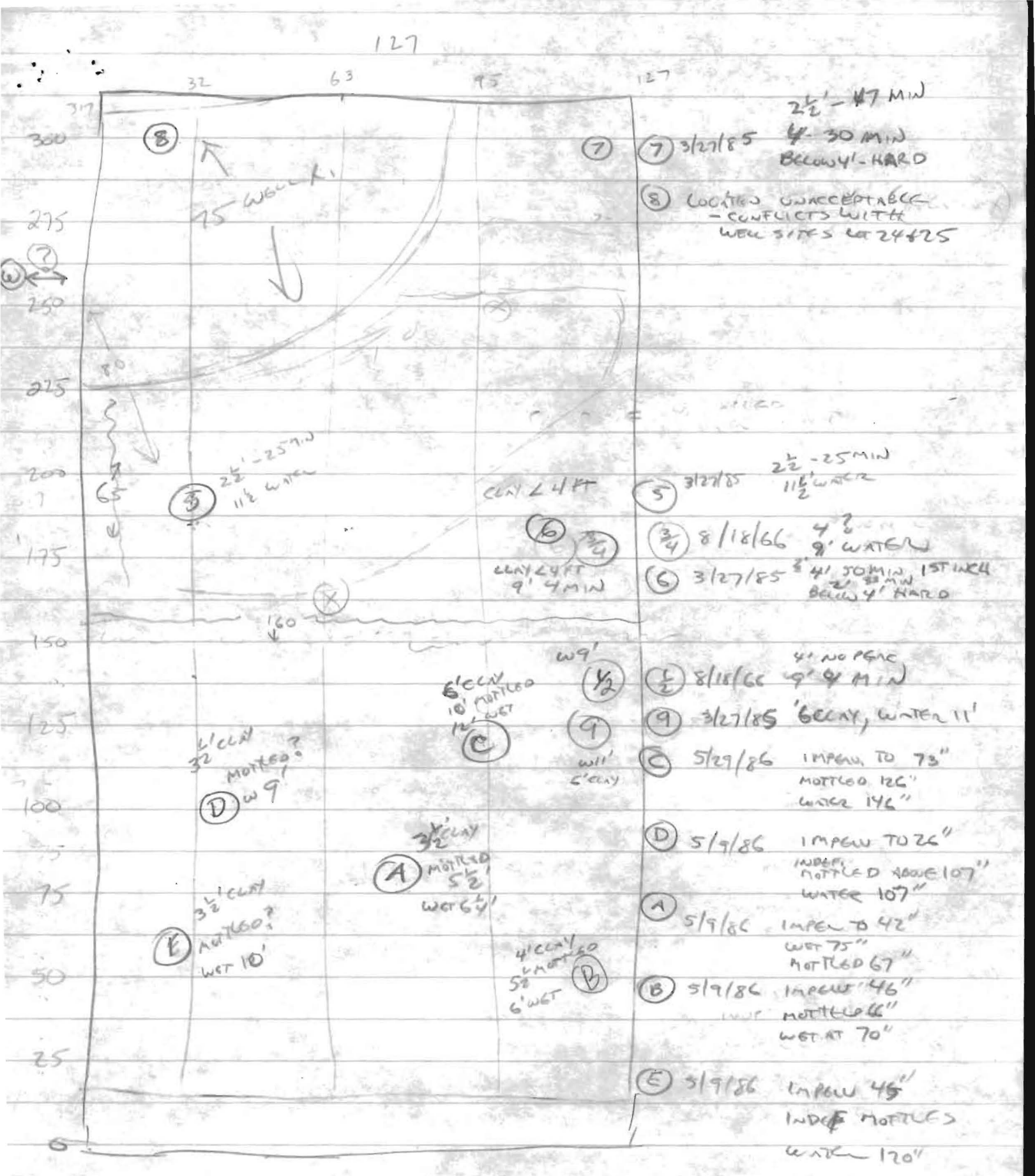
Hole A - Poss HARDPAN @ " Hole (B) 29"-46"

REMARKS _____

TYPE OF SOIL _____

TESTED BY S. Abel ALSO PRESENT _____

EH-12-1079



SUMMARY OF TESTS - VARIOUS DATES

GREENHENGE LOT 25

COLBURN ENGINEERING, INC.

Registered Professional Engineers and Surveyors

Surveying - Land Development

Structural Design and Analysis

MAIN STREET - P. O. BOX 52
HUDSON, MASS. 01749
(617) 562-5247 & 568-8708

April 14, 1986

Mr. Craig Williams, Acting Director
Water and Sewerage Program
Howard County Health Department
Bureau of Environmental Health
3525 Ellicott Mills Drive
Ellicott City, Maryland 21043

Re: Green Henge, Section 4,Lot 25
Owned by Carol McKinley

Dear Mr. Williams:

Carol and I enjoyed meeting you last March in regard to her lots in Green Henge Section 4. We especially appreciated your helpful posture, something not always found here in Massachusetts.

Carol has owned this land since March 7, 1969 and has kept her taxes current to date. I am now responding to your letter dated May 20, 1985 in which you indicate the failure of Lot 25 to pass a percolation test. You have suggested several options to find relief from this failure. Although I feel the following plans meet the requirements of your Title 10, I will consider them as falling in the category of "alternative design".

My firm and myself personally are representing Carol in obtaining the necessary permits for the eventual sale of Lot 25 as captioned above and I would therefore like to briefly introduce myself professionally.

For the past twenty-five years I have owned and have been the principal engineer for Colburn Engineering, Inc. I am a Registered Professional Civil Engineer in Massachusetts and Ohio and a Registered Land Surveyor in Massachusetts. Over the years I have personally designed subsurface sewage disposal systems for uses such as apartments, restaurants, office buildings, retail stores and approximately two thousand single family homes. I am very familiar with the Commonwealth of Massachusetts Title V requirements for subsurface disposal of sewage as well as many Town Board of Health regulations which can exceed the requirements of Title V. It is with this background that I hope to be of help to Carol with respect to this project.

I have enclosed a copy of Commonwealth of Massachusetts Title V as reference material and detailed plans for the installation of a sewage disposal system for Lot 25, Evergreen Way. Please consider this letter and and enclosures as an application for a Permit to construct the proposed system.

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On August 16, 1966 and March 27, 1985 various testing was conducted on Lot 25. I was present for the 1985 testing. The testing done to the rear of the lot indicates a generally unsuitable soil with slow rates of percolation. The deep holes showed a deep layer of clay in which the percolation tests were run and an underlying sand strata.

Test hole #9 of 1985 which approximated the location of test holes #1 and #2 of 1966 showed a 6 foot overburden of clay and 5 feet of underlying sand. Water table was established at 11 feet. A percolation test was performed in 1966 in the sand strata and resulted in a rate of 4 minutes per inch.

Since this lot slopes from the back towards the street, the well should be located at the rear of the property and the sewer system located in the vicinity of test hole #9. The enclosed plans propose a system which will conform to the requirements of "Title 10, Department of Health and Mental Hygiene" and with standard engineering practices in Massachusetts for a soil with a percolation rate of 4.0 minutes per inch, an underlying pervious strata at least 4 feet in depth, and ground water at 11 feet below ground grade.

The design is based on a three bedroom dwelling having two persons per bedroom, or a total of 450 gallons per day flow. Based on this flow rate a 1000 gallon septic tank is recommended in series with a distribution box and two 90 foot trenches two feet wide spaced 15 feet on center to allow for expansions between the primary trenches. The trenches will have a 4 inch diameter perforated p.v.c. pipe laid on 6 inches of washed stone.

The area of the system and 10 feet beyond shall be excavated down to the underlying sand strata and this area shall be filled back to loam subgrade with clean, compacted sand or gravel. The trenches will be installed such that the bottom of the trench is approximately 30 inches below ground grade resulting in a 8.5 foot separation from high ground water and 18 inches of cover over the distribution pipes.

This type of system (excavate and fill) is a standard practice permitted on both a State and local level in Massachusetts where there is underlying pervious soil. The net effect is to hydrologically replicate (in this case) a condition of 11 feet of sand or gravel with water table at 11 feet.

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Please feel free to call me collect at my office to discuss this application and we appreciate your earliest attention to this matter.

Yours truly,
Colburn Engineering, Inc.

Carlton B. Colburn, Jr.
President P.E., R.L.S.

Enclosures
cc: Carol McKinley
CBC/jlb

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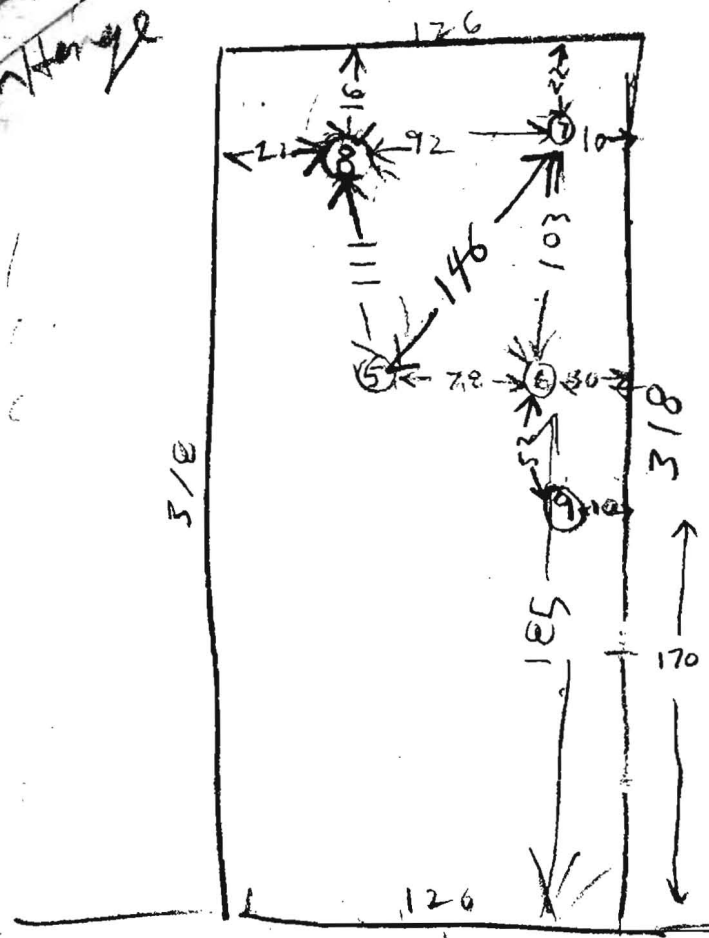
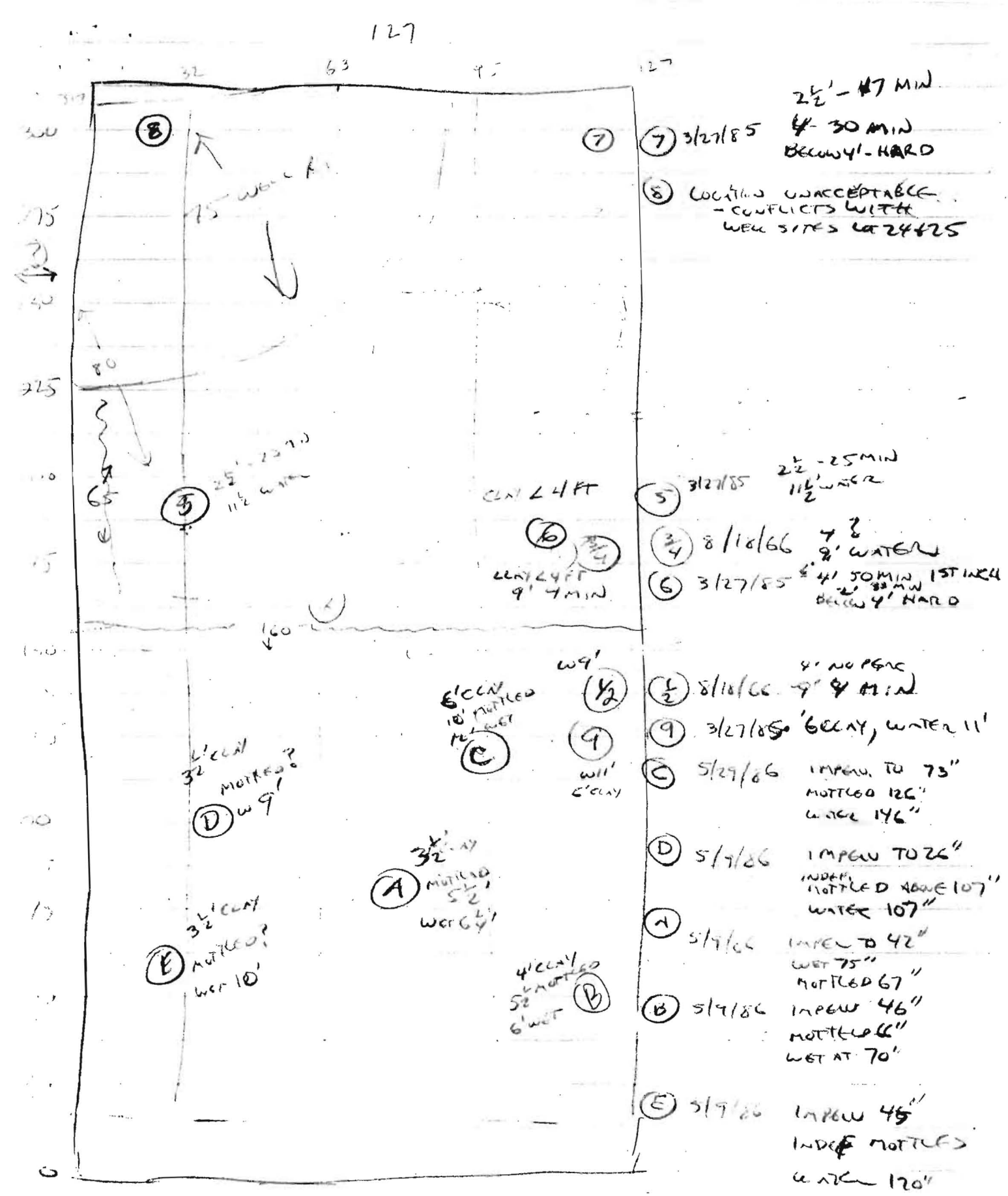
GREEN HOUSE
SECTY



HOLE ELEVATION
(8) = HIGHEST (TOO HIGH TO USE)
(9) = LOWEST
SAME PLACE AS (1) (2) OF 1966

(5) (7) = NEXT HIGHEST
(6) = NEXT LOWEST

OWNER
CAROL MCKINLEY
10 STRAWBERRY HILL RD
SOUTHBORO MASS
01772
617 481 2524
SEND COPY OF LETTER TO
COLBURN ENGINEERING
454 MAIN ST
HUDSON MASS
01749
ALSO COPY OF REGULATIONS PERMITS



(7) 3/27/85 — 2½' - #7 MIN; ¼ - 30 MIN; BELOW 4' - HARD

(8) LOCATION UNACCEPTABLE - CONFLICTS WITH WELL SITES LOT 24 & 25

(5) 3/27/85 — 2½' - 25 MIN; 11½' WATER

(¾) 8/16/66 — 7 & 8' WATER

(6) 3/27/85 — ¼' 30 MIN 1ST INCH; 2' 33 MIN; BELOW 4' HARD

(½) 8/16/66 — 4' NO PERC; 9' ¼ 41 MIN

(9) 3/27/85 — 6' CLAY, WATER 11'

(C) 5/29/86 — IMPERV TO 73"; MOTTLED 126"; WATER 146"

(D) 5/9/86 — IMPERV TO 26"; INDEF MOTTLED ABOVE 107"; WATER 107"

(A) 5/9/86 — IMPERV TO 42"; WET 75"; MOTTLED 67"

(B) 5/9/86 — IMPERV 46"; MOTTLED 66"; WET AT 70"

(E) 5/9/86 — IMPERV 45"; INDEF MOTTLES; WATER 120"

SUMMARY OF TESTS - VARIOUS DATES

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