



Howard County Health Department

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

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

RECEIPT DATE: 6/13/23

ONSITE SEWAGE DISPOSAL SYSTEM

P 574909

APPROVAL DATE: 10/31/2023

PERMIT:

CONSTRUCTION

A

PROPERTY ADDRESS: 10637 Reynolds Court

SUBDIVISION: King's Forest

LOT: 6

TAX ID:

CONTRACTOR:

Fogles Septic Clean Inc.

EMAIL:

kmf@foglesinc.com

CONTRACTOR ADDRESS:

580 Obrecht Rd, Sykesville, MD 21784

PHONE:

410-755-2670

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:



MDE



MANUFACTURER:

PROPERTY OWNER: Toll Brothers

EMAIL: Sriley1@tollbrothers.com

OWNER ADDRESS: 250 Gibraltar Road

PHONE: 410-872-9105

BAT UNIT MODEL: Norweco 750

PUMP SIZE: EP50

PUMP TANK CAPACITY: 2000 Gallon

OPERATION & MAINTENANCE AGREEMENT

DATE SIGNED:

6/27/2023

DATE RECORDED:

8/21/2023

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS:

6

APPLICATION RATE:

0.8

TRENCHES:	LINEAR FEET REQUIRED:	<u>210</u>	INLET DEPTH:	<u>3</u> ✓
	TRENCH WIDTH:	<u>3</u>	MAXIMUM BOTTOM DEPTH:	<u>8</u> ✓
	MINIMUM SPACE BETWEEN TRENCHES:	<u>10</u>	EFFECTIVE AREA BEGINNING DEPTH:	<u>5.5</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:	Electrical Permit Needed. <u>4 trenches @ 52.5'</u>			

ISSUED BY: Dana Bernard

ISSUE DATE:

8/23/23

EXPIRATION DATE:

8/23/24

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

2302933

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 separate
sheet for
AS-built

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	3'	8"
NUMBER OF TRENCHES		4
TOTAL LENGTH		211
ABSORPTION AREA		633 ft ³
DISTRIBUTION BOX LEVEL		—
DISTRIBUTION BOX BAFFLE		yes
DISTRIBUTION BOX PORT		yes

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	yes
MANUFACTURER	Baker River
CAPACITY	750 GAL
SEAM LOC	Top
TANK LID DEPTH	2'-2.5'
BAFFLES	6" Front
BAFFLE FILTER	—
MANHOLE LOC	Front, back & middle
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	—
DATE ON LID	8/10/2023

PUMP/SEPTIC TANK LEVEL	yes
MANUFACTURER	Baker
CAPACITY	2000 GAL
SEAM LOC	Top
TANK LID DEPTH	2.5'-3.5'
BAFFLES	4" back
BAFFLE FILTER	—
MANHOLE LOC	Front & back
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	—
DATE ON LID	7/24/2023

PRE-CONSTRUCTION:

9/5/2023 - BA1 certified installer visited. SPA staked, tanks staked, tanks 230' from house. I, straightened out slightly to match contour, length @ 52.5'. Distance between 1, & 12 13'-11". 12 on contour, length measured @ 52.5'. 13 on contour by 0.5", distance between 12 & 13, 19'. 13 length @ 52.5' & straightened out, 14 on contour by 0.5" difference, length @ 52.5', distance between 14 & 12 13'. OK to start install. (P)

INSTALLATION: 9/8/2023 - Sewer out of house to tank installed. SCHD 40 PVC w/adequate fall. Septic BA1 tank installed, 2'-2.5' cover on tank. 9/11/2023 - Pump tank set, 3'-3.5' cover on tank. Installer removed cut so only 3.5' cover on tank not 4'. (P) 9/12/2023 - first trench started. Depth to bottom @ 7.5'-8', position of trench stoned inlet @ 3'. Stone pipe rejected see attached pic & stone ticket. (P) 9/18/2023 - tank set, rest of trenches done, lengths 52'-52', met @ 3.0% to bedrock. (P) 10/25/2023 - Wasp panel outside house. Floats inside river, high water 2120m successful. Pump successfully goes to D-box (P) 10/30/2023 - received BA1 start up. (P) o/m agreement verified (P)

FINAL INSPECTOR

DATE OF APPROVAL

10/31/2023

10637 Reynolds Ct

3810-81-07-1



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

LR - Agreement	20.00
Recording Fee	
Name: En0115h	
Ref: 1	
LR - Agreement	40.00
Search Charge	6.00
Subtotal:	66.00
Date: 02/21/2024	
Total:	106.00
745644750503 - CC15-01	
Edward Code 11011	
City/CO05000006 -	
Register 158	

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.

Michael J. Davis 6/27/23
Howard County Health Department

Terry English 6/26/23
Owner #1 Signature Date

TERRY ENGLISH
Owner #1 Print Name

Owner#2 Signature Date

Owner #2 Print Name

Buyer #1 Signature Date

Buyer #2 Signature Date

Buyer #1 Print Name

Buyer #2 Print Name

Wolf, Kevin

From: Wolf, Kevin
Sent: Tuesday, October 31, 2023 8:52 AM
To: Greg Simons; Martin, Sharhonda
Cc: Jeffrey Hyde
Subject: RE: 10637 Reynolds, Kingsley Lot 6, B23000187

Greg,
I don't have the O&M agreement. Can you forward me a copy of the signed/recorded agreement?

Kevin

From: Wolf, Kevin
Sent: Monday, October 30, 2023 10:27 AM
To: Greg Simons <gsimons@tollbrothers.com>; Martin, Sharhonda <smmartin@howardcountymd.gov>
Cc: Jeffrey Hyde <jhyde2@tollbrothers.com>
Subject: RE: 10637 Reynolds, Kingsley Lot 6, B23000187

Yes, Ill be looking at this one. I have a few in que.

Kevin

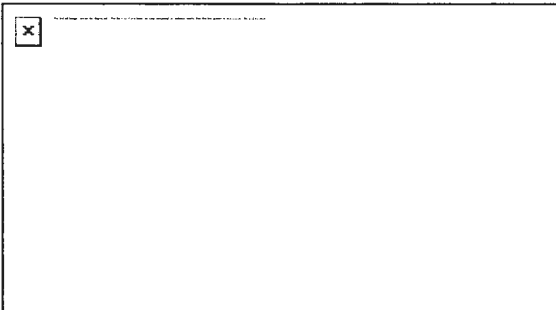
From: Greg Simons <gsimons@tollbrothers.com>
Sent: Monday, October 30, 2023 9:35 AM
To: Wolf, Kevin <KWolf@howardcountymd.gov>; Martin, Sharhonda <smmartin@howardcountymd.gov>
Cc: Jeffrey Hyde <jhyde2@tollbrothers.com>
Subject: Re: 10637 Reynolds, Kingsley Lot 6, B23000187

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Good morning Kevin,

I heard that Backwater sent over the cert for this tank over the weekend. Just want to make sure we are still tracking for this ICOP.

Greg Simons
Senior Construction Manager, DC Metro
Toll Brothers
6731 Columbia Gateway Drive, Suite 120, Columbia, MD, MD 21046



From: Greg Simons

Sent: Thursday, October 26, 2023 9:10:14 AM

To: Wolf, Kevin <KWolf@howardcountymd.gov>; Martin, Sharhonda <smmartin@howardcountymd.gov>

Subject: 10637 Reynolds, Kingsley Lot 6, B23000187

Good morning Kevin and Sharhonda,

My understanding is that the Kingsley Lot 6 pump alarm test passed yesterday. Could we please get that ICOP issued as soon as possible?

Thank you,

Greg Simons

Senior Construction Manager, DC Metro

Toll Brothers

6731 Columbia Gateway Drive, Suite 120, Columbia, MD, MD 21046



BACK RIVER PRE-CAST, LLC
 PO BOX 329
 GLYNDON, MD 21071
 PH# 410-833-3394

NORWECO CERTIFICATION

PROPERTY OWNER: TOLL MID-ATLANTIC	INSTALLATION COMPANY: FOGLES SEPTIC
ADDRESS: 10637 REYNOLDS CT	CERTIFIED INSTALLER: RICKY COLSON
CITY, ZIPCODE & COUNTY: ELICOTT CITY, 21042, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 09-07-23
750 GPD CONCRETE	START-UP DATE: 10-27-23
NUMBER OF BEDROOMS:	DATE OF FINAL INSPECTION:
TYPE OF INSTALLATION: NEW	DATE OF ELECTRICAL INSPECTION:
ELECTRICAL WIRING PER ELECTRICAL INSTRUCTIONS: YES	TANK LEVEL: YES
HT. OF CONTROL PANEL ABOVE FINAL GRADE: 48"	BURIAL DEPTH OF TANK: 28"
SYSTEM WIRED ON A 15-AMP DEDICATED CIRCUIT WITH STD. BREAKER: YES	RISERS 4" - 6" ABOVE GRADE: YES
LENGTH(S) OF UF WIRE PAST LAST AERATION RISER(S): 30"	VENTED LID(S) ON AERATION CHAMBER(S): YES
FEMALE PLUG(S) WIRED TO UF WIRE: YES	ANY GROUND SETTLING AROUND TANK:
CONDUIT(S) ENTERING AERATION RISER MADE WITH A WATERTIGHT CONNECTION: YES	NO
ISTHE INSIDE OF THE CONDUIT ENTERING THE CONTROL PANEL(S) AND AERATION RISER(S) SEALED WITH DUCT SEAL: YES	

ON 2ND PAGE MAKE A ROUGH SKETCH OF THE HOUSE ,WHERE THE SYSTEM IS LOCATED, WHERE THE CONTROL PANEL IS LOCATED , WHERE THE FRONT OF THE IS AND DIRECTIONS TO THE PROPERTY.

DIRECTIONS CAN START A FEW STREETS AWAY

EXAMPLE: RT. X LEFT ONTO XX STREET RIGHT ONTO PRIVATE DRIVEWAY 5TH HOUSE OF THE LEFT.

I certify that the Norweco Singlair TNT Wastewater Treatment System was installed according to the manufacture's specifications.

Matthew Geckle

October 27, 2023

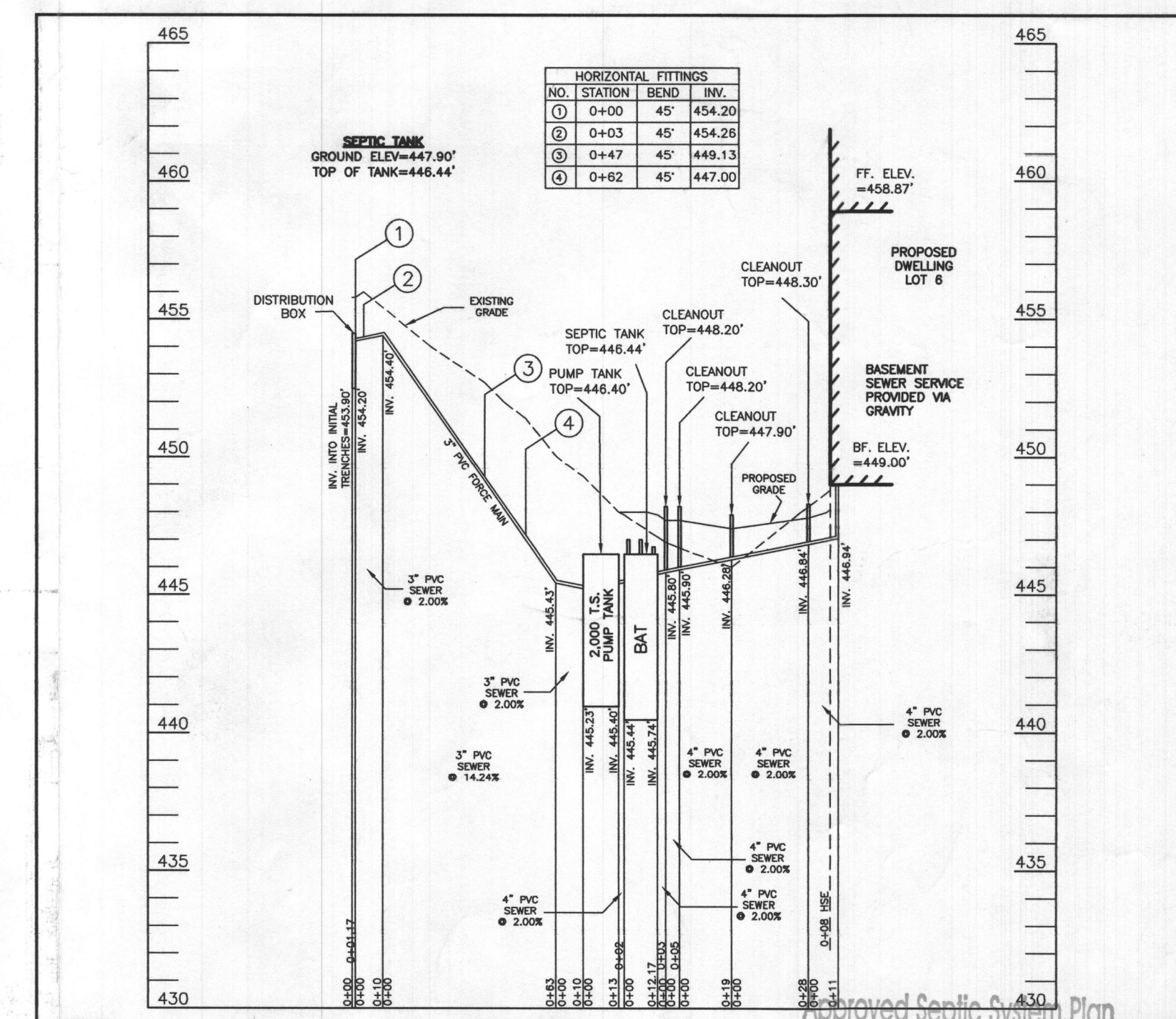
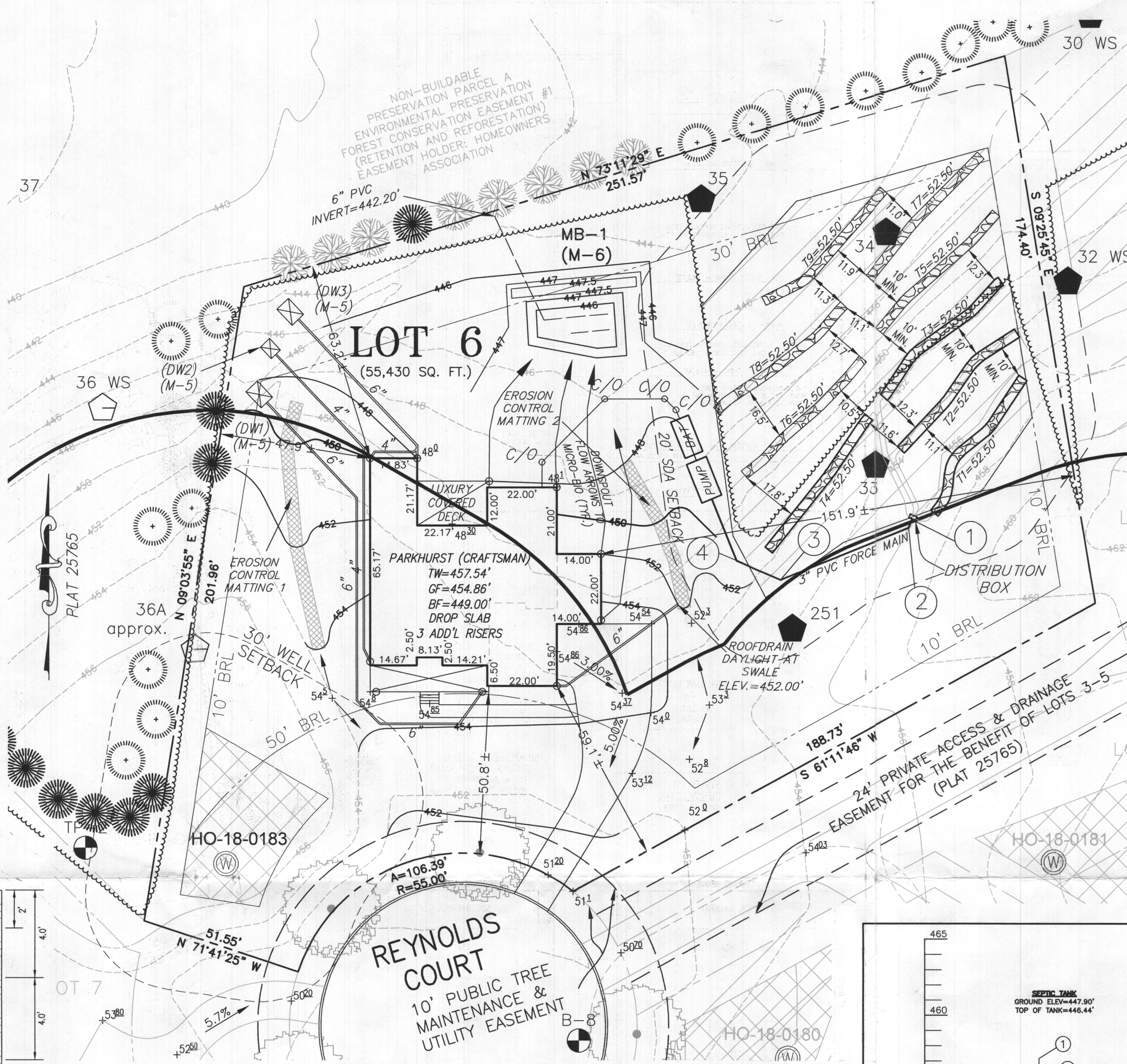
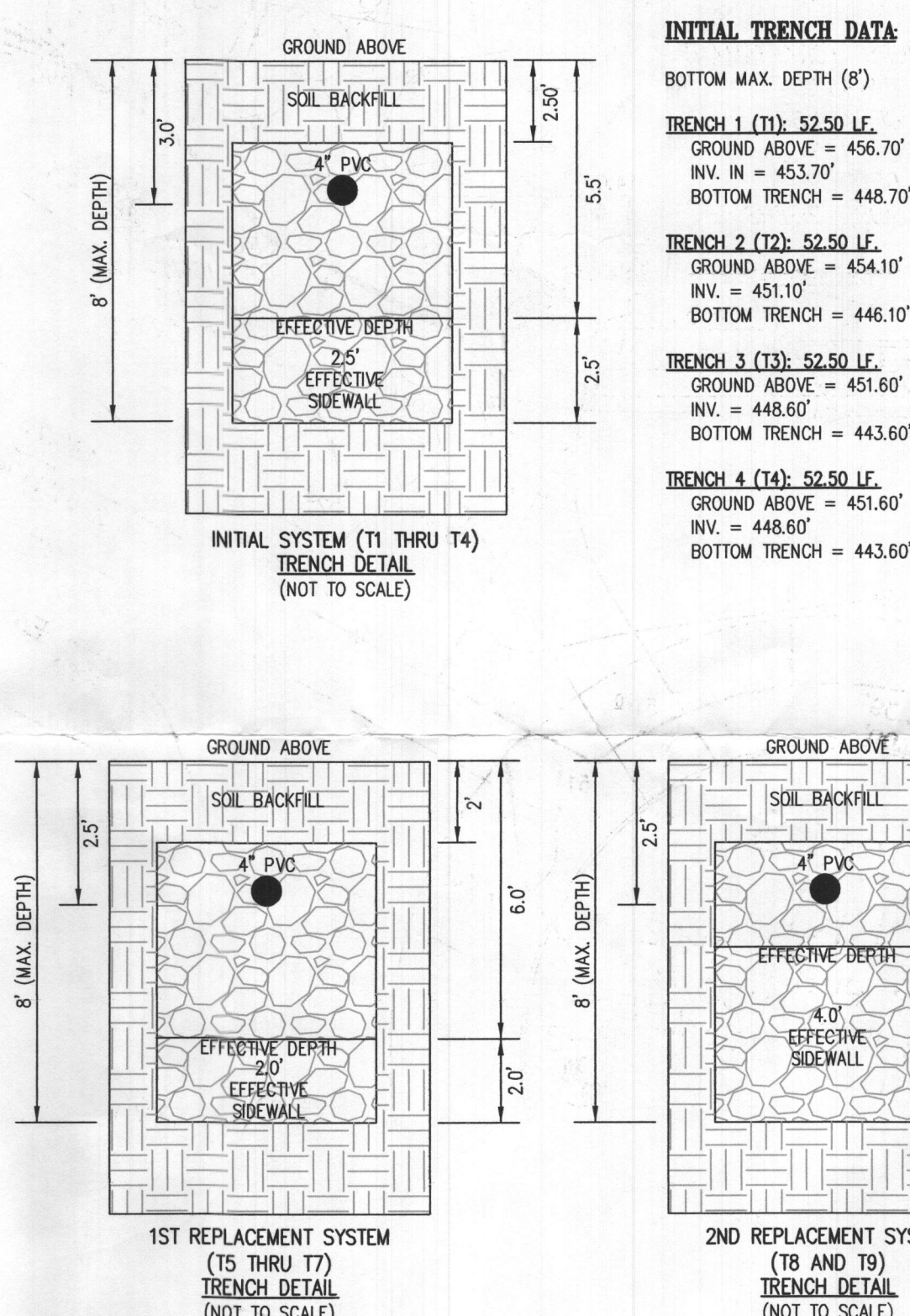
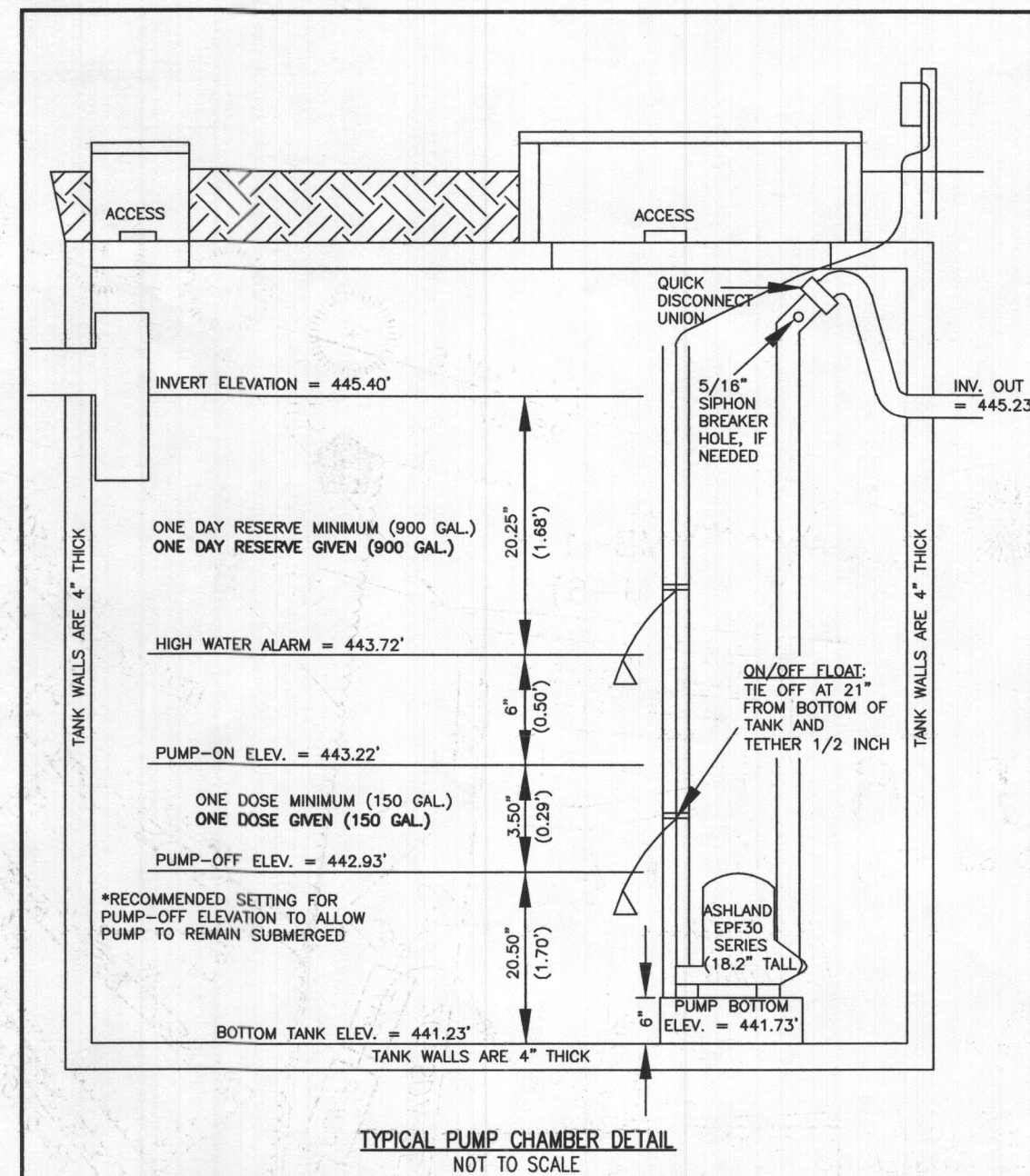
Signature of BRP Representative

Vice-President

Date

GENERAL NOTES:

1. ~~EXISTING~~ THESE AREAS DESIGNATE A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BECOME HULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.
2. EXISTING WELLS, SEPTIC SYSTEMS, AND SEPTIC RESERVE AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEPTIC RESERVE AREAS HAVE BEEN SHOWN.
3. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
4. BUILDING SETBACKS (B.R.L.'S) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS $\pm 2'$ HAVE AN ACCURACY OF $\pm 0.1'$ FOOT.
5. ANY CHANGES TO THE LOCATIONS OR DEPTHS AT ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
6. THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
7. THE LOT SHOWN HEREON COMPLES WITH THE MINIMUM OWNERSHIP, WIDTH, AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
8. THE EXISTING TOPOGRAPHY SHOWN HEREON IS FROM HOWARD COUNTY GIS, 2" CONTOUR INTERVAL AND FIELD VERIFIED BY BENCHMARK ENGINEERING, INC., IN FEBRUARY 2014.
9. LOTS SHOWN HEREON ARE PER THE F-19-014 PLAN, APPROVED ON MARCH 5, 2020. RECORD PLATS ARE NOT RECORDED AT THIS TIME BUT ARE IN PROCESS THIS DATE.



SEPTIC SYSTEM PROFILE
SCALE = HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

Howard County Health Department
Rana Bernard 2-1-23
Signature Date

WELL LOCATION CERTIFICATION

THE EXISTING WELL SHOWN FOR LOT 6 (TAG NO. HO-18-0183)
HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN HEREON

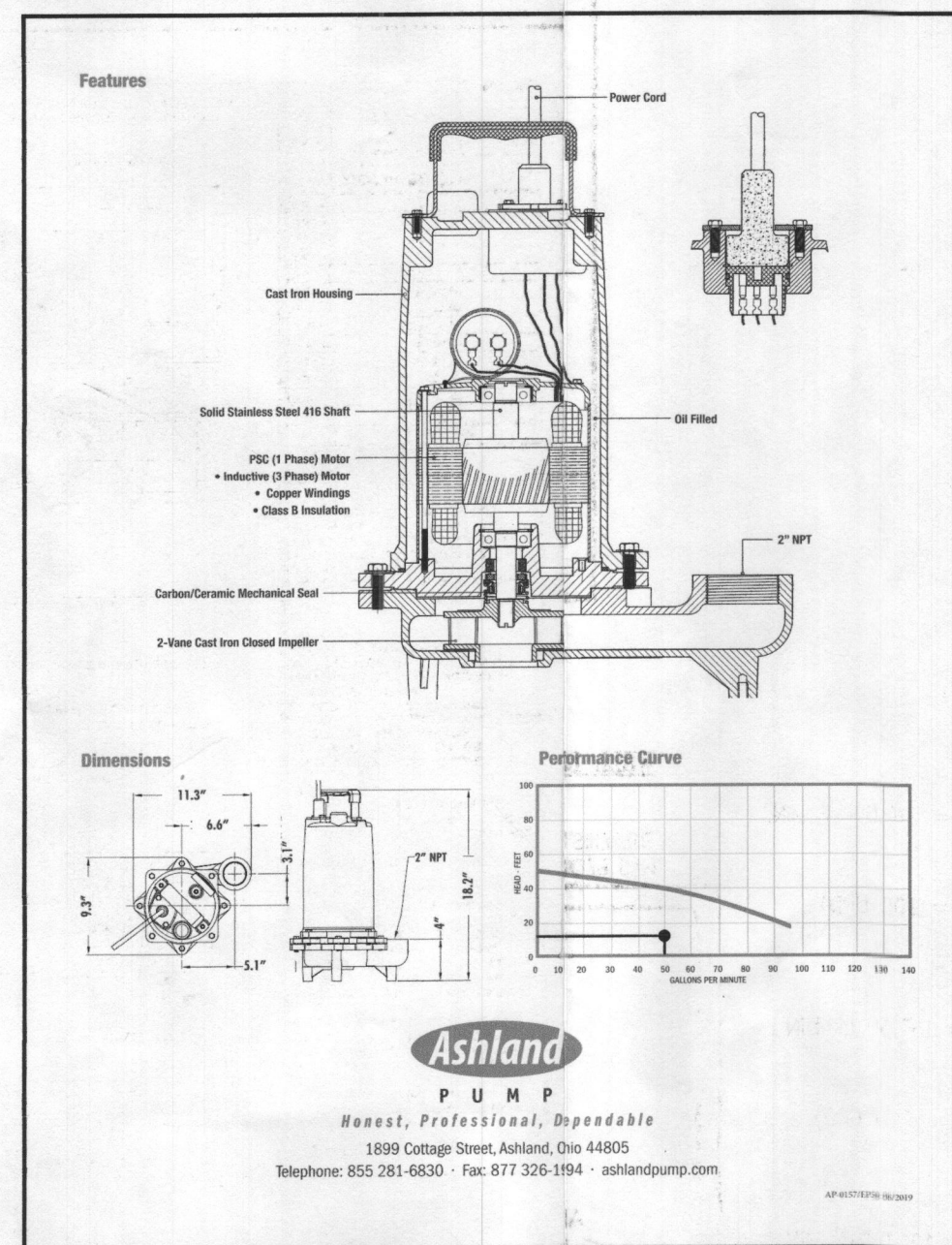
SITE PLAN FOR BAT INSTALLATION
LOT 6
KINGS FOREST
LIBER 20039, FOLIO 212
PLAT NO. 25765
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND
ADDRESS: 10637 REYNOLDS COURT
ELLICOTT CITY, MARYLAND 21042

ESE CONSULTANTS

ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL

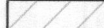

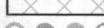
ESE Consultants, Inc.
 Gateway Drive • Suite 120 • Columbia, MD 21046
 T: 410-872-9105

DATE: 01/10/2023	SCALE: 1"=30'	FILE: BAT LOT 6
CHK'D: M.J.B	JOB NO: 4520	DRAWN: R.C.K



HOUSE OPTIONS:
HOUSE TYPE: PARKHURST (CRAFTSMAN)
TWO CAR SIDE ENTRY GARAGE
FINISHED LOWER LEVEL
WALK-OUT BASEMENT
LUXURIOUS PRIMARY BATH PACKAGE
MULTI GENERATIONAL SUITE
OPTIONAL DROP ZONE
ADDITIONAL ONE CAR FRONT ENTRY GARAGE
PREP KITCHEN
WALK-OUT LUXURY COVERED DECK
OPTIONAL BATH - FINISHED LOWER LEVEL

LEGEND:

BR	BUILDING RESTRICTION
T.W.	WELL LOCATION
G.F.	TOP OF WALL
B.F.	GARAGE FLOOR
+	BASEMENT FLOOR
+	PASSED PERC LOCATION
+	FAILED PERC LOCATION
	SEWAGE DISPOSAL AREA
	WELL BOX AREA
	PROPOSED TREE

SEWAGE DISPOSAL SYSTEM DATA (6 BDRM)

PROPOSED INVERT AT FOUNDATION WALL: 446.94'
1. EX. GRADE OVER TANK: 447.30'
PROPOSED GRADE OVER TANK: 447.90'
INVERT IN: 445.74' INVERT OUT: 445.44'

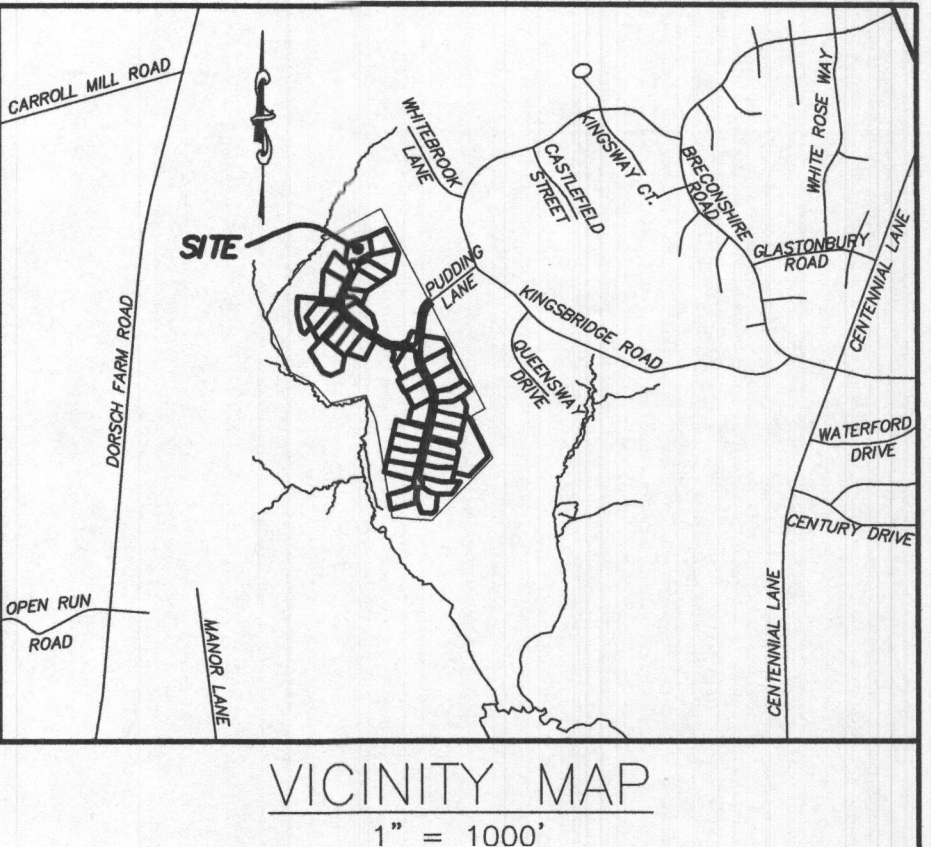
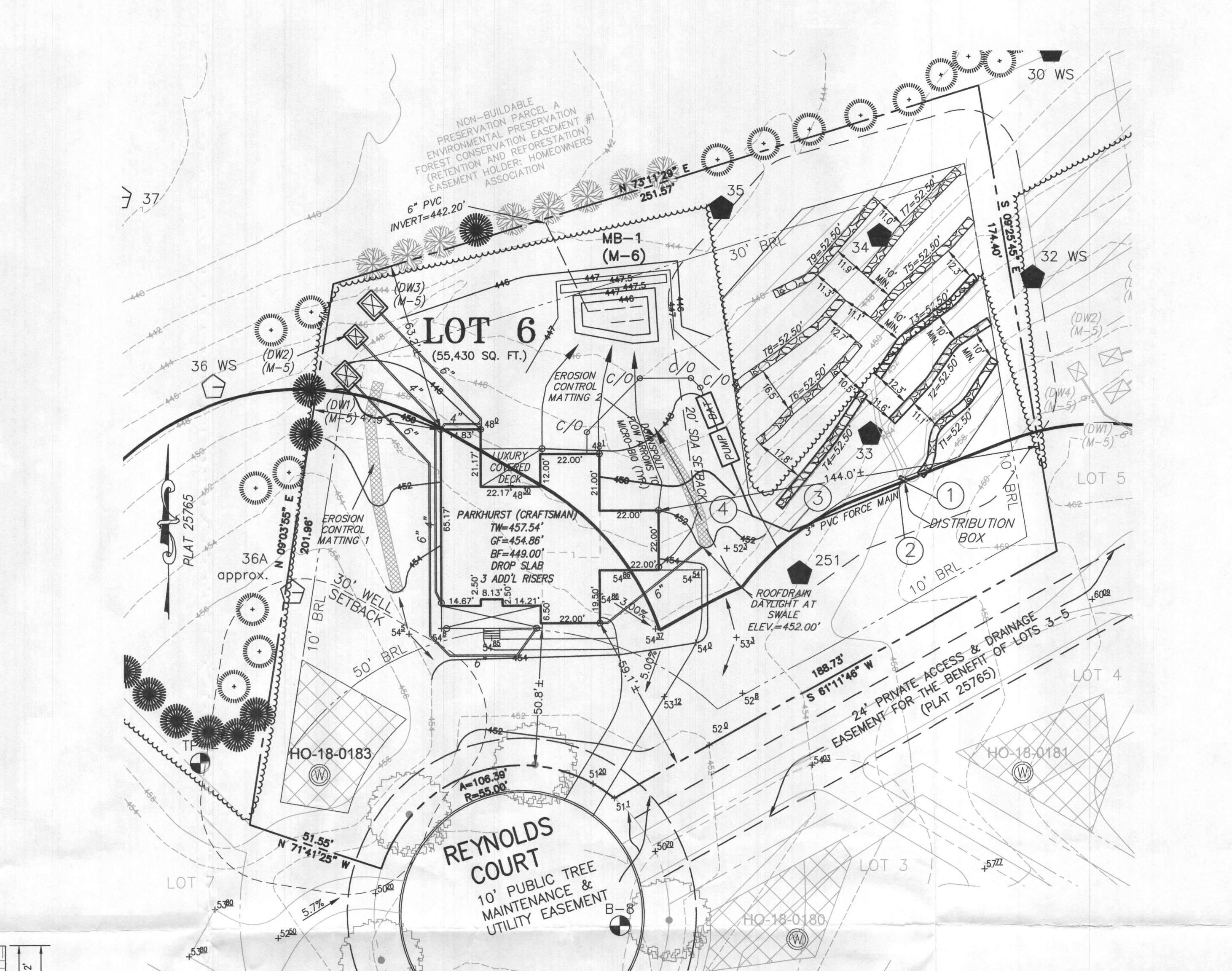
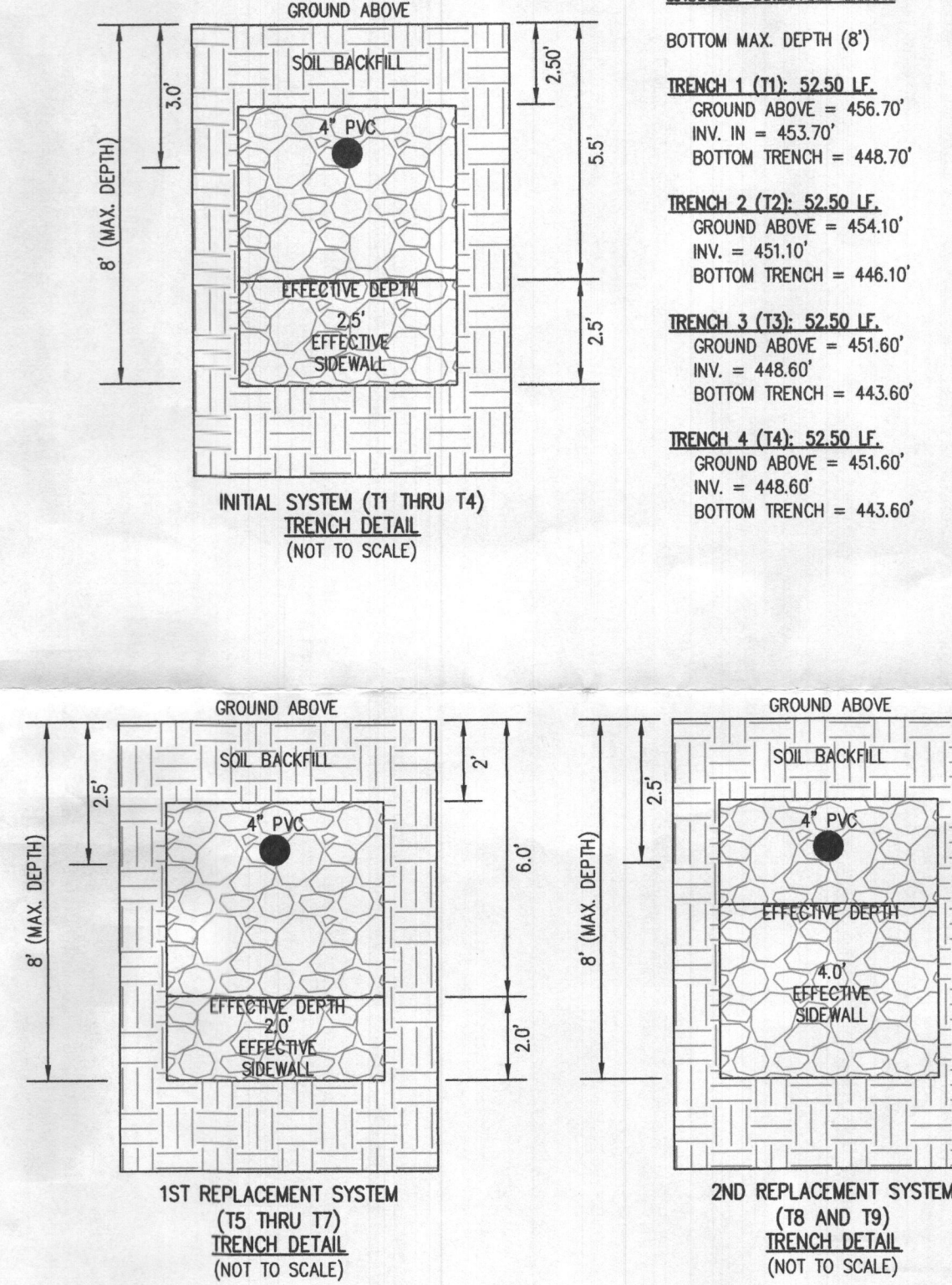
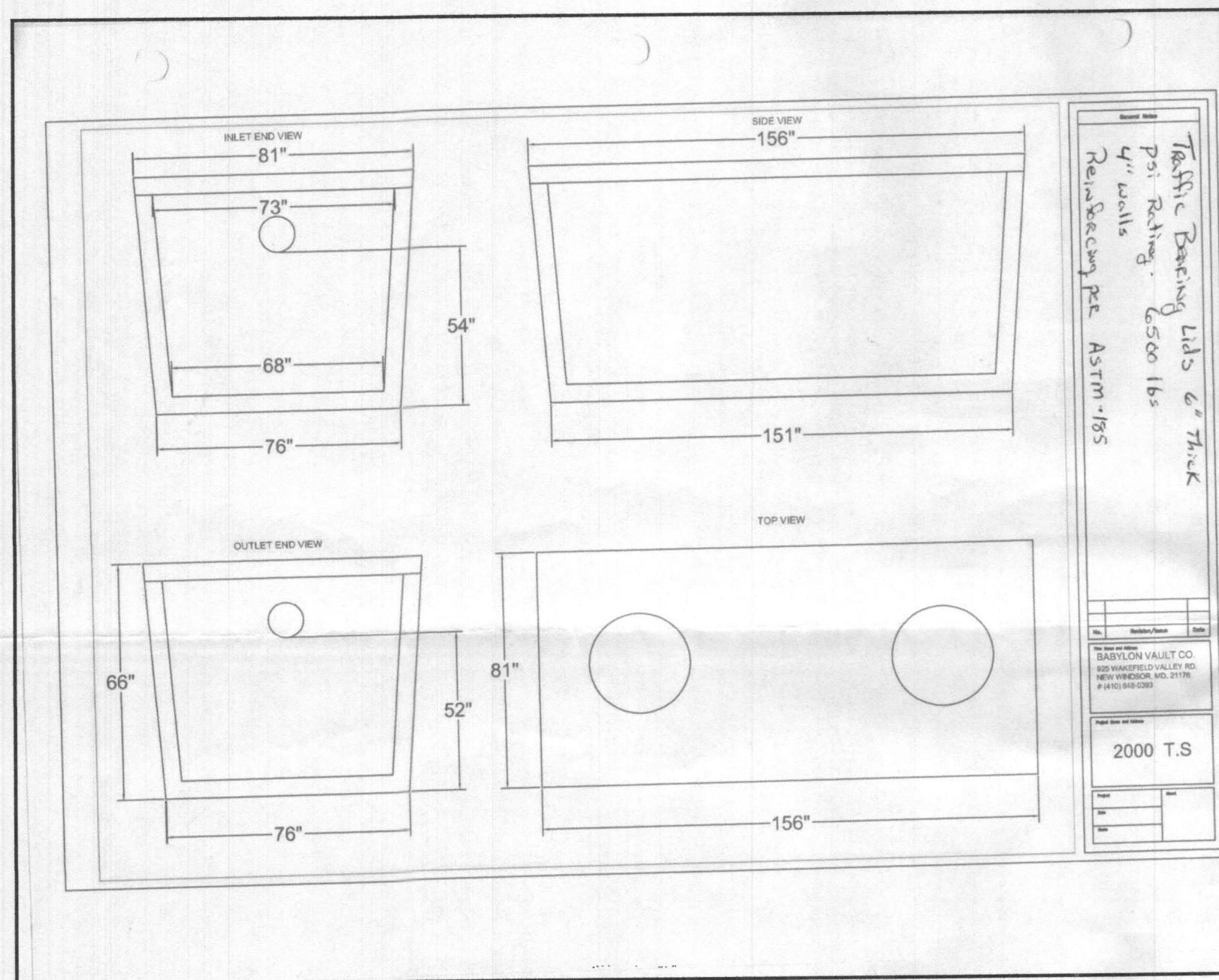
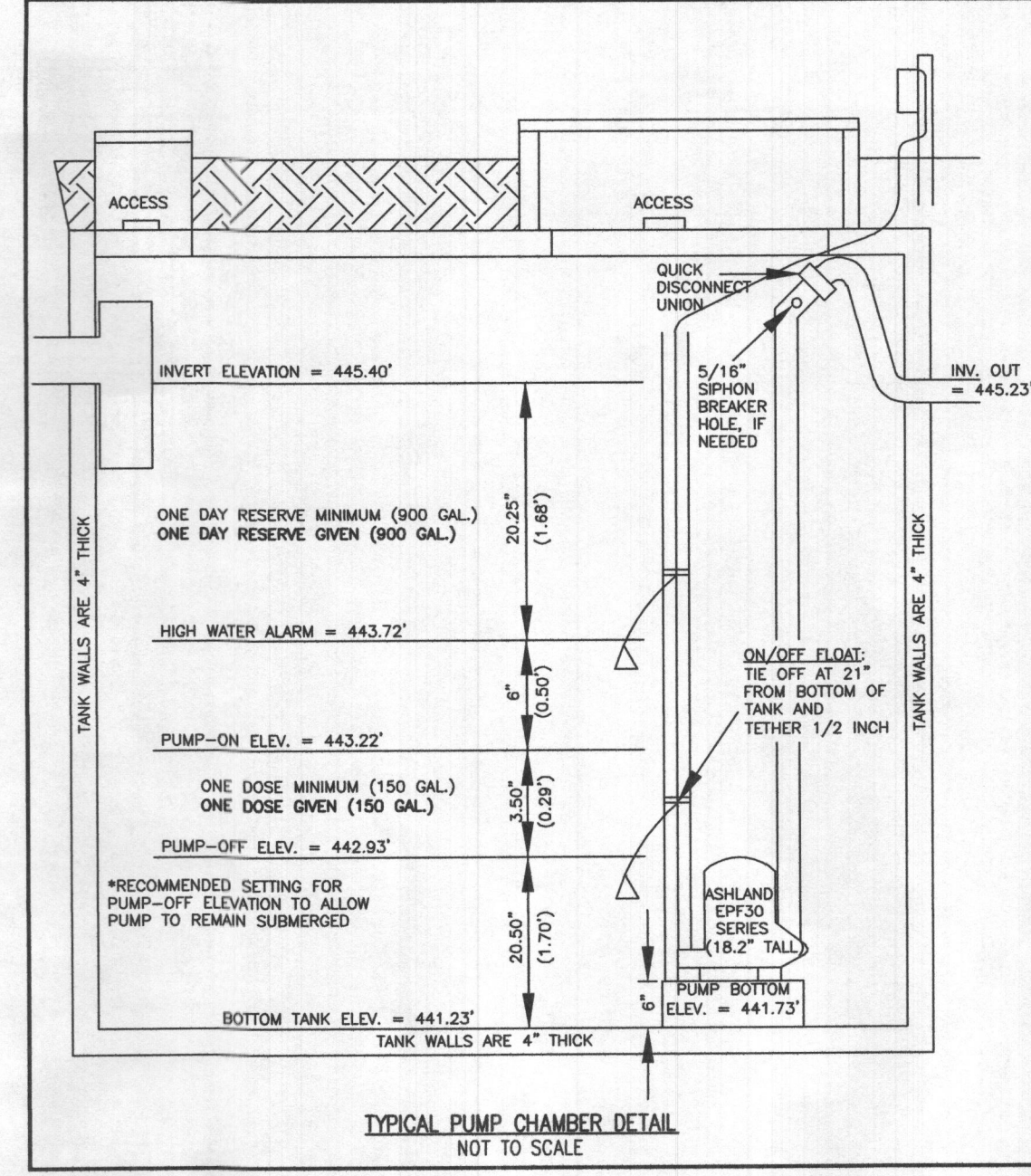
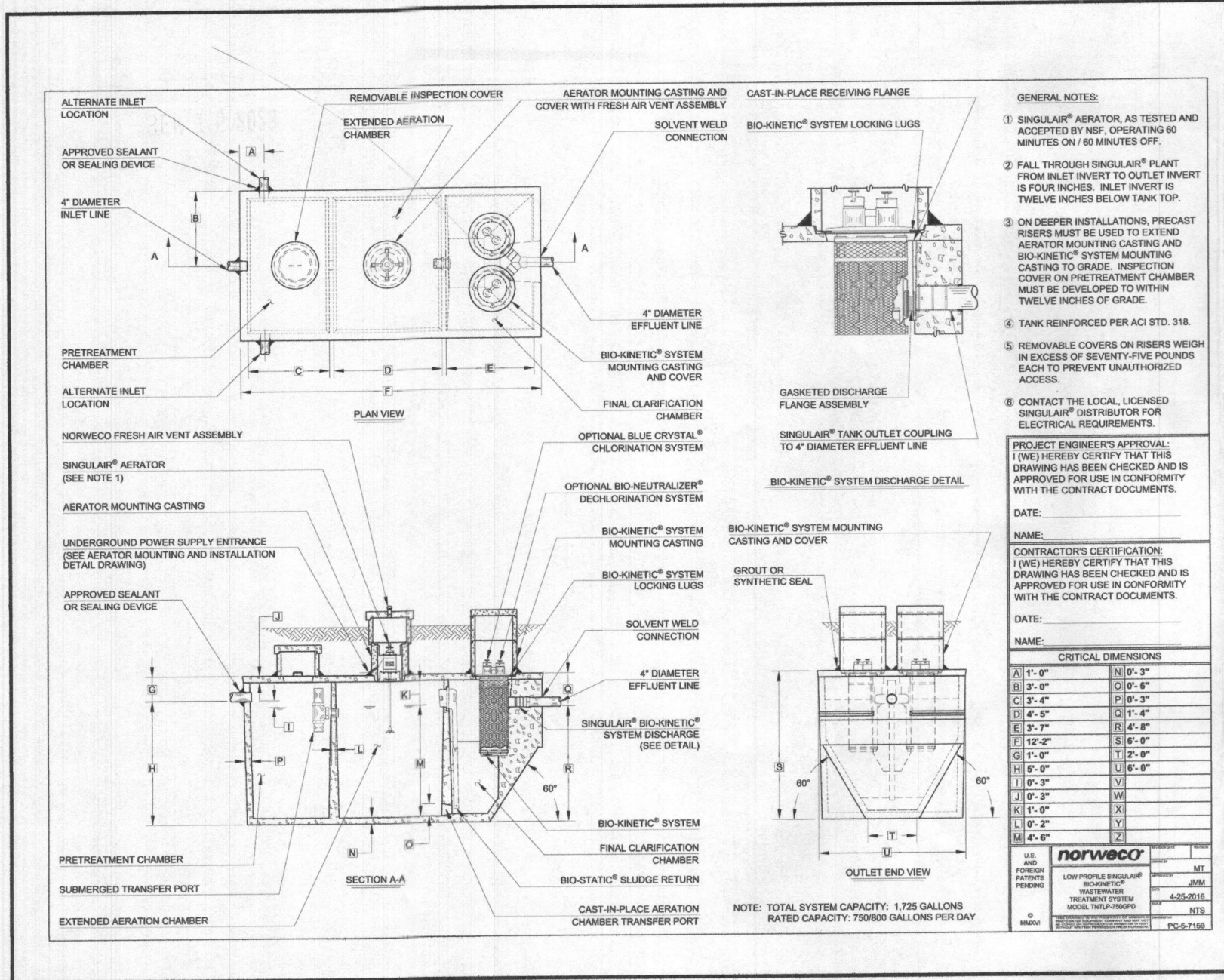
2. DISTRIBUTION BOX
EXISTING GRADE OVER TANK: 455.80'
PROPOSED GRADE OVER TANK: 455.80'
INVERT IN: 454.20' INVERT OUT: 453.90'

3. INITIAL TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD ÷ 0.8 APP. RATE = 1,125 SF
USE 3' WIDE TRENCH WITH 66" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
1,125 SF ÷ 3' WIDTH = 375 LF x 0.56 (SIDEWALL REDUCTION) = 210.00 LF MIN.
USE 4 32.50' LONG TRENCHES = 210.00 LF

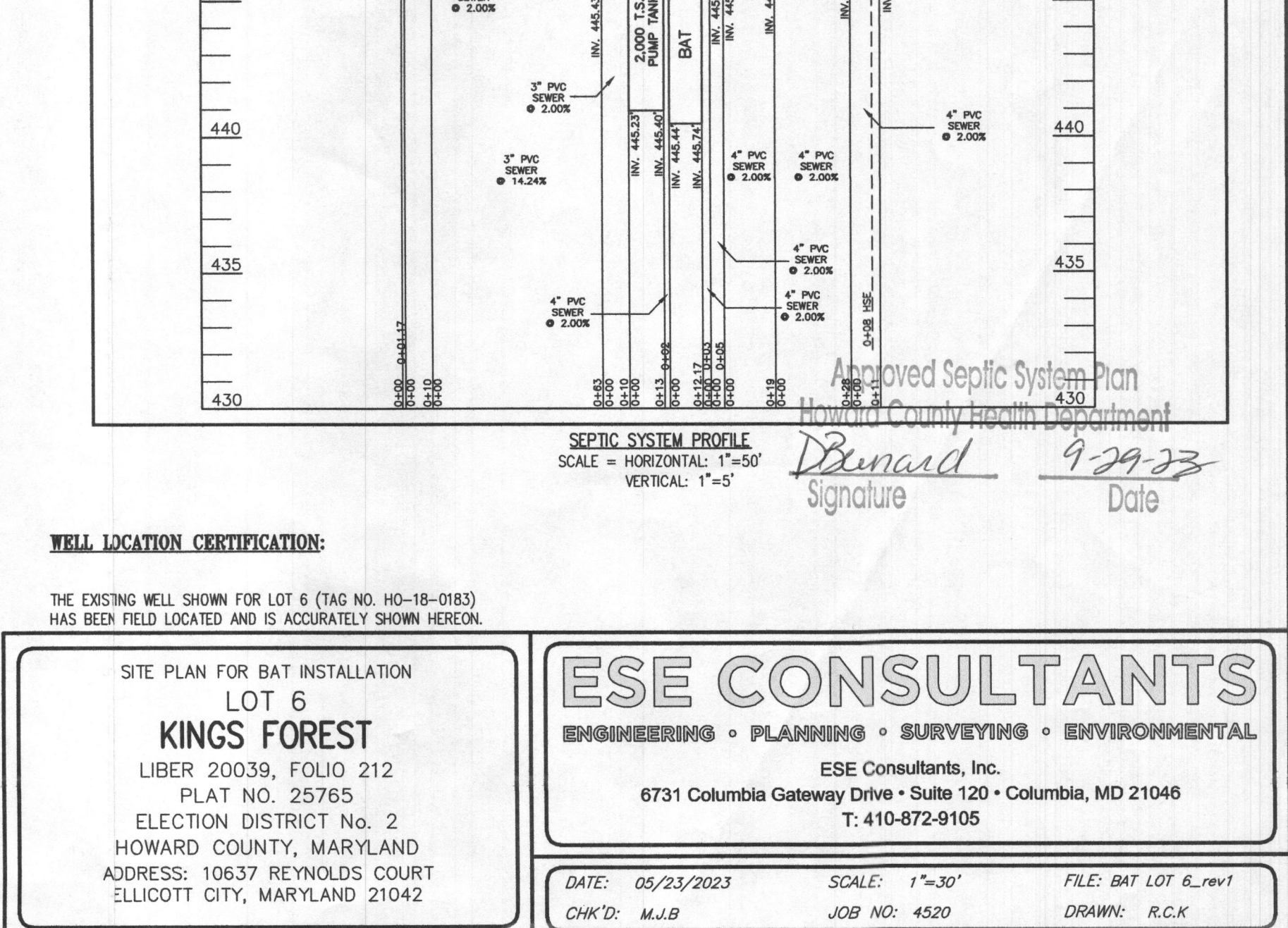
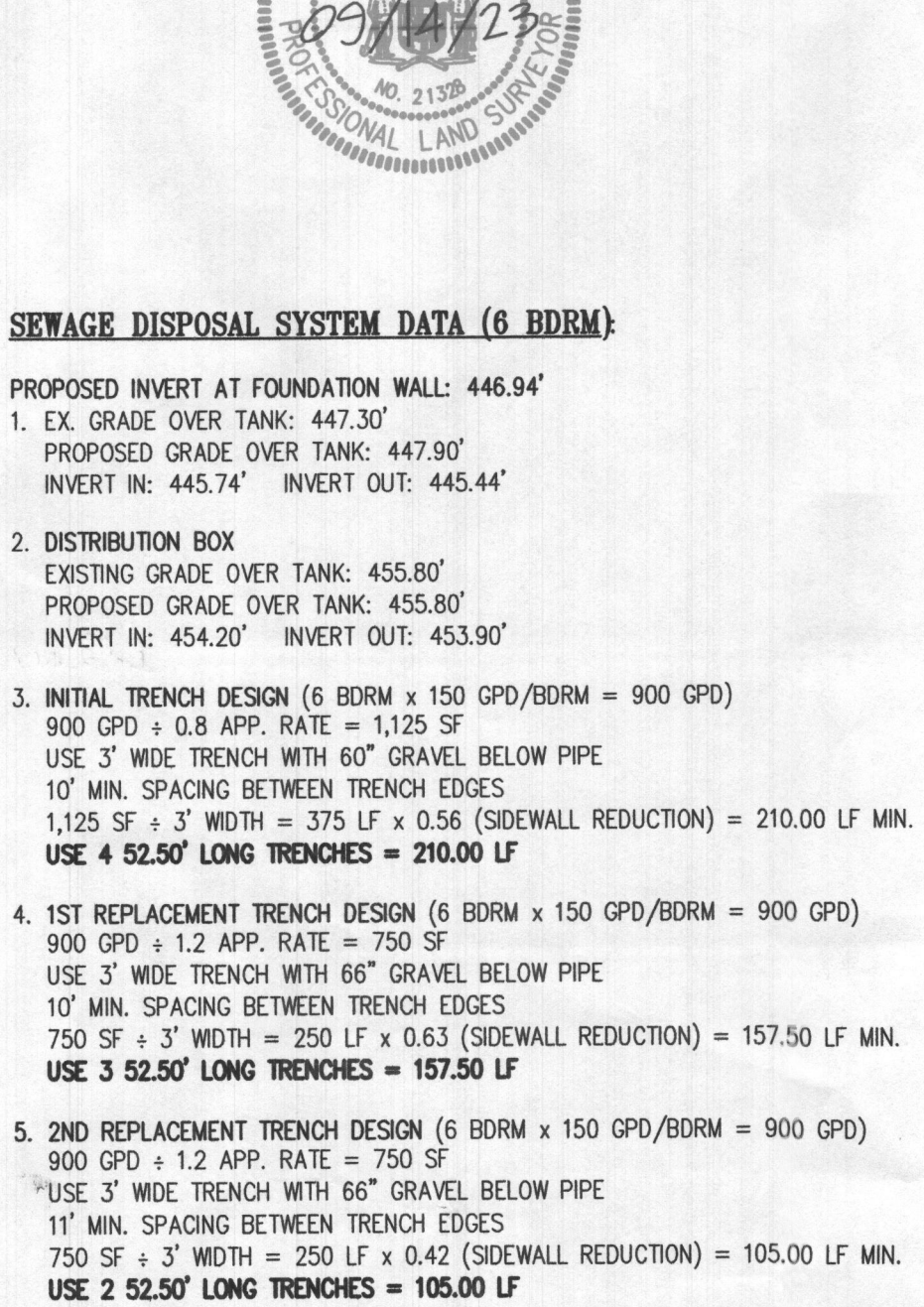
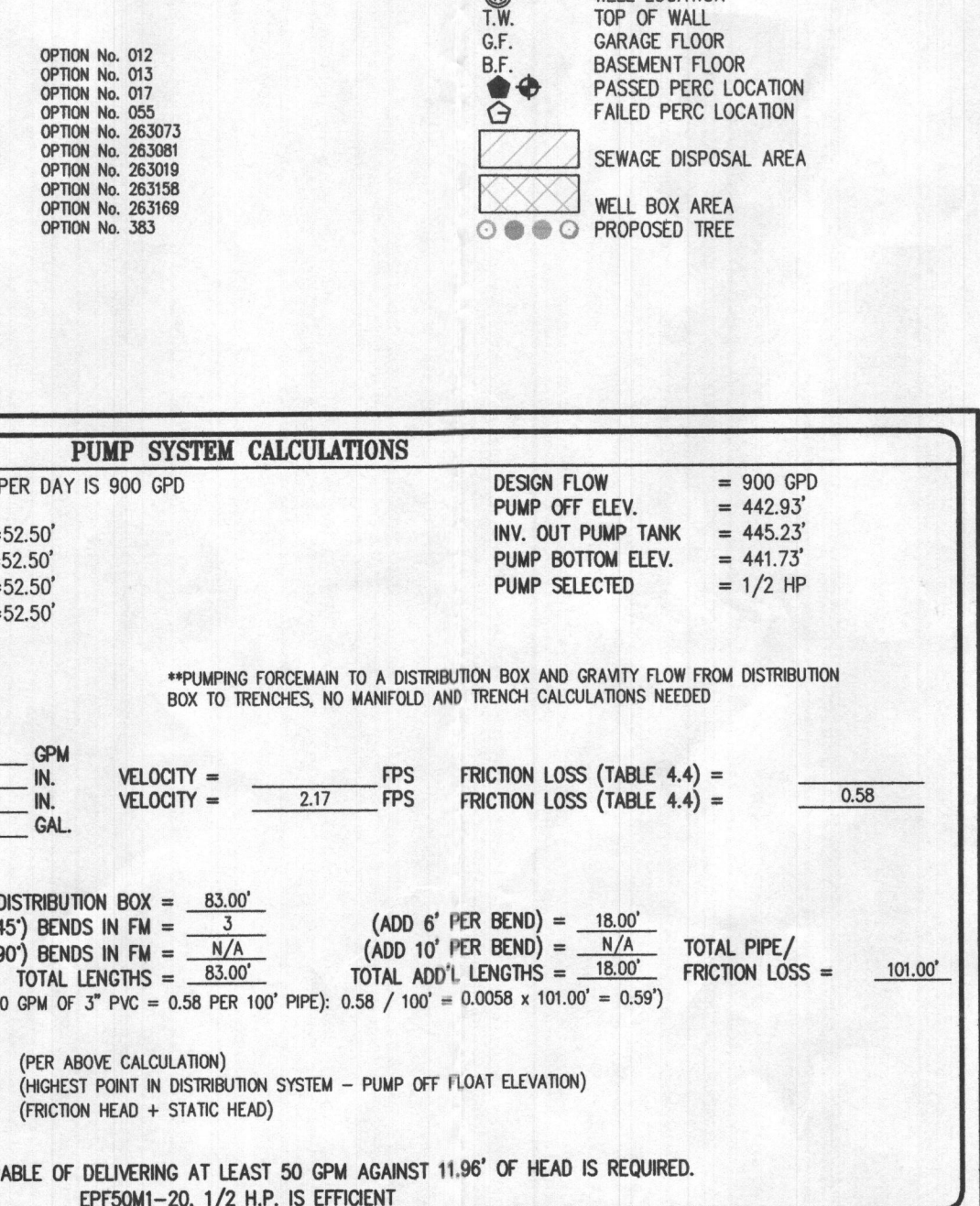
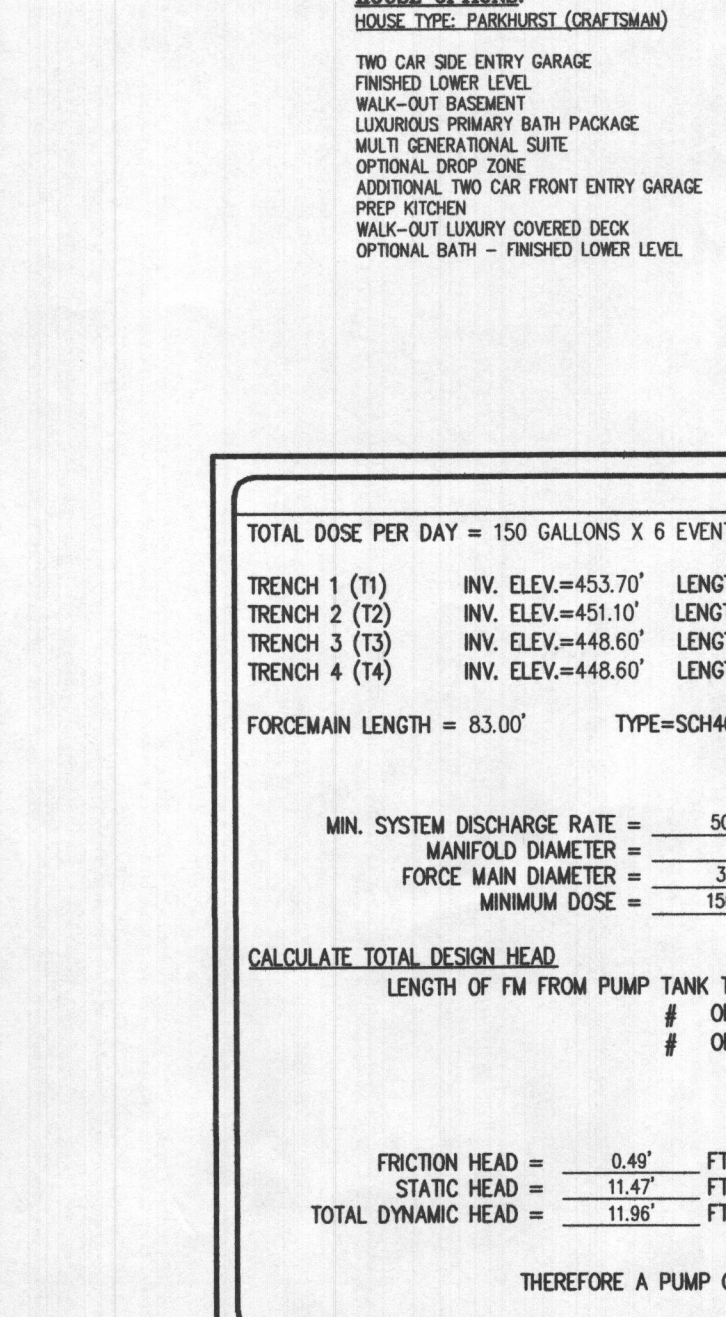
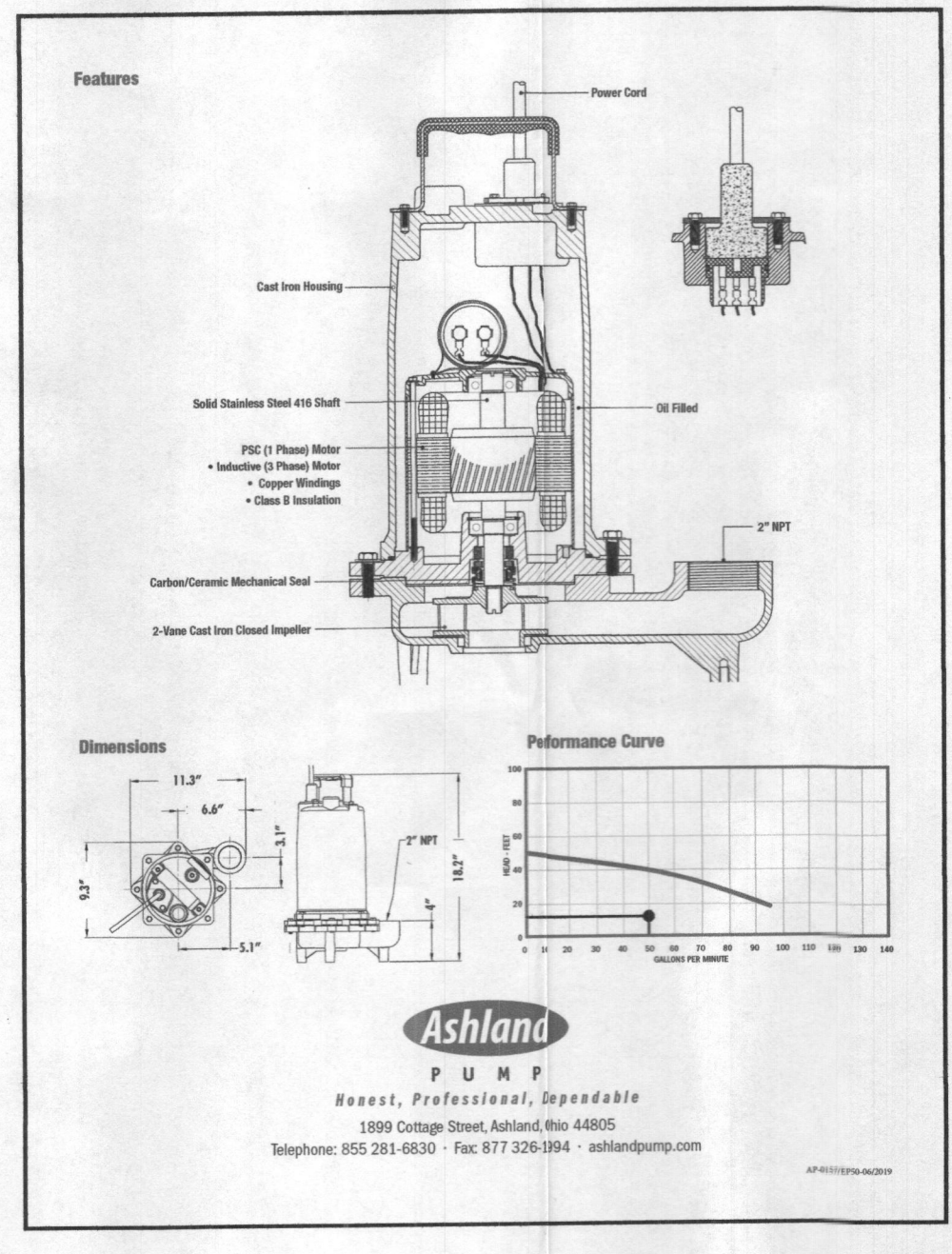
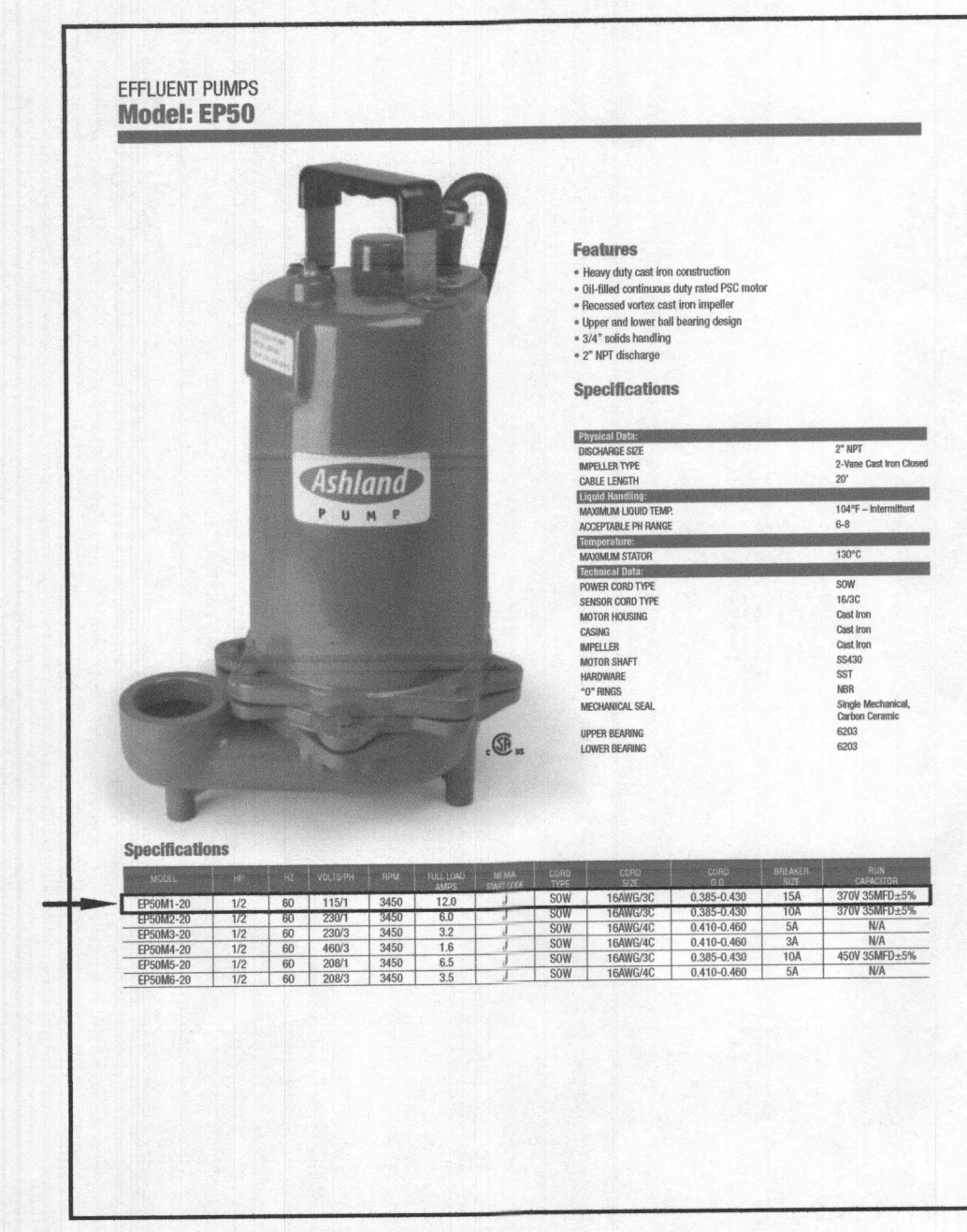
4. 1ST REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD ÷ 1.2 APP. RATE = 750 SF
USE 3' WIDE TRENCH WITH 66" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF ÷ 3' WIDTH = 250 LF x 0.63 (SIDEWALL REDUCTION) = 157.50 LF MIN.
USE 3 52.50' LONG TRENCHES = 157.50 LF

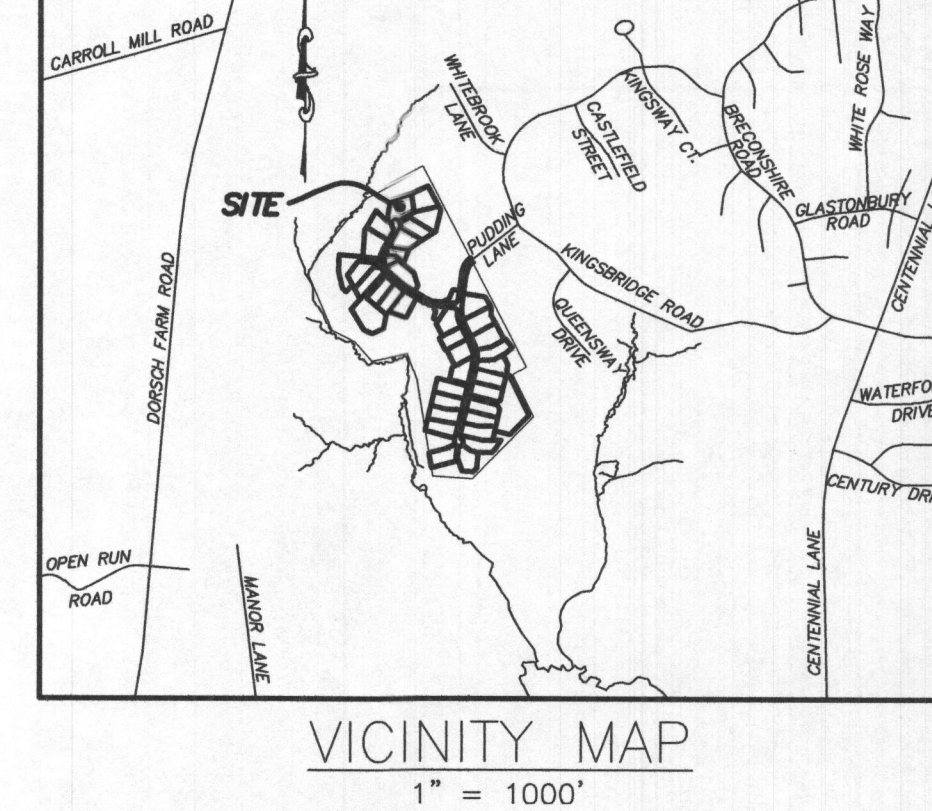
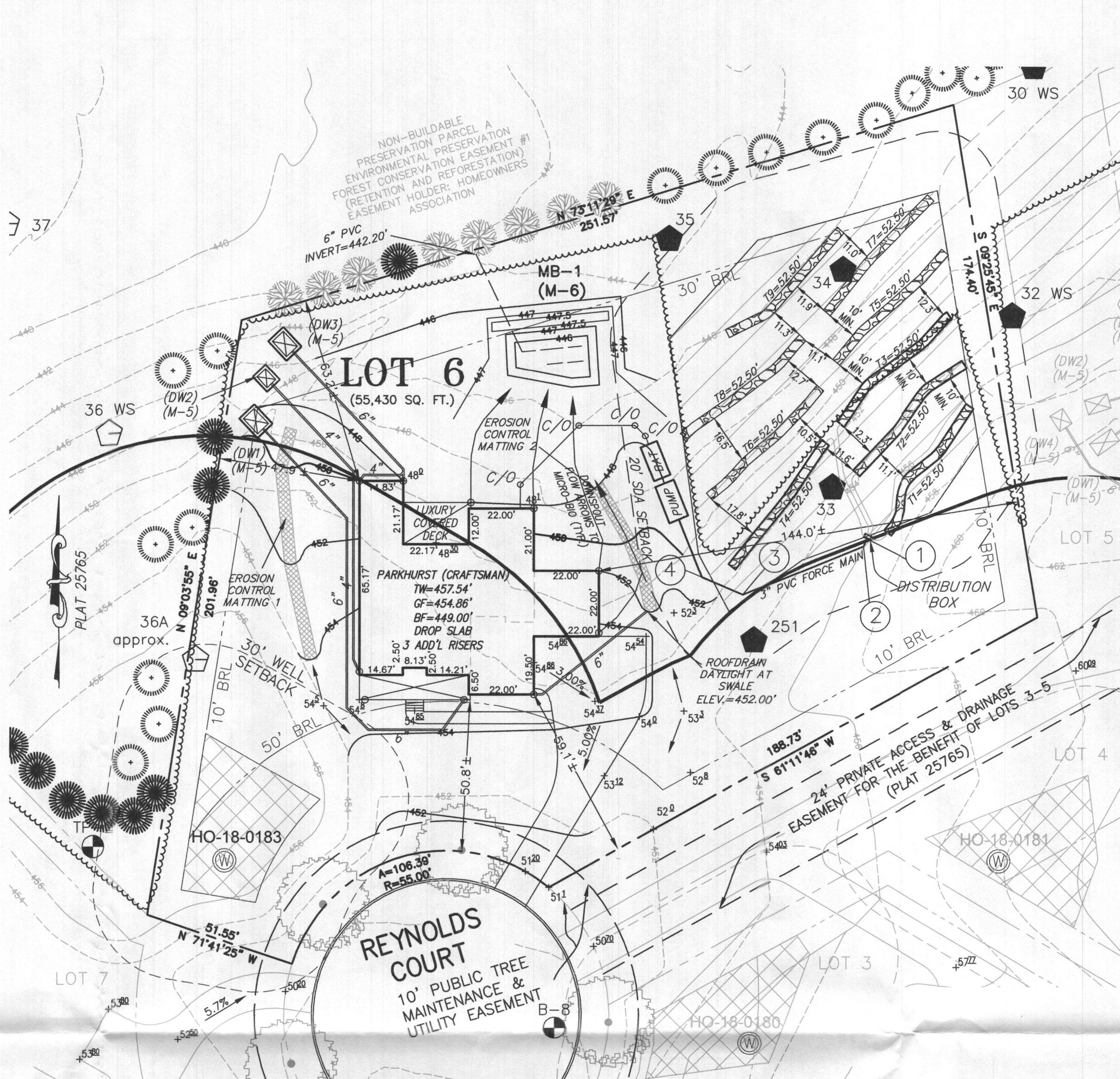
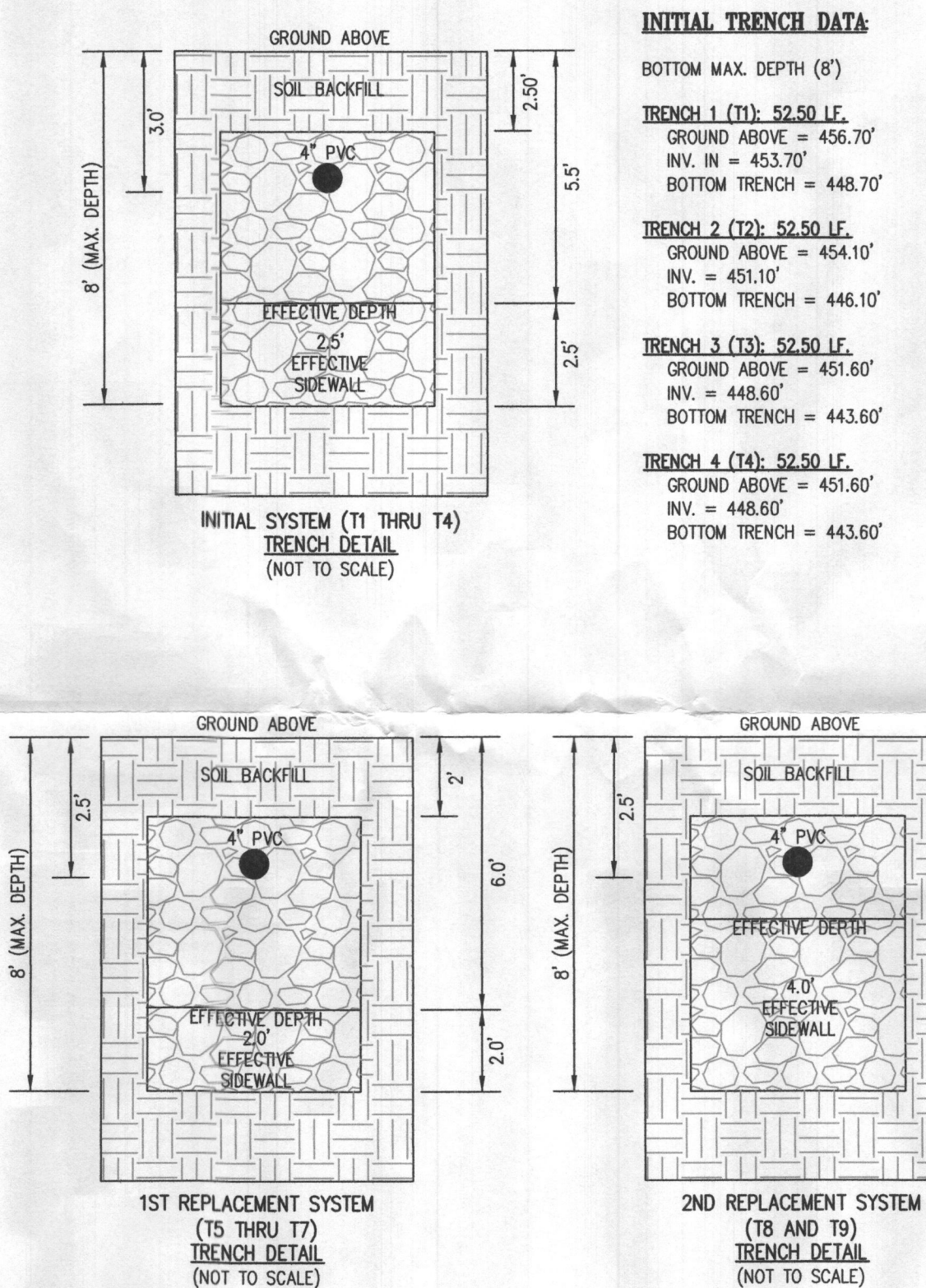
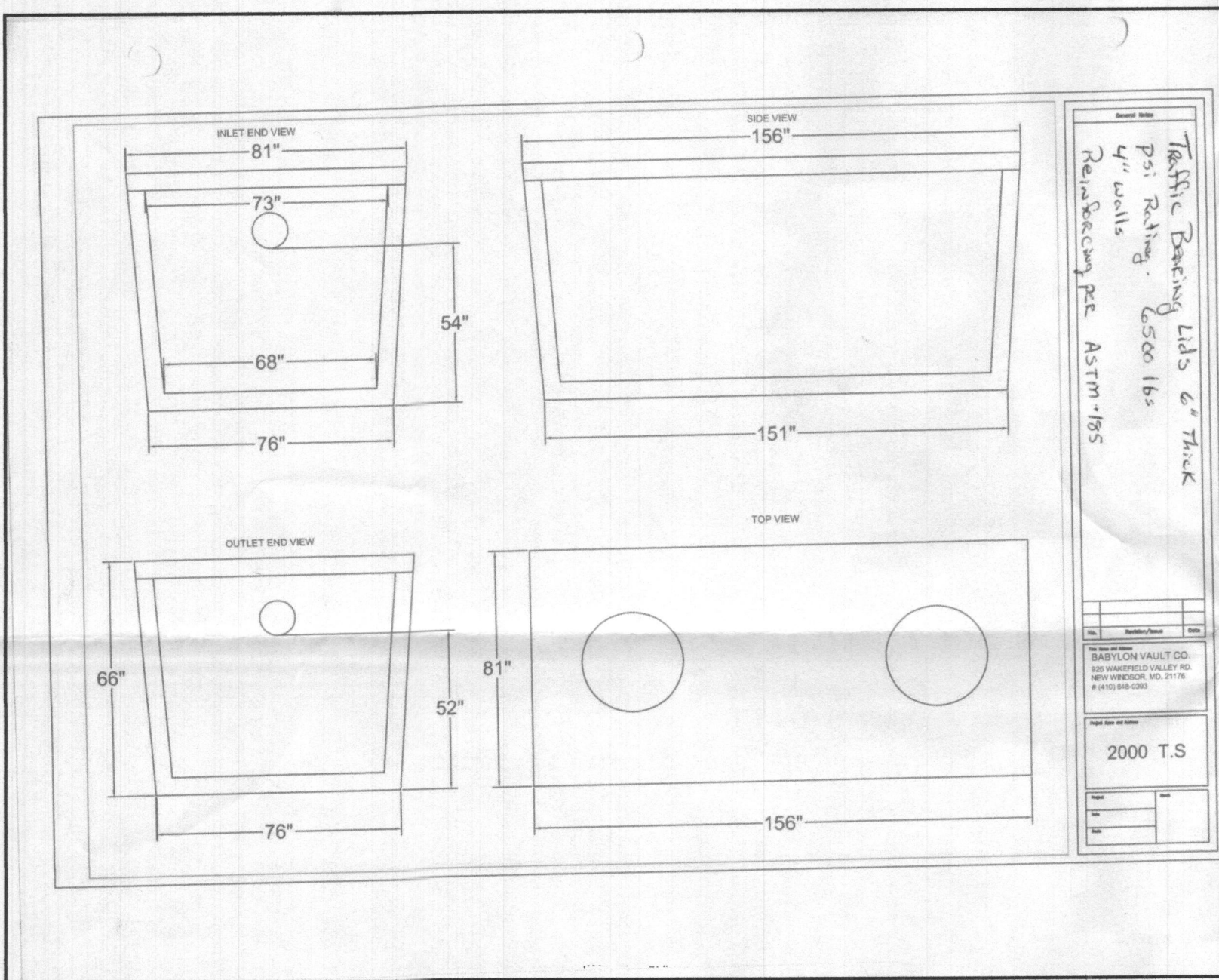
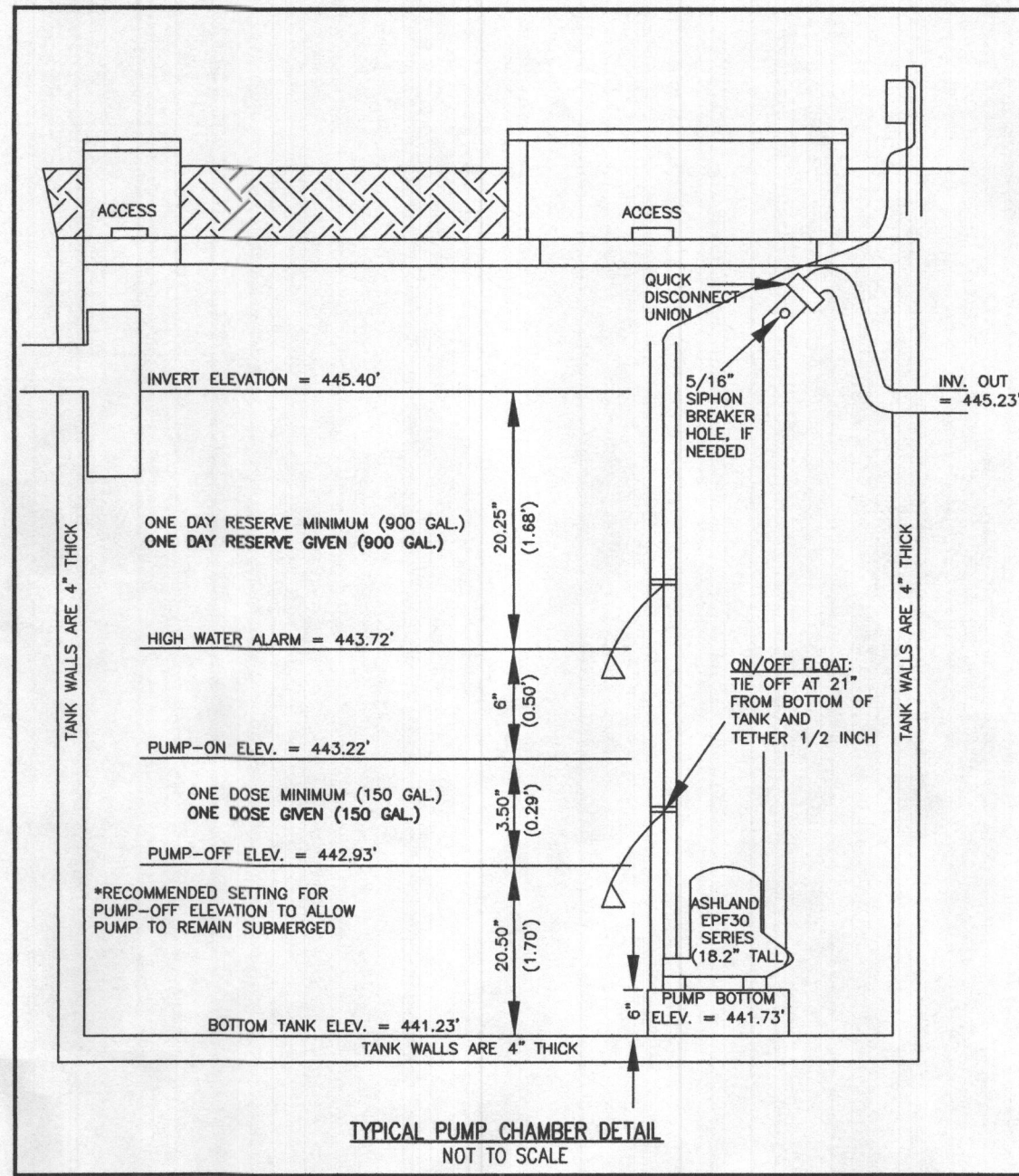
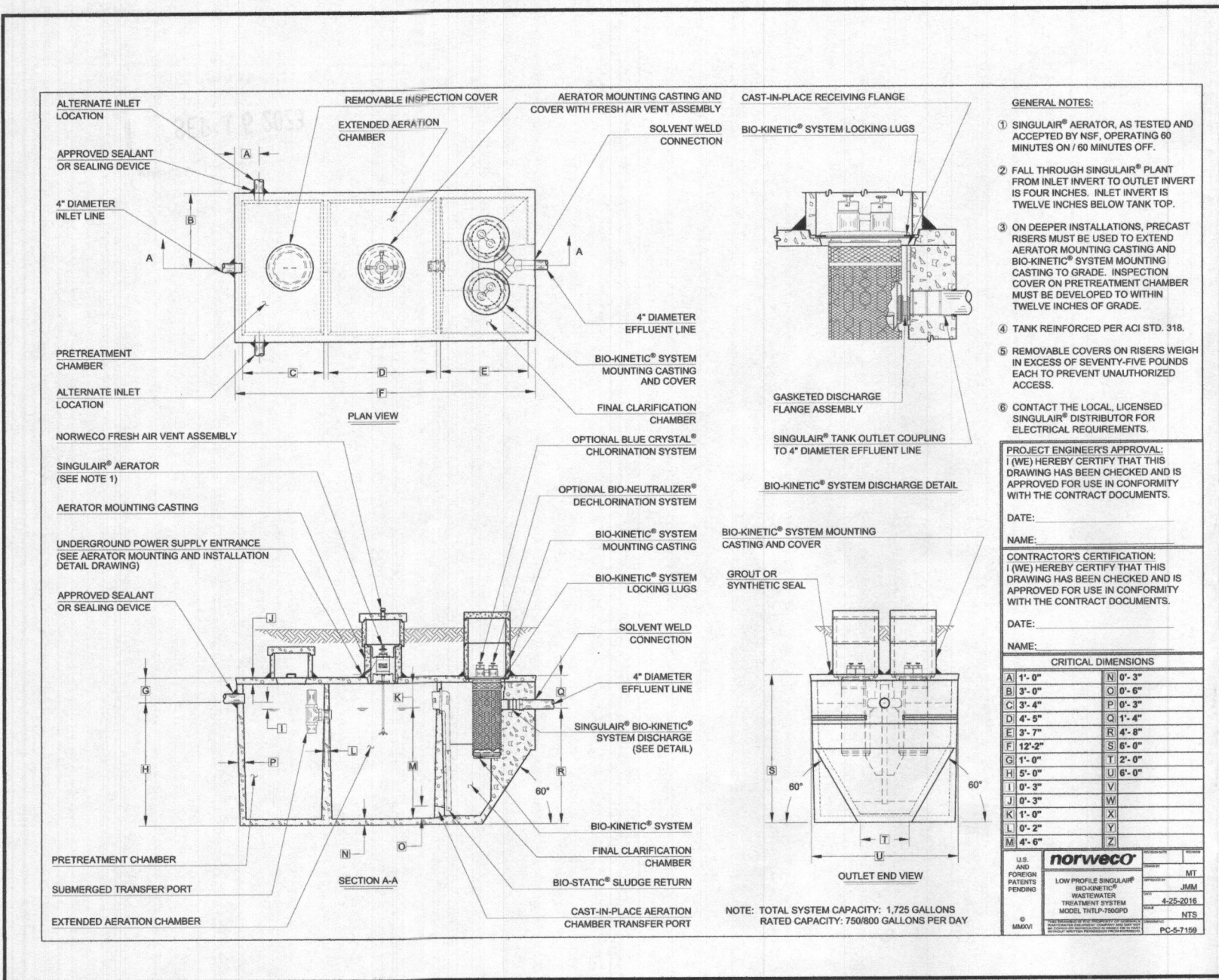
5. 2ND REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD ÷ 1.2 APP. RATE = 750 SF
USE 3' WIDE TRENCH WITH 66" GRAVEL BELOW PIPE
11' MIN. SPACING BETWEEN TRENCH EDGES
750 SF ÷ 3' WIDTH = 250 LF x 0.42 (SIDEWALL REDUCTION) = 105.00 LF MIN.
USE 2 52.50' LONG TRENCHES = 105.00 LF

PUMP SYSTEM CALCULATIONS				
TOTAL DOSE PER DAY = 150 GALLONS X 6 EVENTS PER DAY IS 900 GPD		DESIGN FLOW	= 900 GPD	
TRENCH 1 (T1)	INV. ELEV.=453.70'	LENGTH=52.50'	PUMP OFF FLOW	= 442.93'
TRENCH 2 (T2)	INV. ELEV.=451.10'	LENGTH=52.50'	INV. OUT PUMP TANK	= 445.23'
TRENCH 3 (T3)	INV. ELEV.=448.60'	LENGTH=52.50'	PUMP BOTTOM ELEV.	= 441.73'
TRENCH 4 (T4)	INV. ELEV.=448.60'	LENGTH=52.50'	PUMP SELECTED	= 1/2 HP
FRICTION LOSS				
FORCEMAIN LENGTH = 83.00'		TYPE=SD40	**PUMPING FORCEMAIN TO A DISTRIBUTION BOX AND GRAVITY FLOW FROM DISTRIBUTION BOX TO TRENCHES, NO MANHOLE AND TRENCH CALCULATIONS NEEDED	
MIN. SYSTEM DISCHARGE RATE = 50 GPM				
MANHOLE DIAMETER = 3 IN.		VELOCITY =	FPS	FRICTION LOSS (TABLE 4.4) =
FORCE MAIN DIAMETER = 3 IN.		VELOCITY =	2.17 FPS	FRICTION LOSS (TABLE 4.4) = 0.58
MINIMUM DOSE = 150 GAL.				

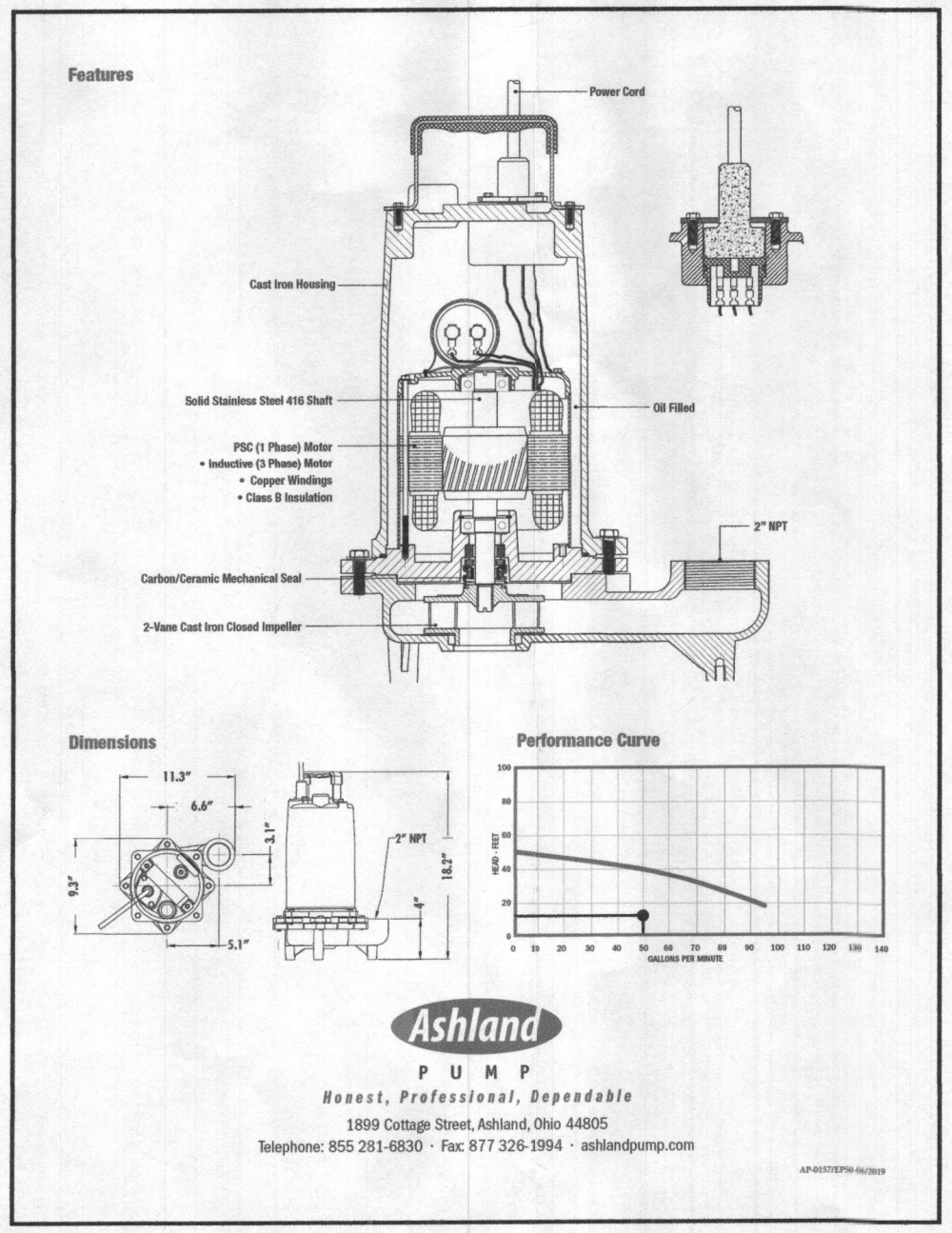
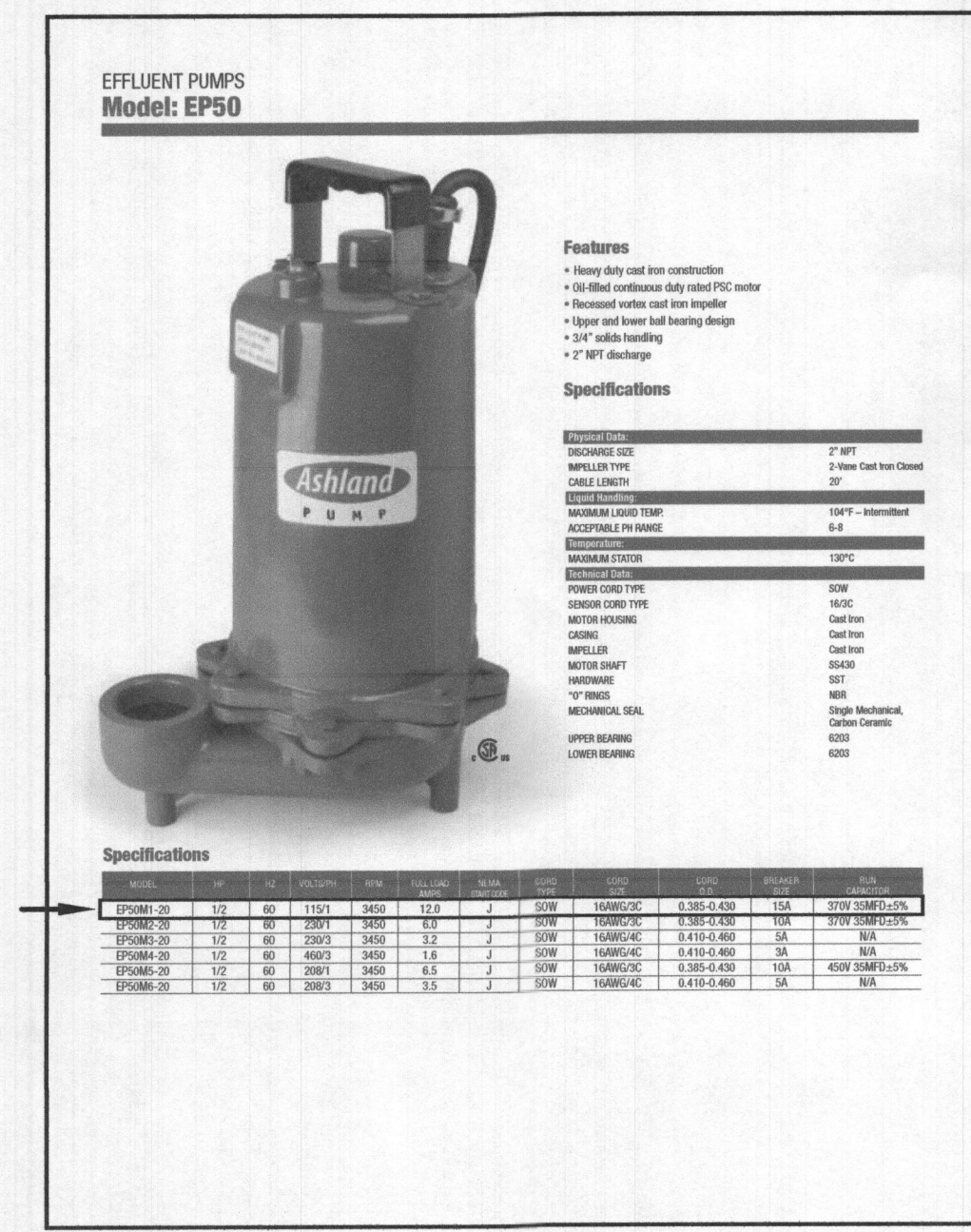


- GENERAL NOTES:**
1. THESE AREAS DESIGNATE A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.
 2. EXISTING WELLS, SEPTIC SYSTEMS, AND SEPTIC RESERVE AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEPTIC RESERVE AREAS HAVE BEEN SHOWN.
 3. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 4. BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "X" HAVE AN ACCURACY OF ±0.1' FOOT.
 5. ANY CHANGES TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 6. THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 7. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH, AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
 8. THE EXISTING TOPOGRAPHY SHOWN HEREON IS FROM HOWARD COUNTY GIS, 2" CONTOUR INTERVAL AND FIELD VERIFIED BY BENCHMARK ENGINEERING, INC., IN FEBRUARY 2014.
 9. LOTS SHOWN HEREON ARE PER THE F-19-014 PLAN, APPROVED ON MARCH 5, 2020. RECORD PLATS ARE NOT RECORDED AT THIS TIME BUT ARE IN PROCESS THEREOF.





- GENERAL NOTES:**
1. THESE AREAS DESIGNATE A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS UNTO THE PRIVATE SEWAGE AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.
 2. EXISTING WELLS, SEPTIC SYSTEMS, AND SEPTIC RESERVE AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS ARE SHOWN.
 3. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 4. BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "3" HAVE AN ACCURACY OF $\pm 0.1'$ FOOT.
 5. ANY CHANGES TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 6. THE MAXIMUM EARTH COVER OVER THE TANK IS THREE (3) FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 7. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP, WIDTH, AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
 8. THE EXISTING TOPOGRAPHY SHOWN HEREON IS FROM HOWARD COUNTY GIS, 2' CONTOUR INTERVAL AND FIELD VERIFIED BY BENCHMARK ENGINEERING, INC. IN FEBRUARY 2014.
 9. LOTS SHOWN HEREON ARE PER THE F-19-014 PLAN, APPROVED ON MARCH 5, 2020. RECORD PLATS ARE NOT RECORDED AT THIS TIME BUT ARE IN PROCESS THEREOF.



HOUSE OPTIONS:

HOUSE TYPE: PARKHURST (CRAFTSMAN)

OPTION No. 012
OPTION No. 013
OPTION No. 017
OPTION No. 055
OPTION No. 263073
OPTION No. 263081
OPTION No. 263019
OPTION No. 263168
OPTION No. 263169
OPTION No. 383

PUMP SYSTEM CALCULATIONS

TOTAL DOSE PER DAY = 150 GALLONS X 6 EVENTS PER DAY IS 900 GPD

TRENCH 1 (T1) INV. ELEV.=453.70' LENGTH=52.50'
TRENCH 2 (T2) INV. ELEV.=451.10' LENGTH=52.50'
TRENCH 3 (T3) INV. ELEV.=448.60' LENGTH=52.50'
TRENCH 4 (T4) INV. ELEV.=448.60' LENGTH=52.50'

FORCEMAIN LENGTH = 83.00' TYPE=SQ440

MIN. SYSTEM DISCHARGE RATE = 50 GPM
FORCE MAIN DIAMETER = 3 IN.
MINIMUM DOSE = 150 GAL.

VELOCITY = 2.17 FPS
FRICTION LOSS (TABLE 4.4) = 0.58

CALCULATE TOTAL DESIGN HEAD

LENGTH OF FM FROM PUMP TANK TO DISTRIBUTION BOX = 83.00'
OF (45) BENDS IN FM = 3
OF (90) BENDS IN FM = N/A
TOTAL LENGTHS = 83.00'
TOTAL ADD'L LENGTHS = 18.00'
TOTAL PIPE/FRICTION LOSS = 101.00'

FRICITION HEAD = 0.49' FT.
STATIC HEAD = 11.27' FT.
TOTAL DYNAMIC HEAD = 11.96' FT.

THEORETICALLY A PUMP CAPABLE OF DELIVERING AT LEAST 50 GPM AGAINST 11.96' OF HEAD IS REQUIRED.
EP50M-20, 1/2 H.P. IS EFFICIENT

SEWAGE DISPOSAL SYSTEM DATA (6 BDRM)

PROPOSED INVERT AT FOUNDATION WALL: 446.94'

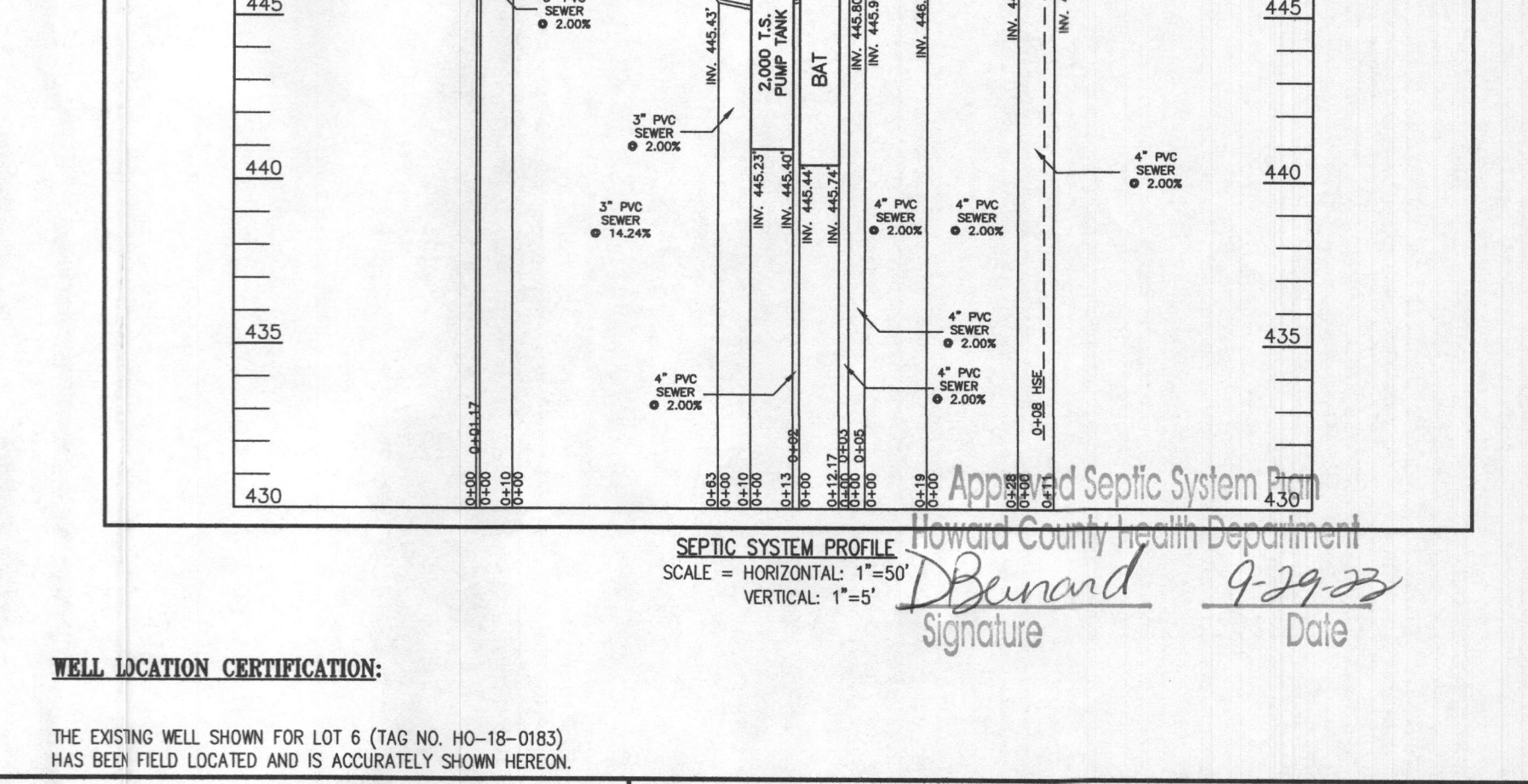
1. EX. GRADE OVER TANK: 447.30'
PROPOSED GRADE OVER TANK: 447.90'
INVERT IN: 445.74' INVERT OUT: 445.44'

2. DISTRIBUTION BOX
EXISTING GRADE OVER TANK: 455.80'
PROPOSED GRADE OVER TANK: 455.80'
INVERT IN: 454.20' INVERT OUT: 453.90'

3. INITIAL TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD \div 0.8 APP. RATE = 1,125 SF
USE 3" WIDE TRENCH WITH 60" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
1,125 SF \div 3" WIDTH = 375 LF x 0.56 (SIDEWALL REDUCTION) = 210.00 LF MIN.
USE 4 52.50' LONG TRENCHES = 210.00 LF

4. 1ST REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD \div 1.2 APP. RATE = 750 SF
USE 3" WIDE TRENCH WITH 60" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF \div 3" WIDTH = 250 LF x 0.63 (SIDEWALL REDUCTION) = 157.50 LF MIN.
USE 3 52.50' LONG TRENCHES = 157.50 LF

5. 2ND REPLACEMENT TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)
900 GPD \div 1.2 APP. RATE = 750 SF
USE 3" WIDE TRENCH WITH 60" GRAVEL BELOW PIPE
10' MIN. SPACING BETWEEN TRENCH EDGES
750 SF \div 3" WIDTH = 250 LF x 0.42 (SIDEWALL REDUCTION) = 105.00 LF MIN.
USE 2 52.50' LONG TRENCHES = 105.00 LF



WELL LOCATION CERTIFICATION:

THE EXISTING WELL SHOWN FOR LOT 6 (TAG NO. HO-18-0183) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN HEREON.

SITE PLAN FOR BAT INSTALLATION
LOT 6
LIBER 20039, FOLIO 212
PLAT NO. 25765
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND
ADDRESS: 10637 REYNOLDS COURT
ELLCOTT CITY, MARYLAND 21042

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL

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

DATE: 05/23/2023 SCALE: 1"=30' FILE: BAT LOT 6_rev1
CHK'D: M.J.B. JOB NO: 4520 DRAWN: R.C.K.

