



**Howard County
Health Department**

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

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

RECEIPT DATE: 8-24-22 **ONSITE SEWAGE DISPOSAL SYSTEM** P 572152
APPROVAL DATE: 8/30/2022 **PERMIT: CONSTRUCTION** A _____
PROPERTY ADDRESS: 6013 BRICKER ROAD, CLARKSVILLE, MD 21029
SUBDIVISION: WILLOWSHIRE LOT: 4 TAX ID: 05-602992
CONTRACTOR: CHAVIS ENTERPRISES & SEPTIC SERVICES EMAIL: sedrick@chavisenterprisesllc.com
CONTRACTOR ADDRESS: 23 EAST ELLENDALE, BEL AIR, MD 21014 PHONE: (410)872-9165

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER:
PROPERTY OWNER: TOLL MID-ATLANTIC LP COMPANY, INC EMAIL: nbrandenburg@tollbrothers.com
OWNER ADDRESS: 250 GIBRALTER ROAD, HORSHAM, PA 19044 PHONE: (410)872-9165

BAT UNIT MODEL: NORWECO TNTLP 750 PUMP SIZE: 0.5 PUMP TANK CAPACITY: 2000

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 8/31/2022 DATE RECORDED: 8/31/2022

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>112.5</u>	INLET DEPTH: <u>2.3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>6.0</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>2.5</u>

LOCATION: PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.

NOTES: **Install at least ONE cleanout on SHC.**
BAT unit installation must be certified by manufacturer prior to Final Approval of this permit.
The installed septic system must pass a Pump & Alarm test prior to Health Department release of Use and Occupancy.

ISSUED BY: R BRICKER ISSUE DATE: 8-26-22 EXPIRATION DATE: 8-24-23

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
 ELECTRICAL PERMIT ISSUED E 22004344
- NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.
CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

NOT TO SCALE

See asbuilt
on separate
sheet

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	2.3'	6'
NUMBER OF TRENCHES		2
TOTAL LENGTH		116'
ABSORPTION AREA		3'x8 sqft + Sidewall
DISTRIBUTION BOX LEVEL		-
DISTRIBUTION BOX BAFFLE		-
DISTRIBUTION BOX PORT		-

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL yes

MANUFACTURER Norweco

CAPACITY 750 GAL

SEAM LOC top

TANK LID DEPTH 1.5' - 2'

BAFFLES -

BAFFLE FILTER -

MANHOLE LOC F/m/b

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED -

DATE ON LID 2/26/22

PUMP/SEPTIC TANK LEVEL

MANUFACTURER Babylon

CAPACITY 2000 GAL

SEAM LOC TOP

TANK LID DEPTH 2.5'

BAFFLES NO

BAFFLE FILTER -

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED -

DATE ON LID 02/26/2022

PRE-CONSTRUCTION:

9/7/22 - Septic tank stakes not in place, contractor to get staked^(x2) for inspection before ST install, trenches bid out according to plan, stakes in place the beginning of both trenches needed to be shifted 4' for acceptable contour install. (T1-57'; T2-56') - ok to begin drainfield install. (ea)

9/8/22 - Septic tanks restaked. (ea) 9/8/22 - Stakes in place for both Septic tanks & clo near house, fall ok w/ hung sewer (ea)

INSTALLATION:

9/8/22 - site inspection contractor onsite, 2 trenches @ 58' each installed according to plan, stone ok, observation pipes installed, geotextile fabric in place, soils consistent w/ perc data, ok to backfill and continue. (ea) 9/9/22 - Norweco ST set in ground & sewer line constructed, contractor waiting on pump tank delivery (late delivery issues); ok to continue. @ 09/13/2022 FM MANIF INSTALLED. REINSPECT P/A (P) 11/17/2022 No water in tank, call for reinspection (P) 11/28/2022 PUMP AND ALARM FUNCTION; DHP 22' ELECTRICAL PANEL 11/30/2022 6/13 SUB PANEL FOR P/A OUTSIDE BOX (P)

FINAL INSPECTOR

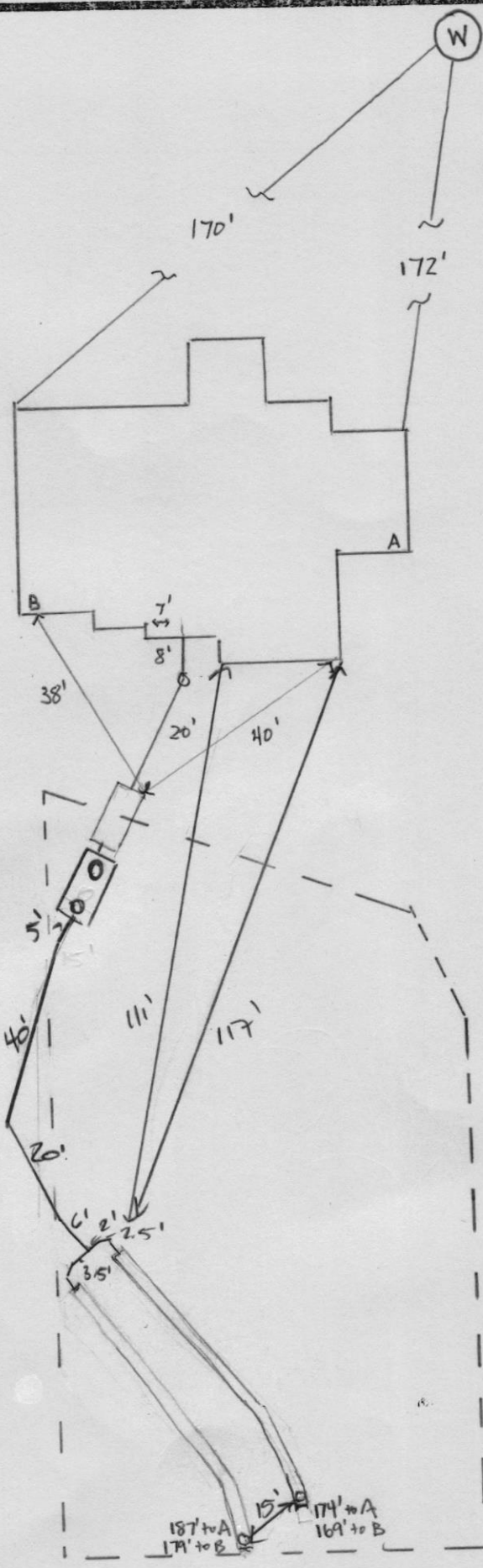
DATE OF APPROVAL

11/30/2022

1 ~ 30'

H0-18-0031

W



← Bricker Rd →

Clerk of the Circuit Court for
Howard County

9250 Judicial Way,
Ellicott City, MD 21043
410-313-2111

LR - Agreement Recording Fee
1x 20.00 20.00

Name: Patel
Ref: 46

LR - Agreement Surcharge
1x 40.00 40.00

LR - Agreement Recording Fee
1x 20.00 20.00

Name: Nguyen
Ref: 47

LR - Agreement Surcharge
1x 40.00 40.00

SubTotal: 120.00
Total: 120.00

CRD-Credit 120.00
Credit Card Confirmation : 065491

08/31/2022 11:52
#16567983/494/4

CC13-YW

Thank you for visiting us today~



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

OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM

THIS AGREEMENT is made this 26th day of Aug, among Quan Nguyen, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at lot 4, 6013 Brickell Rd. Dayton, MD 21036, in the 5 Election District of Howard County, Maryland, and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 27, Block # 18, Parcel # 36, Deed Reference # 25500-09 and Tax Account # 602992 ("the Property").

WHEREAS, The Property is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective November 24, 2016. The pre-treatment device being installed is Norweco Model TNTLP-750 GPD

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the Property at any reasonable time with prior notice for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County.

B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.

C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.

E. This agreement shall run with the land and upon Owner's taking title to the Property shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as

the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Property that the system shall require maintenance or other attention. Upon taking title to the Property, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.


G. This agreement may be voided at any time at the discretion of the County.


H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed this agreement on the date indicated above.


Howard County Health Department


Owner #1 Signature Date

Owner #2 Signature Date

QUAN NGUYEN
Owner #1 Print Name

Owner #2 Print Name

Buyer #1 Signature Date

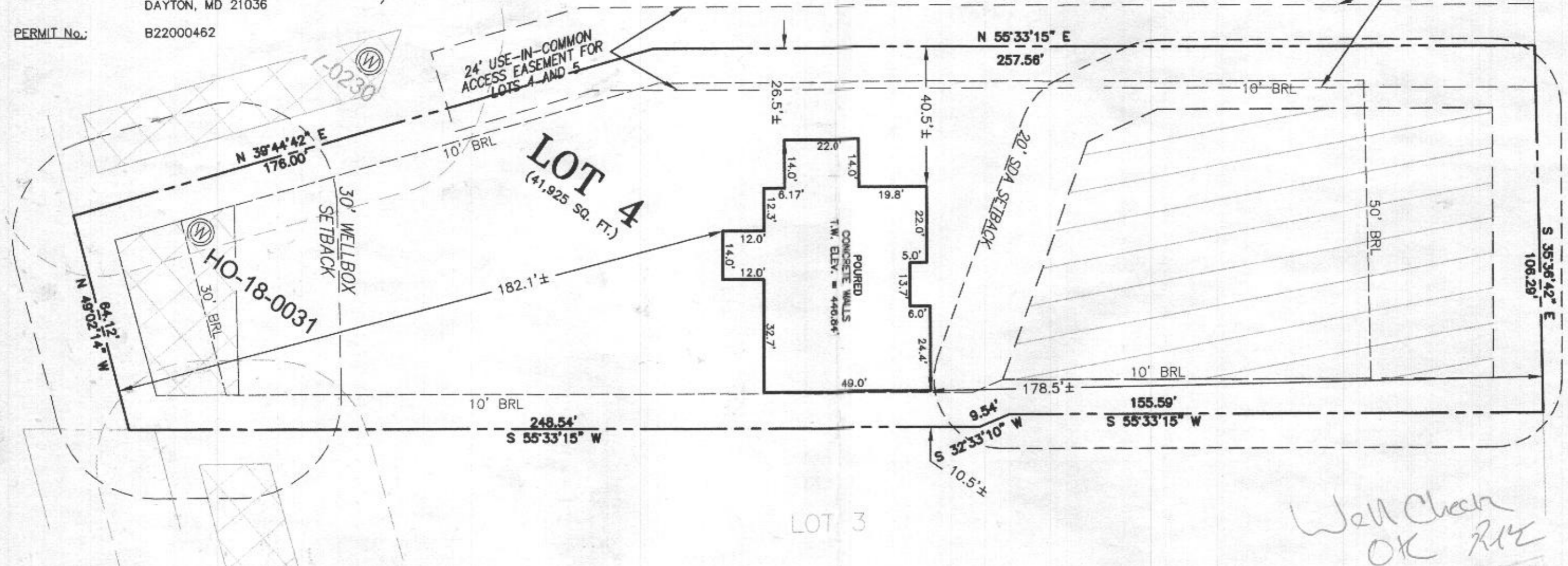
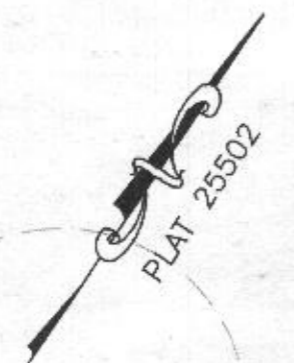
Buyer #2 Signature Date

Buyer #1 Print Name

Buyer #2 Print Name

- LEGEND:**
- BRL BUILDING RESTRICTION LINE
 - ⊙ WELL LOCATION
 - T.W. TOP OF WALL
 - [Hatched Box] SEWAGE DISPOSAL AREA
 - [Hatched Box] WELL BOX AREA

WELL NUMBER: HO-18-0031
 ADDRESS: 6013 BRICKER ROAD
 DAYTON, MD 21036
 PERMIT No.: B22000462



BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPEMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.



SURVEYOR'S CERTIFICATE

THIS WALLCHECK WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHT-OF-WAYS, COVENANTS, AND RESTRICTIONS, ETC. OF RECORD, SOME OR ALL OF WHICH MAY OR MAY NOT BE SHOWN AND/OR REFERENCED HEREON. BEARINGS AND DISTANCES OF THE PROPERTY BOUNDARY LINES SHOWN HEREON ARE PER AVAILABLE RECORDS AND HAVE NOT BEEN FIELD VERIFIED.

THIS IS NOT A "LOCATION DRAWING" AND IS NOT TO BE USED FOR SETTLEMENT PURPOSES.

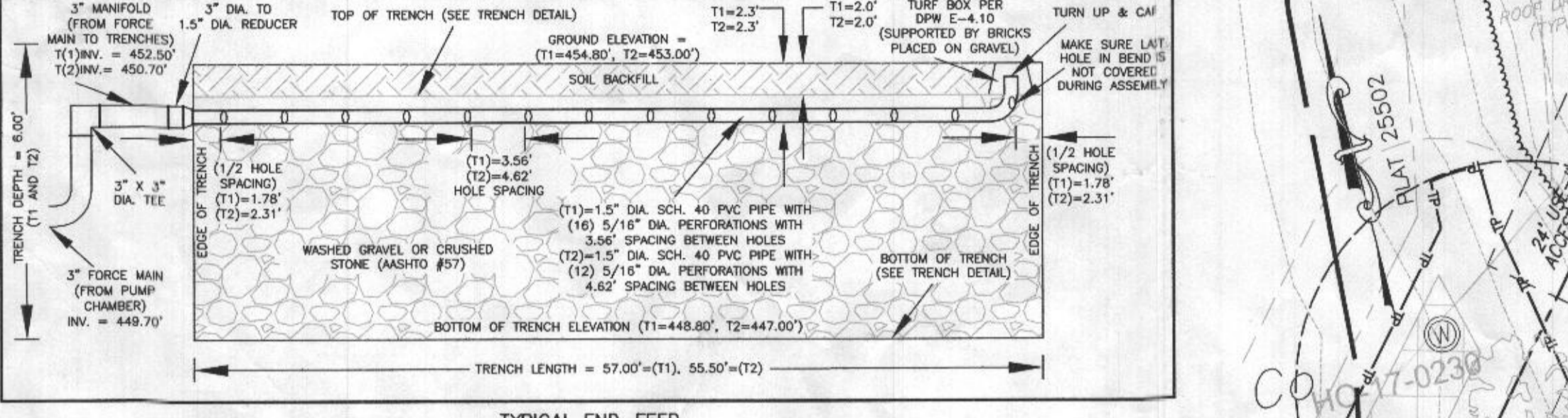
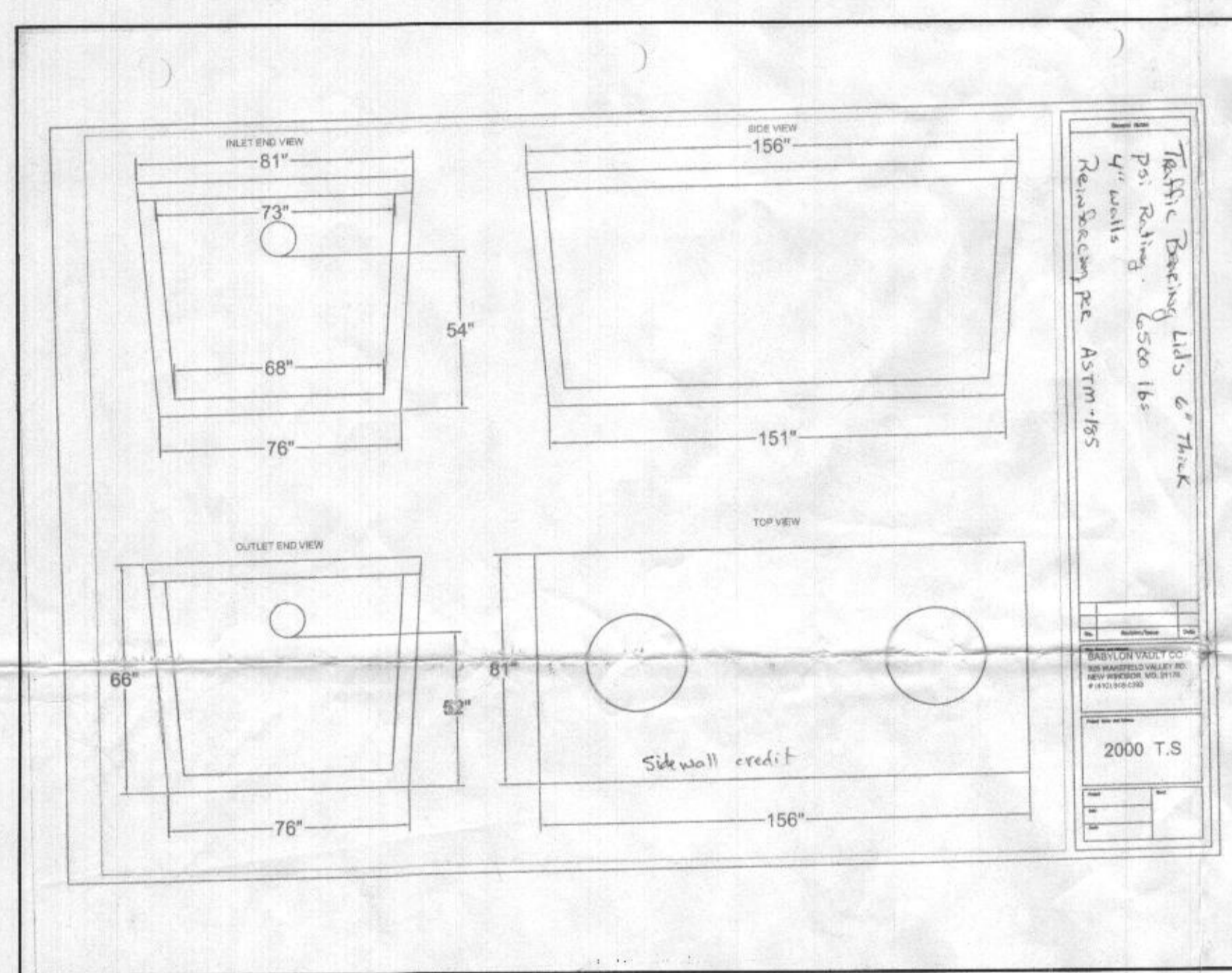
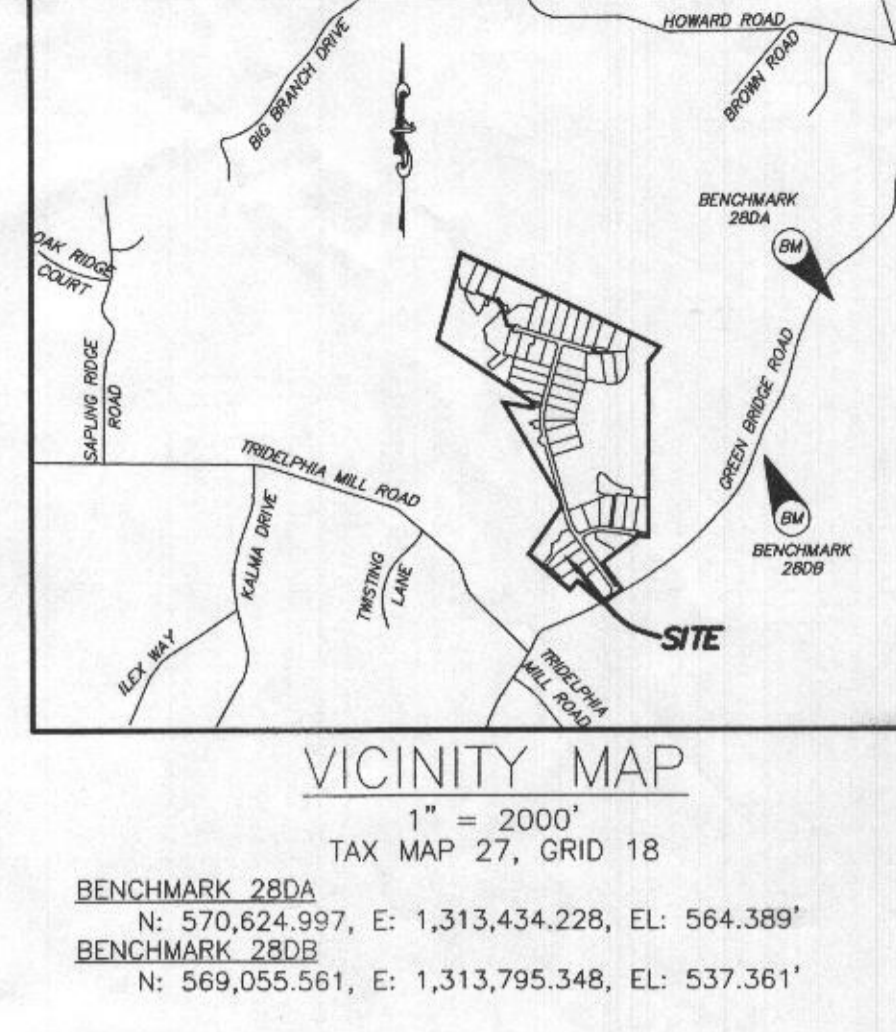
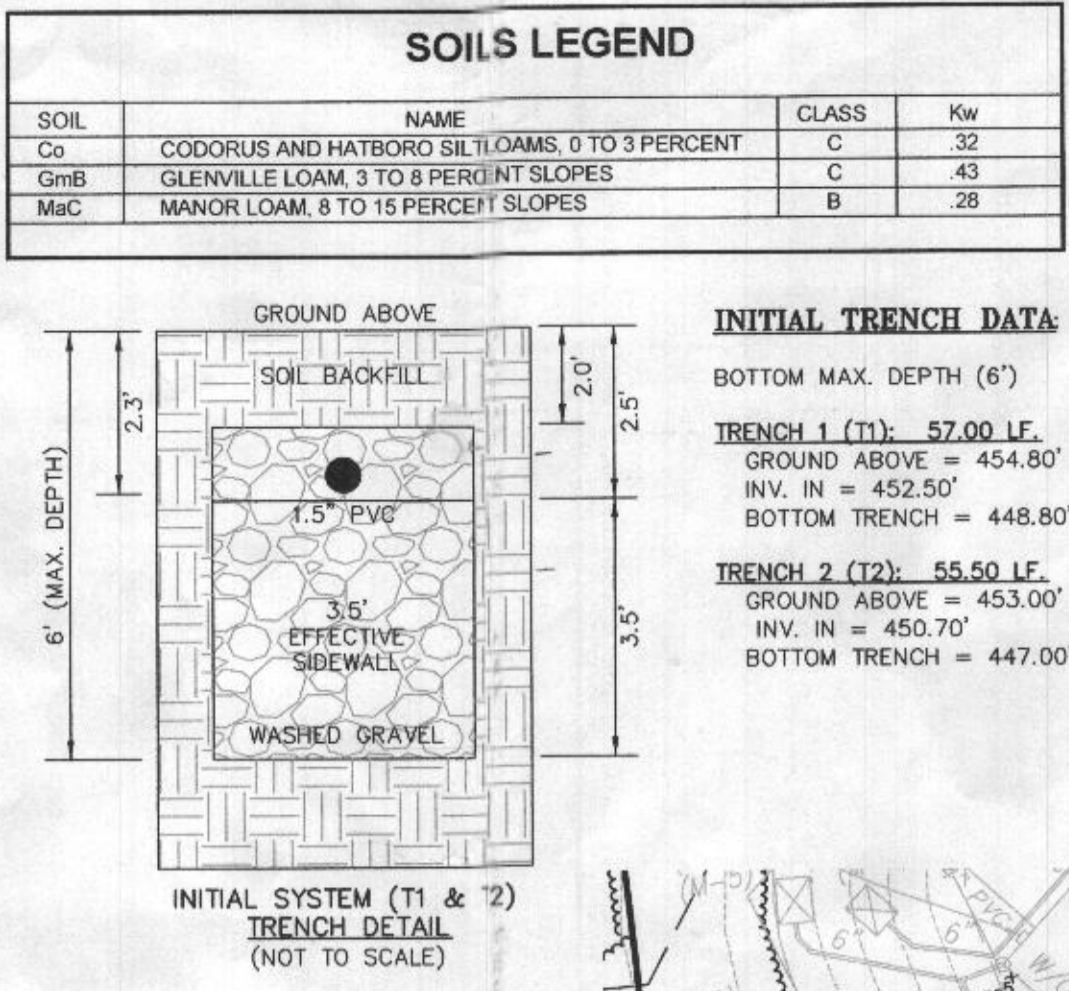
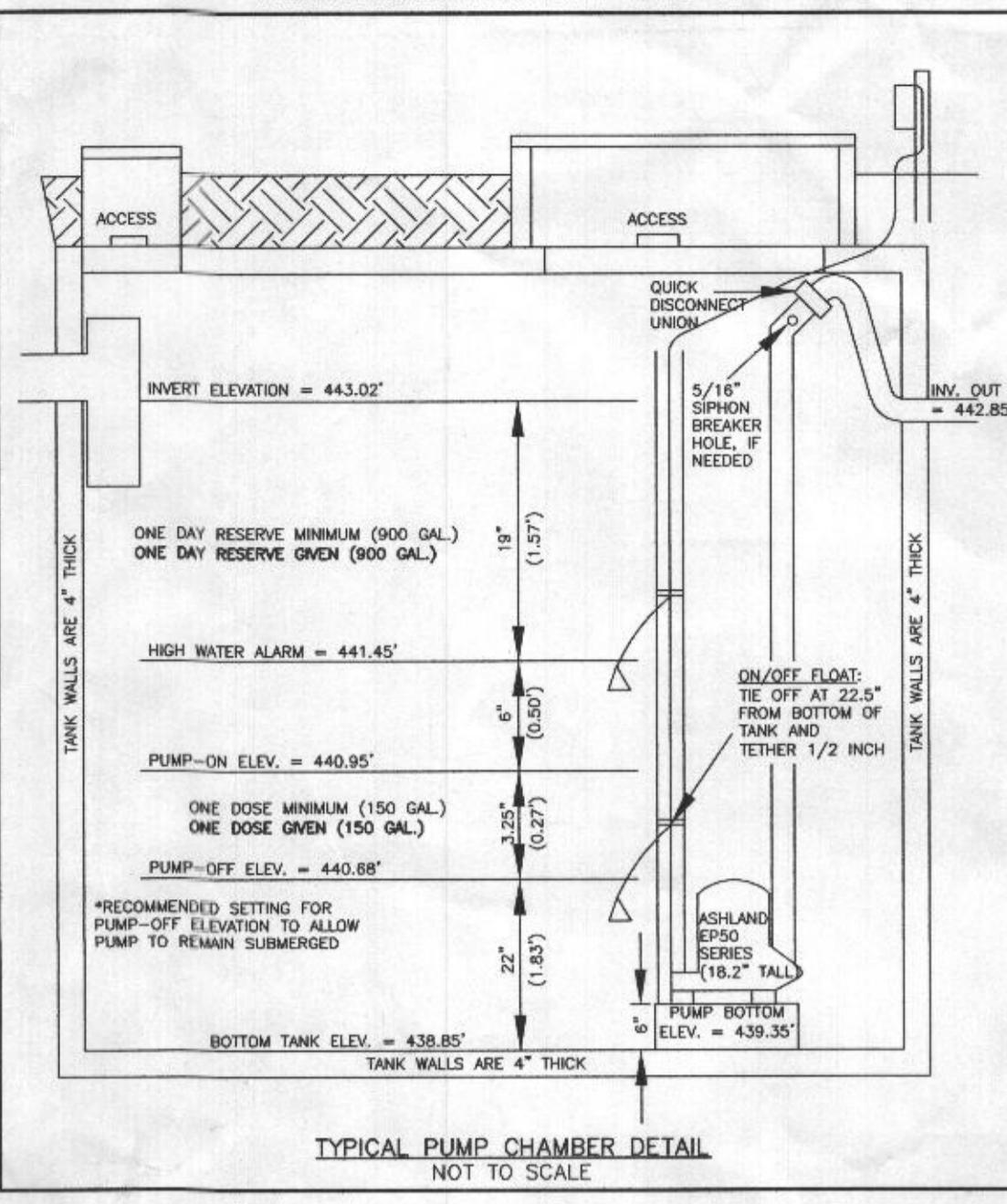
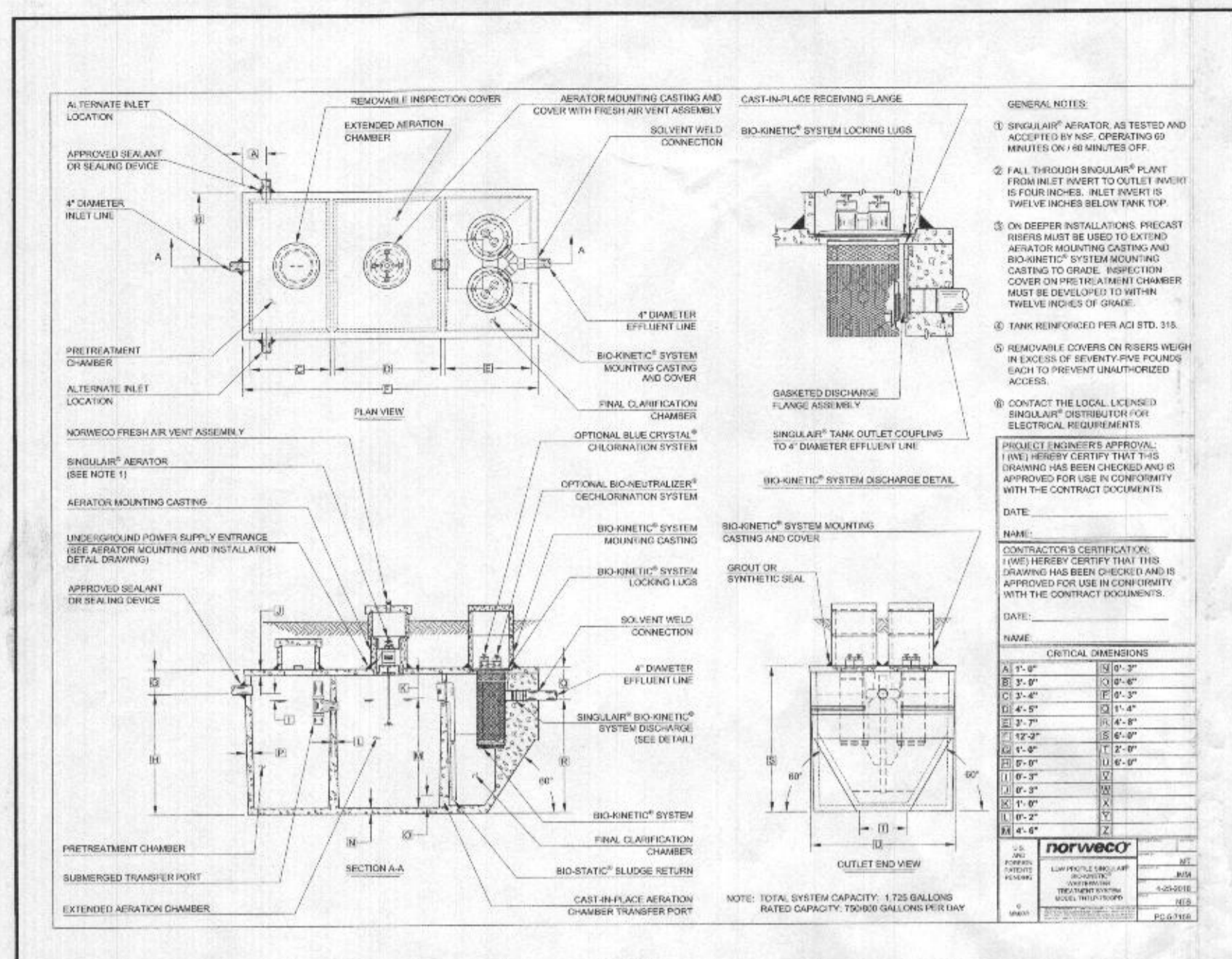
SIGNATURE: *Michael Joe Boyce* 21328 7/21/22
 MD. LIC. NO. DATE

WALLCHECK
 LOT 4
WILLOWSHIRE
 LIBER 18479, FOLIO 296
 PLAT NO. 25502
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

ESE CONSULTANTS
 ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL

ESE Consultants, Inc.
 6731 Columbia Gateway Drive • Suite 120 • Columbia, MD 21046
 T: 410-872-9105

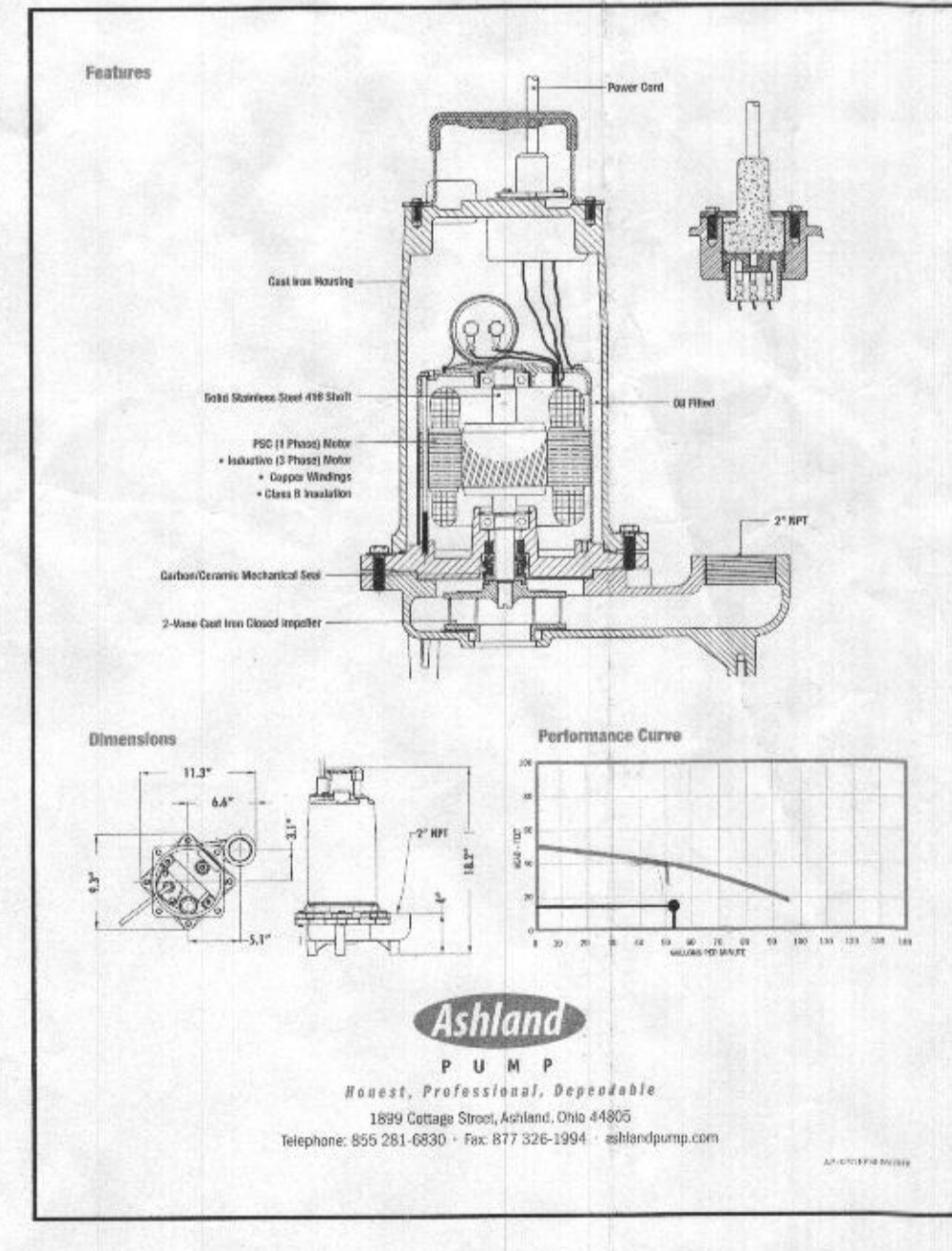
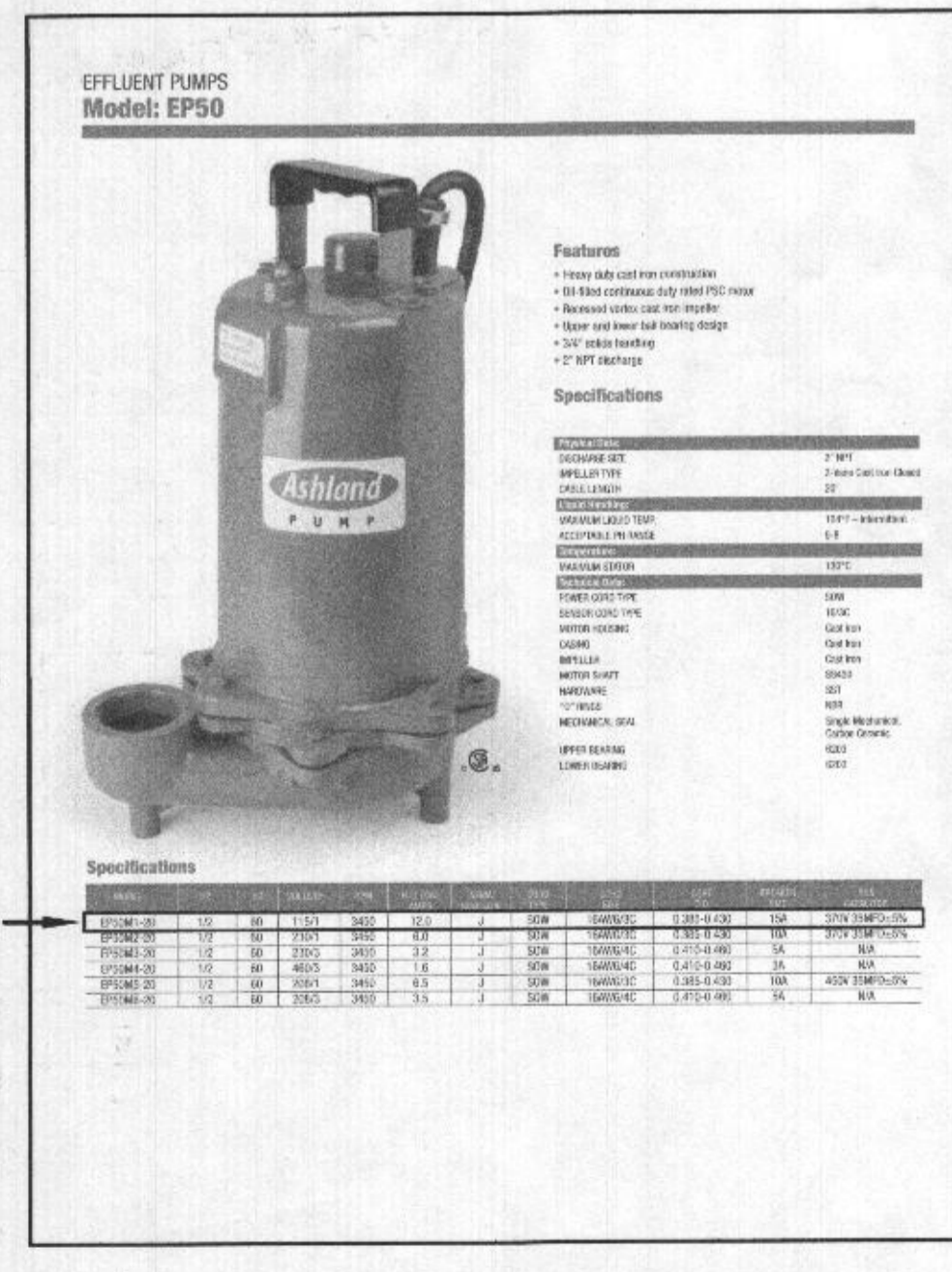
DATE: 07/21/2022 SCALE: 1" = 30' FILE: WC LOT 4
 CHK'D: M.J.B. JOB NO: 4520 DRAWN: V.X.P



HOUSE OPTIONS:
 HOUSE TYPE: RENOV (CRAFTSMAN)
 TWO CAR SIDE ENTRY GARAGE I/O STANDARD GARAGE CONCRETE FINISHED LOWER LEVEL WALK-OUT BASEMENT
 ADD'L BATH - FINISHED BASEMENT
 ADD'L ONE CAR FRONT ENTRY GARAGE - 14' WALK-OUT LUXURY COVERED DECK
 ADD'L BEDROOM - FINISHED BASEMENT

LEGEND:
 ● PASSED PERC TEST LOCATION
 ○ EXISTING WELL LOCATION
 C/O CLEANOUT
 TW TOP OF WALL
 GF GARAGE FLOOR
 BF BASEMENT FLOOR
 BR BUILDING RESTRICTION LINE
 SEWAGE DISPOSAL AREA
 SOIL DELINEATION LINE

APPROVED SEPTIC SYSTEM PLAN
 Howard County Health Department
 NORWECO TNTP-70 w/ 2000-gal Pump Tank & Ashland EP50 M1-20 Pump or equiv.
 Phil... Signature
 5/12/22 Date
 To LPD for 6-bedroom residence.



LOW PRESSURE DISTRIBUTION SYSTEM CALCULATIONS

NUMBER OF MANIFOLDS = 1
 MANIFOLD TYPE = END FEED
 TRENCH 1 (T1) ELEV.=454.80' LENGTH=57.00'
 TRENCH 2 (T2) ELEV.=453.00' LENGTH=55.50'

TRENCH	LENGTH (FT.)	FEED	PIPE INV. ELEV. (FT.)	HEAD HOLE DIA. (IN.)	HOLE FLOW RATE (GPM)	HOLE SPACING (FT.)	HOLES	TRENCH FLOW RATE (GPM)	LATERAL FLOW RATE (GPM)	FLOW PER LF TRENCH (GPM)	LATERAL DIA. (IN.)	TYPE
1	57.00'	END	452.50	2	5/16	1.63	3.56	16	26.08	55.22	0.472	1.5 SCH40
2	55.50'	END	450.70	3	5/16	2.30	4.62	12	27.60	53.19	0.519	1.5 SCH40

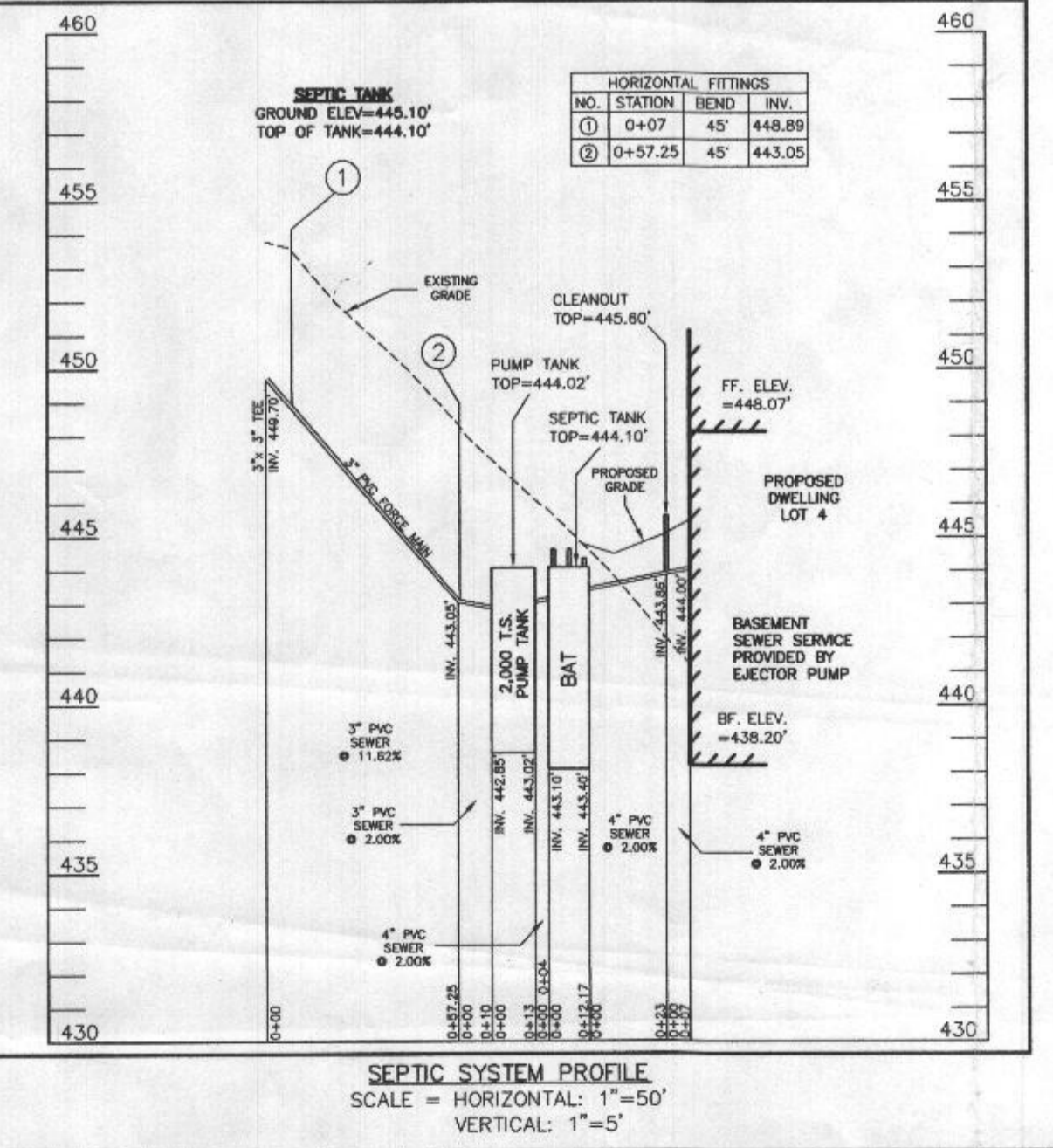
MIN. SYSTEM DISCHARGE RATE = 53.68 GPM
 MANIFOLD DIAMETER = 3 IN.
 FORCE MAIN DIAMETER = 3 IN.
 MINIMUM DOSE = 150 GAL

MAX./MIN. FLOW RATIO (SHOULD BE < 1.10): 0.99
 VELOCITY = 2.53 FPS FRICTION LOSS (TABLE 4.4) = 0.58
 VELOCITY = 2.53 FPS FRICTION LOSS (TABLE 4.4) = 0.58
 (VOL. IN FM, MAN, 5x LATERAL=90.13 GAL < 1.76 DESIGN LOW=90/6=150 GAL)

CALCULATE TOTAL DESIGN HEAD
 LENGTH OF FM FROM PUMP TANK TO MANIFOLD = 67.25' (ADD 8' PER BEND) = 12'
 # OF (45°) BENDS IN FM = 2 (ADD 10' PER BEND) = 10'
 # OF (90°) BENDS IN FM = 1 (ADD 10' PER BEND) = 10'
 LENGTH OF MANIFOLD FROM FM TO TRENCHES = 17.85' (ADD 8' PER BEND) = 24'
 # OF (45°) BENDS IN MANIFOLD = N/A (ADD 10' PER BEND) = N/A
 # OF (90°) BENDS IN MANIFOLD = N/A (ADD 10' PER BEND) = N/A
 # OF COUPLINGS (3" TO 1.5") = 2 (ADD 3' PER COUPLING) = 6'
 TOTAL LENGTHS = 85.10' TOTAL ADD'L LENGTHS = 52' FRICTION LOSS = 137.10'
 ((53.68 GPM OF 3" PVC = 0.58 PER 100' PIPE); 0.58 / 100' = 0.0058 x 37.10' = 0.795')

FRICTION HEAD = 0.80' FT. (PER ABOVE CALCULATION)
 OPERATING HEAD = 2.00' FT.
 STATIC HEAD = 11.82' FT. (HIGHEST POINT IN DISTRIBUTION SYSTEM - PUMP OFF FLOAT ELEVATION)
 TOTAL DYNAMIC HEAD = 14.62' FT. (FRICTION HEAD + OPERATING HEAD + STATIC HEAD)

THEREFORE A PUMP CAPABLE OF DELIVERING AT LEAST 53.68 GPM AGAINST 14.62' OF HEAD IS REQUIRED.
 EP50M1-20, 1/2 H.P. IS EFFICIENT



SEPTIC TRENCH SIZE CALCULATIONS

SYSTEM INPUT INFORMATION	INITIAL SYSTEM	1ST REPLACEMENT SYSTEM	2ND REPLACEMENT SYSTEM
APPLICATION RATE (GPH)	1.2	1.2	1.2
EFFECTIVE AREA BEGINNING DEPTH (GIVEN)	2.5	2.5	3
BOTTOM MAXIMUM DEPTH (GIVEN)	6	6	6
NUMBER OF BEDROOMS	6	6	6
DESIGN FLOW (150 GAL/DAY/BEDROOM)	900	900	900

ABSORPTION TRENCH CALCULATIONS

DESIGN FLOW (GPH)	750	750	750
EFFECTIVE SIDEWALL DEPTH "D" (DEPTH BETWEEN THE EFFECTIVE BEGINNING DEPTH OR PIPE DEPTH (WHICHEVER IS DEEPER) AND MAX. TRENCH BOTTOM)	3.5	3.5	3
TRENCH WIDTH "W" (2 OR 3 FEET)	3	3	3
SIDEWALL REDUCTION ((W+2)/(W+1+2D))	0.45	0.45	0.50
LINEAR FEET OF TRENCH REQUIRED (DESIGN FLOW / (SIDEWALL REDUCTION * W))	112.50	112.50	125.00

TRENCH LAYOUT INFORMATION

NUMBER OF TRENCHES USED	2	2	2
TOTAL LINEAR FEET USED	112.50	112.50	125.00
MINIMUM TRENCH SPACING (FOR TRENCHES WITH NO SIDEWALL CREDIT, THE SPACING IS 6' FOR A 2' WIDE TRENCH AND 9' FOR A 3' WIDE TRENCH (MEASURED EDGE TO EDGE). ALL TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT MUST BE SPACED A MIN. OF 10' FOR EFFECTIVE SIDEWALL NOT OVER 3.5'. IF MORE THAN 3.5' THEN SPACING FORMULA IS (2D+W) UP TO A MAX. OF 18'	10	10	10

PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21328, EXPIRATION DATE 1/8/23.

Michael Joe Boyce
 DATE: 04/20/22



DESIGNED BY: R.C.K.
 DRAWN BY: R.C.K.
 CHECKED BY: M.J.B.
 DATE: _____

DATE: _____

REVISION: _____

BY: _____

APPROVED: _____

SITE PLAN FOR BAT INSTALLATION
WILLOWSHIRE
 LIBER 18479, FOLIO 296
 PLAT No. 25502
 TAX No. 05-602992
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 ADDRESS: 6013 BRICKER ROAD
 DAYTON, MARYLAND 21036

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ESE Consultants, Inc.
 6731 Columbia Gateway Drive • Suite 120 • Columbia, MD 21046
 T. 410-872-9105

DATE: 04/18/2022 SCALE: 1" = 30' FILE: BAT LOT 4
 CHK'D: M.J.B. JOB NO: 4520 DRAWN: R.C.K.

SHEET 1 OF 1