

**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](http://www.hchealth.org)  
 Facebook: [www.facebook.com/hocohealth](http://www.facebook.com/hocohealth)

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

RECEIPT DATE: 08/22/2019 **ONSITE SEWAGE DISPOSAL SYSTEM** P 566353

APPROVAL DATE: 08/28/2019 **PERMIT: CONSTRUCTION** A \_\_\_\_\_

PROPERTY ADDRESS: 12241 Hayland Farm Way

SUBDIVISION: Walnut Creek LOT: P/T TAX ID: \_\_\_\_\_

CONTRACTOR: FOGLES SEPTIC INC EMAIL: \_\_\_\_\_

CONTRACTOR ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

PROPERTY OWNER: BV Business Trust EMAIL: \_\_\_\_\_

OWNER ADDRESS: 1355 Beverly Road Suite 300, McClean VA, 22101 PHONE: \_\_\_\_\_

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Babylon or equivalent

PUMP MODEL: \_\_\_\_\_ PUMP SIZE \_\_\_\_\_ PUMP TANK CAPACITY: \_\_\_\_\_

DISTRIBUTION SYSTEM:  GRAVITY  PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>168.75</u>	INLET DEPTH: <u>3.5</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4.5</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>2 x 851 TRENCHES</u>	

ISSUED BY: Dana Bernard ISSUE DATE: \_\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_

- 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 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
- 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 ATTACHED  
AS BUILT

PIPE SPEC:

4" COEX CELLULAR CORE PVC  
SCH 40  
ASTM F891-16  
TEMP NO MORE THAN 140 F

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH 3 INLET 3.5 BOTTOM 8

NUMBER OF TRENCHES 2

TOTAL LENGTH 170 F

ABSORPTION AREA 510 SF + SIDE WALL

DISTRIBUTION BOX LEVEL SPEED

DISTRIBUTION BOX BAFFLE YES

DISTRIBUTION BOX PORT YES

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES

MANUFACTURER BABYLON

CAPACITY 2000 GAL

SEAM LOC TOP

TANK LID DEPTH 2'

BAFFLES YES

BAFFLE FILTER -

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED YES

DATE ON LID 07/05/2019

PUMP/SEPTIC TANK LEVEL

MANUFACTURER

CAPACITY GAL

SEAM LOC

TANK LID DEPTH

BAFFLES

BAFFLE FILTER

MANHOLE LOC

6" PORT LOC

WATERTIGHT TEST

SLOTTED

DATE ON LID

PRE-CONSTRUCTION:

08/27/2019 SHC UNCOVERED, FAIL OK. TANK, SDA, TRENCHES STAKED. CONFIRMED CONTOUR, LAID OUT 2X85 TRENCHES. OK TO START.

INSTALLATION: 08/28/2019 SHC AND SEWER LINE INSTALLED. TANK SET. (C/A) EXTEND INLET BAFFLE 16" BELOW INVERT. CORRECTED DURING INSPECTION. EFFLUENT LINE INSTALLED TO D BOX, LEVELED W/ SPEED LEVELS. (C/A) SEAL CRACK IN D BOX W/ TAR - CORRECTED DURING INSPECTION. TRENCHES COMPLETE. OK TO BACKFILL.

FINAL INSPECTOR

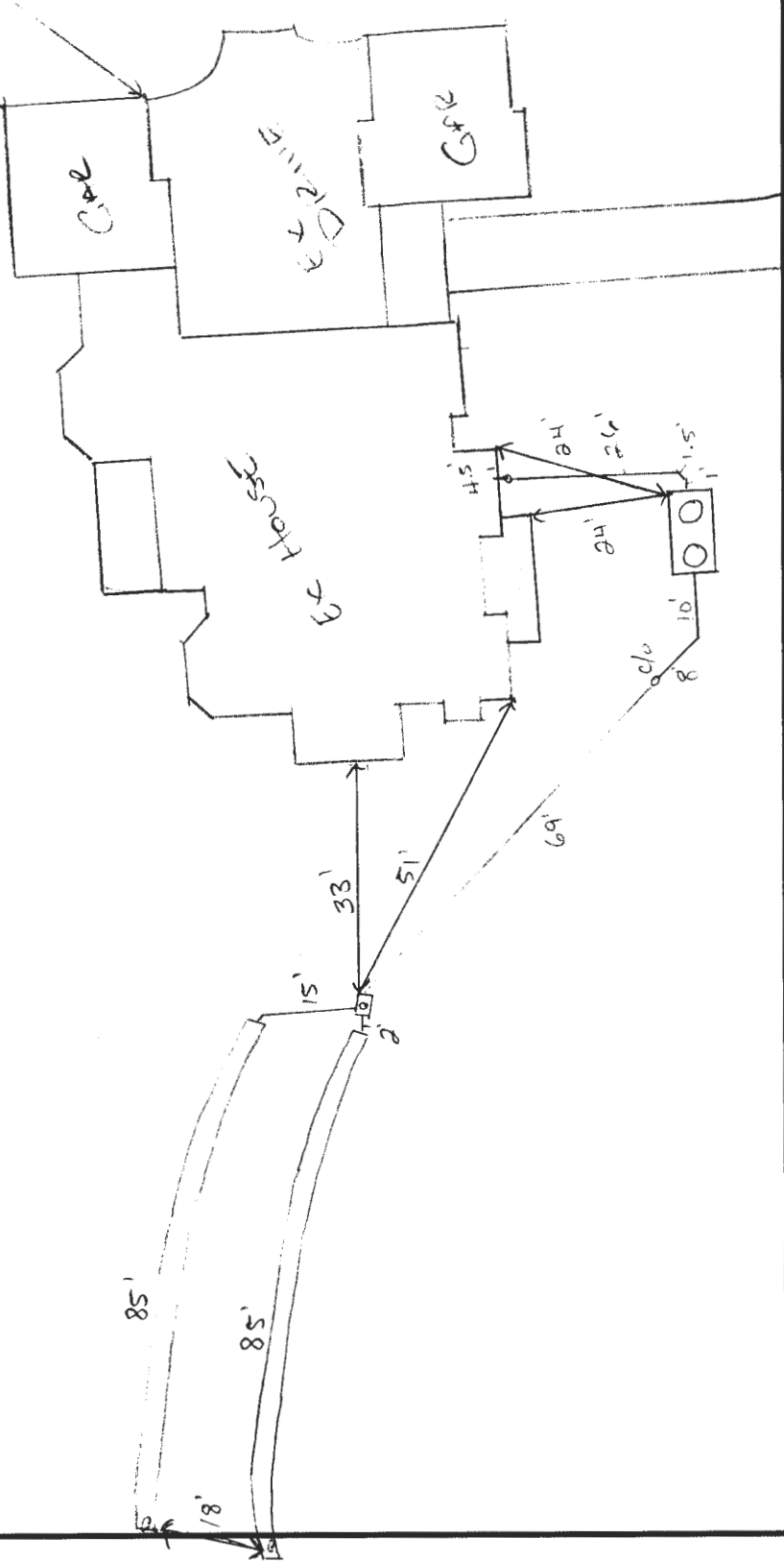
*Joseph Calabro*

DATE OF APPROVAL

08/28/2019

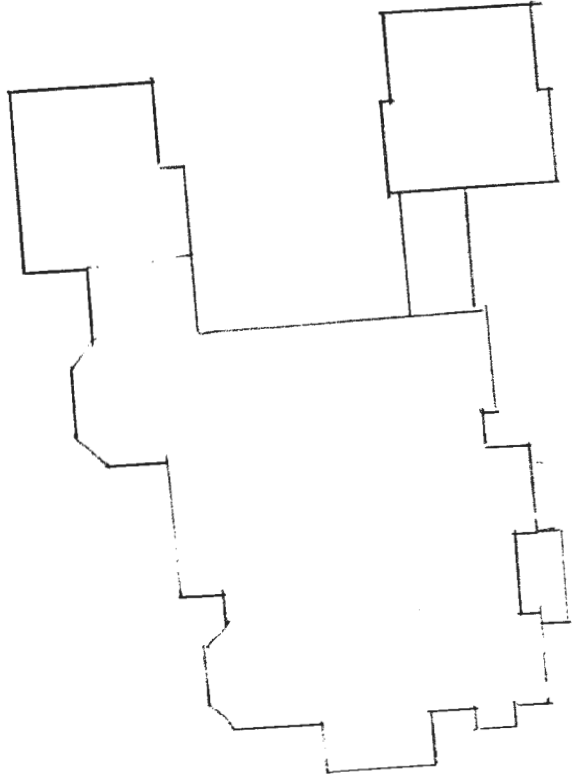
NOT TO SCALE

Ho-95-26 17



HAYLAND FARM ROAD

10-15-77  
261 (N)



NOT TO SCALE

11-30-77  
261

261

7

## Oswald, Hank

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**From:** Oswald, Hank  
**Sent:** Monday, April 30, 2018 8:50 AM  
**To:** Dave Harward, III (DaveH@fcc-eng.com)  
**Subject:** Septic Specs\_12241 Hayland Farm Way\_Parcel T  
**Attachments:** Septic Specs\_12241 Hayland Farm Way.pdf

Hi Dave:

Good morning. Attach, please find septic specs for 12241 Hayland Farm Way (Walnut Creek, Parcel T).

Thanks,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

### CONFIDENTIALITY NOTICE

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# Howard County Health Department

Bureau of Environmental Health, Columbia, MD 21045 - 410-313-1771

SEWAGE DISPOSAL PERMIT NO. A- \_\_\_\_\_ P- \_\_\_\_\_

RESIDENTIAL PERMIT   
(NUMBER OF BEDROOMS: \_\_\_\_\_)

COMMERCIAL PERMIT   
(DESIGN FLOW: \_\_\_\_\_ GPD)

PERMITEE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

**\*\*POST THIS CARD WHERE IT CAN BE SEEN FROM ROAD\*\***

STOP ALL CONSTRUCTION ON SEWAGE  
DISPOSAL SYSTEM AND CONTACT HEALTH  
DEPARTMENT BEFORE CONTINUING

\_\_\_\_\_  
Inspector

\_\_\_\_\_  
Date

WORK IS SATISFACTORY, OK TO  
CONTINUE

\_\_\_\_\_  
Inspector

\_\_\_\_\_  
Date

COMMENTS: \_\_\_\_\_

FINAL INSPECTION MADE, OK TO  
COVER ALL WORK

\_\_\_\_\_  
Inspector

\_\_\_\_\_  
Date

**Public Forest Conservation Easement Line Chart**

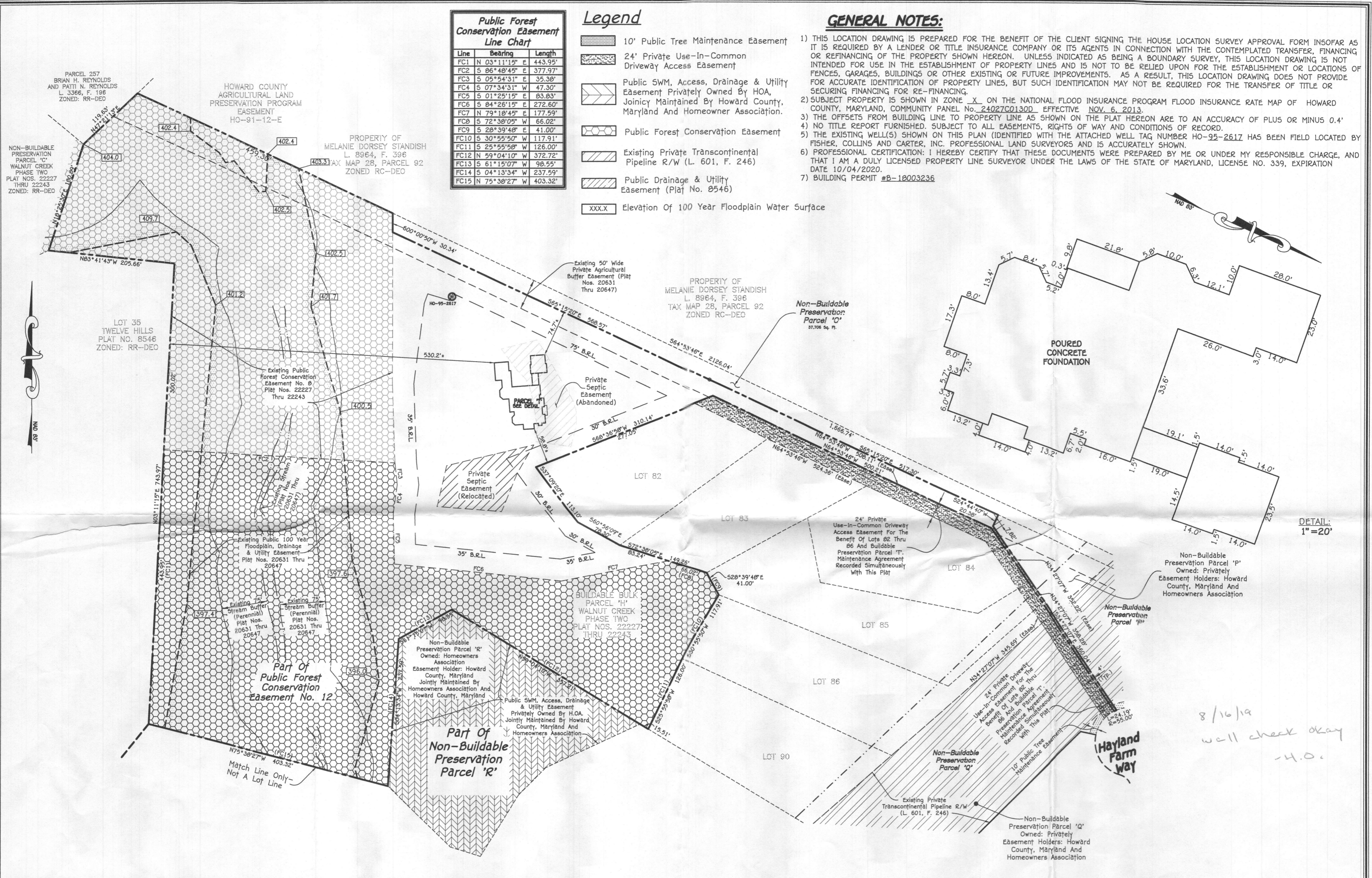
Line	Bearing	Length
FC1	N 03°11'15" E	443.95'
FC2	S 86°48'45" E	377.97'
FC3	S 05°54'31" E	35.38'
FC4	S 07°34'31" W	47.30'
FC5	S 01°25'15" E	83.83'
FC6	S 84°26'15" E	272.60'
FC7	N 79°18'45" E	177.59'
FC8	S 72°38'05" W	66.02'
FC9	S 28°39'48" E	41.00'
FC10	S 30°55'50" W	117.91'
FC11	S 25°55'58" W	126.00'
FC12	N 59°04'10" W	372.72'
FC13	S 61°15'07" W	98.55'
FC14	S 04°13'34" W	237.59'
FC15	N 75°38'27" W	403.32'

**Legend**

- 10' Public Tree Maintenance Easement
- 24' Private Use-In-Common Driveway Access Easement
- Public SWM, Access, Drainage & Utility Easement Privately Owned By HOA, Jointly Maintained By Howard County, Maryland And Homeowner Association.
- Public Forest Conservation Easement
- Existing Private Transcontinental Pipeline R/W (L. 601, F. 246)
- Public Drainage & Utility Easement (Plat No. 8546)
- Elevation Of 100 Year Floodplain Water Surface

**GENERAL NOTES:**

- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INSOFAR AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE X ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 24027C01300 EFFECTIVE NOV. 6, 2013.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 0.4'
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-92-2617 HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 6) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2020.
- 7) BUILDING PERMIT #B-18003236



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 12272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461 - 2895

STATE OF MARYLAND  
 MARK L. ROSE  
 PROPERTY LINE SURVEYOR  
 No. 339  
 DATE: 12/12/18  
 PROPERTY LINE SURVEYOR  
 REG. #339

**HOUSE LOCATION DRAWING**

FOUNDATION LOCATION: 12/10/18  
 FINAL LOCATION:  
 BOUNDARY SURVEY:

SCALE: 1"=100'  
 DATE: 12/12/18  
 DRAWN BY: MD  
 CHECKED BY: MLR  
 PROJECT No.: 04001-6022

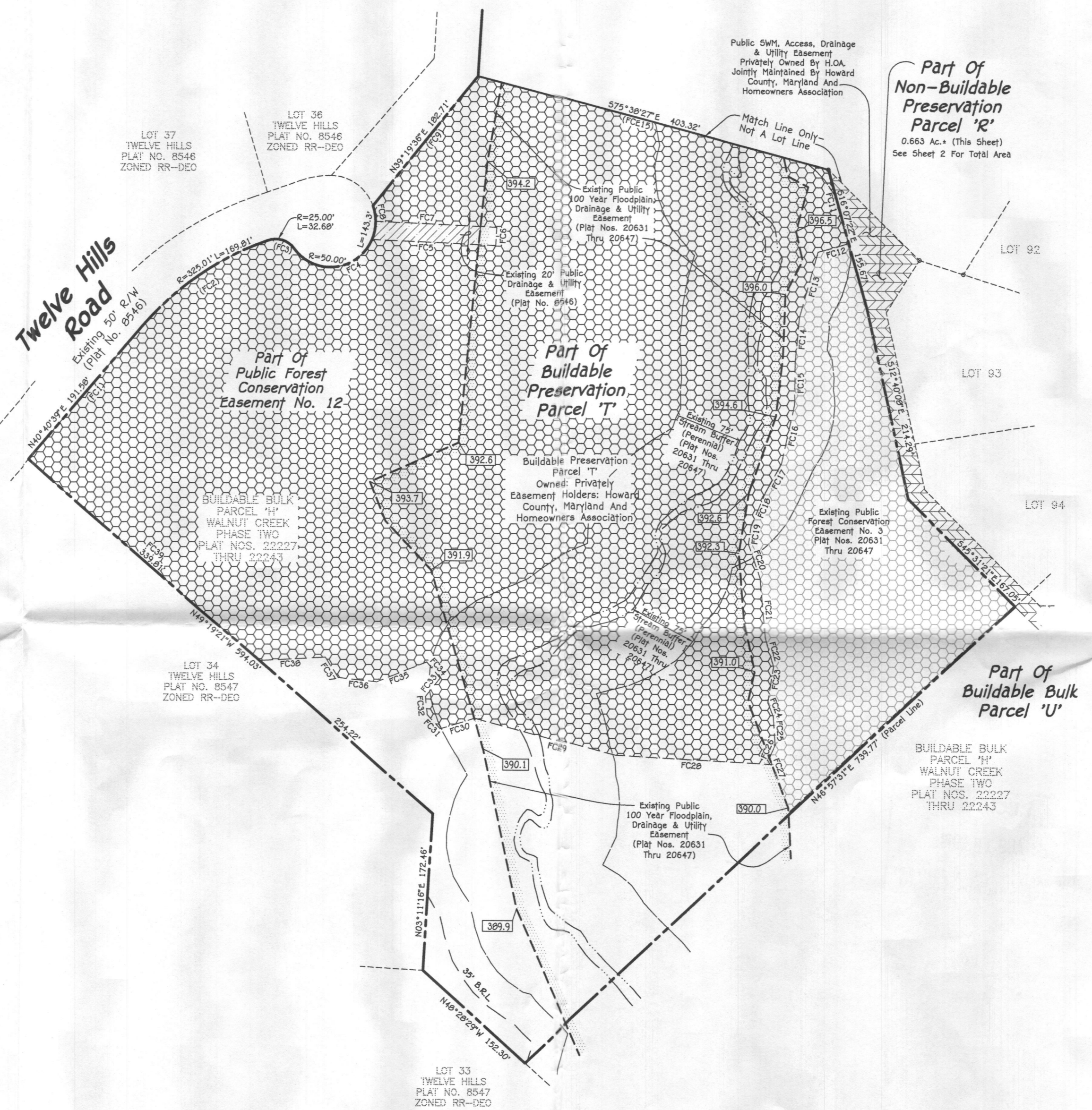
#12241 HAYLAND FARM WAY  
 B.R.L. = BUILDING RESTRICTION LINE  
 TOP OF FOUNDATION WALL ELEVATION = 429.6'

PARCEL "T"  
 WALNUT CREEK  
 PHASE THREE  
 LOTS 69-114, NON-BUILDABLE PRESERVATION PARCELS 'O', 'P', 'Q', 'R', 'V', NON-BUILDABLE PARCEL 'S', BUILDABLE PRESERVATION PARCEL 'T', BUILDABLE BULK PARCEL 'U' AND A REVISION TO NON-BUILDABLE PRESERVATION PARCELS 'K', 'L' AND 'M'  
 PLAT NOS. 23233 THRU 23245  
 FIFTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SHEET 1 OF 2

8/16/19  
 well check okay  
 -4.0'

**Public Forest Conservation Easement Line Chart**

Line	Bearing	Length
FC1	N 40°40'39" E	191.58'
FC2	R=325.01'	L=169.81'
FC3	R=25.00'	L=32.68'
FC4	R=50.00'	L=105.49'
FC5	S 07°23'19" E	137.52'
FC6	N 02°36'41" E	20.00'
FC7	N 07°23'19" W	134.56'
FC8	R=50.00'	L=17.48'
FC9	N 39°19'35" E	182.71'
FC10	S 75°30'27" E	403.32'
FC11	S 16°07'22" E	83.82'
FC12	S 73°52'30" W	35.42'
FC13	S 16°01'37" W	74.70'
FC14	S 05°11'48" W	48.60'
FC15	S 00°33'22" W	46.61'
FC16	S 12°32'03" W	66.38'
FC17	S 29°26'47" W	35.43'
FC18	S 23°08'26" W	39.93'
FC19	S 08°08'01" W	20.16'
FC20	S 19°22'56" E	39.81'
FC21	S 05°26'33" E	67.67'
FC22	S 16°28'01" E	32.71'
FC23	S 08°25'07" W	39.99'
FC24	S 22°23'21" E	16.38'
FC25	S 04°03'30" E	31.49'
FC26	S 23°51'30" W	15.35'
FC27	S 21°13'34" E	7.82'
FC28	N 07°10'41" W	173.40'
FC29	N 75°32'30" W	163.40'
FC30	S 73°18'07" W	39.56'
FC31	N 43°51'20" W	21.06'
FC32	N 06°04'33" W	20.15'
FC33	N 38°02'28" E	26.35'
FC34	N 40°44'38" W	23.13'
FC35	S 68°02'02" W	59.86'
FC36	N 84°05'47" W	42.59'
FC37	N 33°07'20" W	26.73'
FC38	S 86°35'17" W	72.78'
FC39	N 49°19'21" W	339.81'



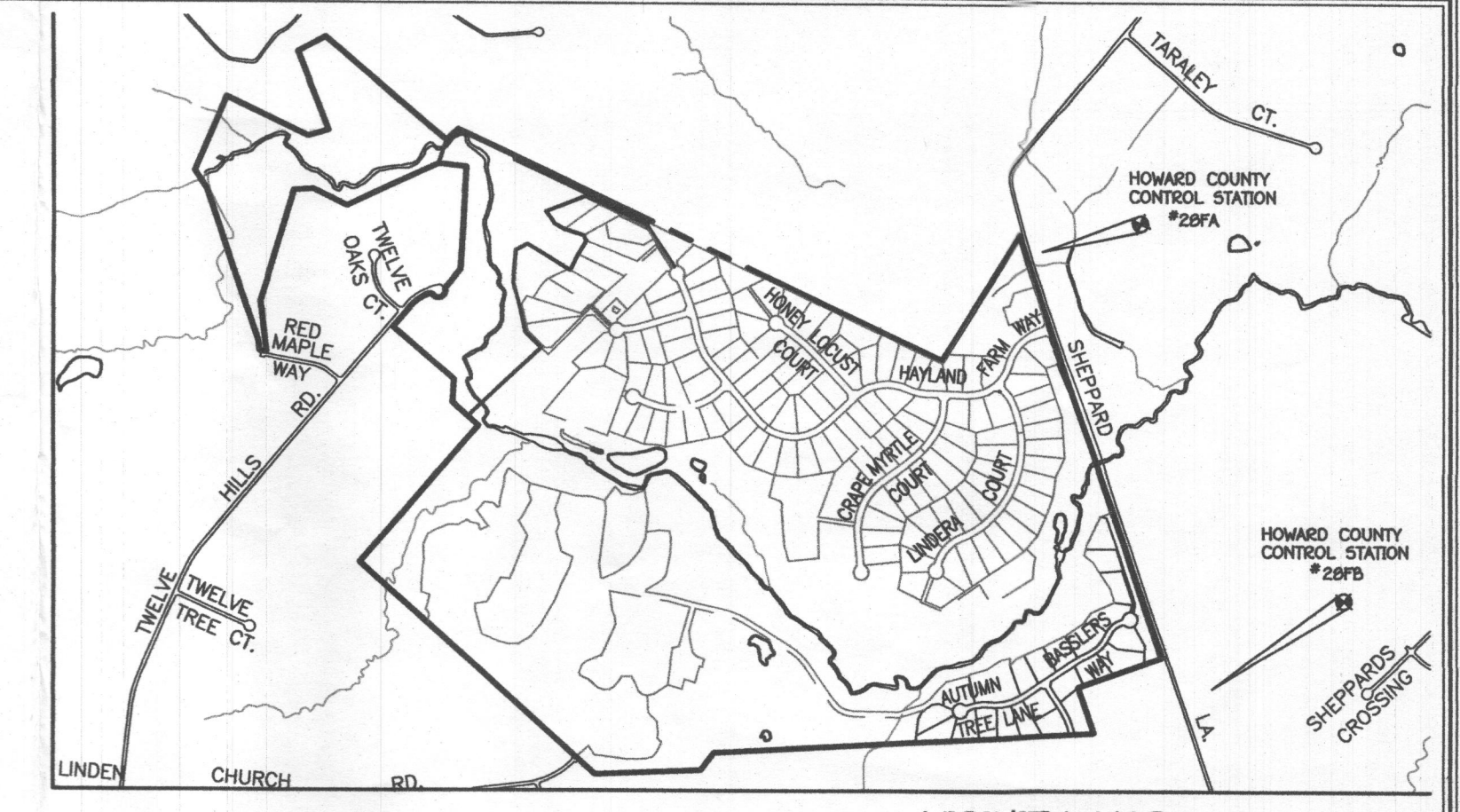
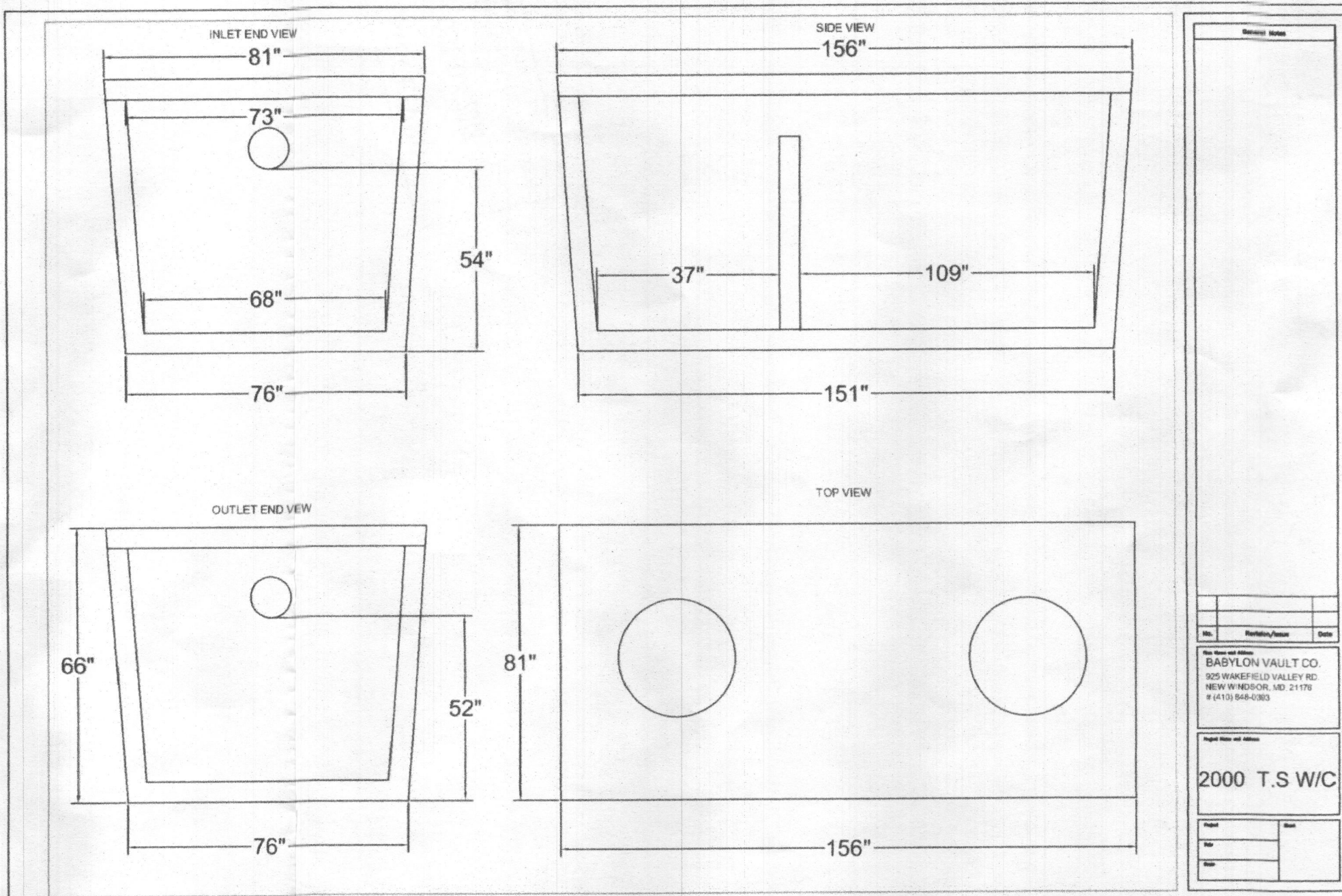
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461 - 2995



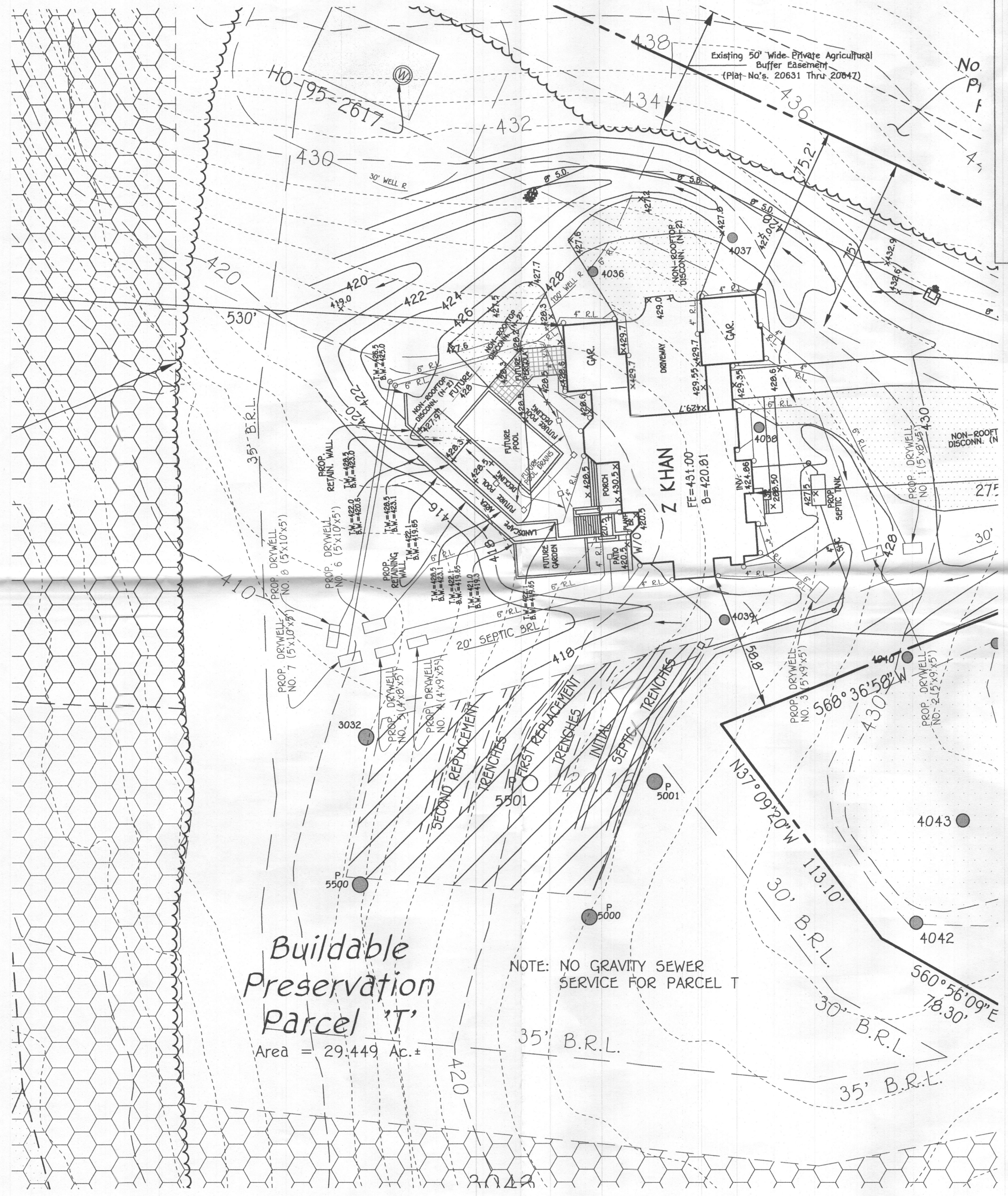
PARCEL "T"  
 WALNUT CREEK  
 PHASE THREE  
 LOTS 69-114, NON-BUILDABLE PRESERVATION PARCELS 'O', 'P',  
 'Q', 'R', 'V', NON-BUILDABLE PARCEL 'S', BUILDABLE PRESERVATION  
 PARCEL 'T', BUILDABLE BULK PARCEL 'U' AND A REVISION TO  
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L' AND 'M'  
 PLAT NOS. 23233 THRU 23245  
 FIFTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=100'  
 SHEET 2 OF 2



1. ANY CHANGE 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.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-95-2617 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

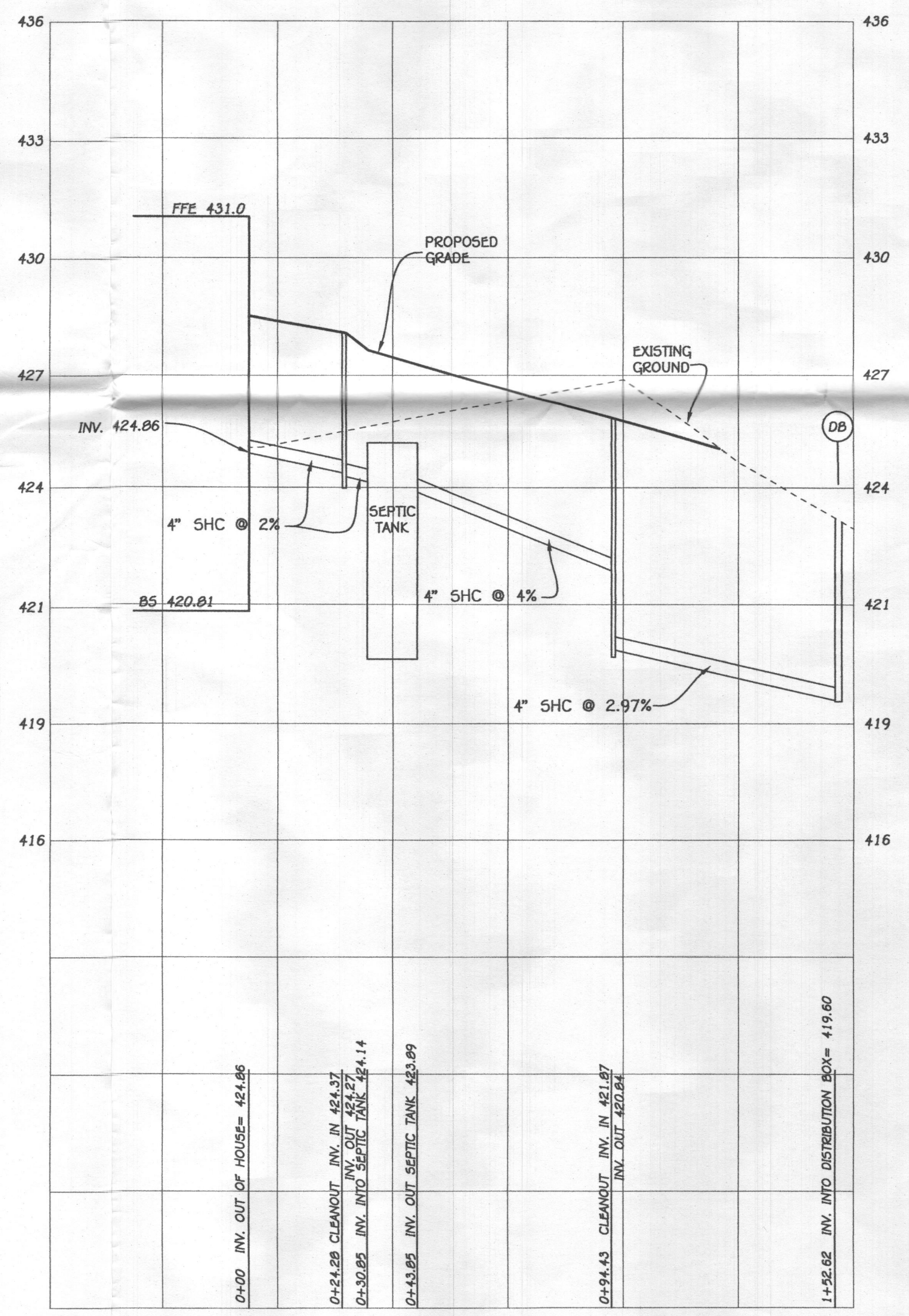


VICINITY MAP  
SCALE: 1" = 1200'



Buildable  
Preservation  
Parcel 'T'  
Area = 29.449 Ac. ±

NOTE: NO GRAVITY SEWER SERVICE FOR PARCEL T



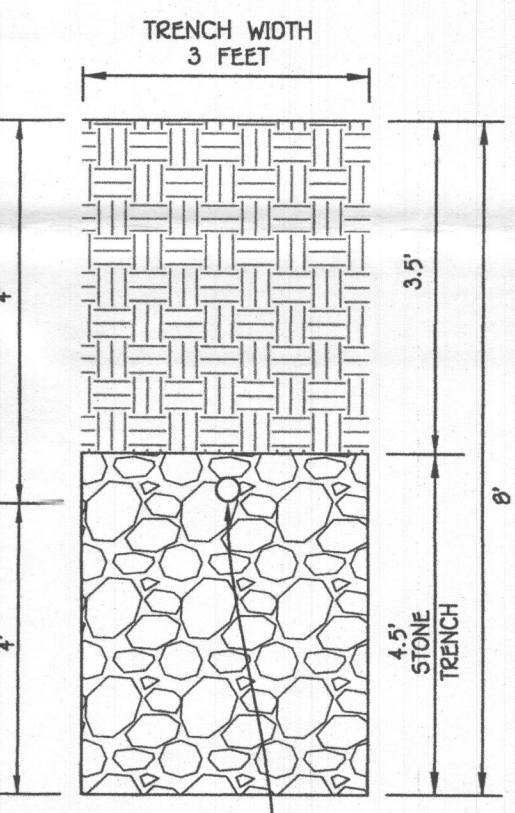
FFE 431.00  
BSE 420.81  
INV. OUT OF HOUSE = 424.86  
PROP. GROUND AT CLEANOUT #1 = 428.1  
INV. INTO CLEANOUT = 424.37  
INV. OUT OF CLEANOUT = 424.27  
EX. GROUND AT SEPTIC TANK = 426.00  
PROP. GRADE ABOVE SEPTIC TANK = 427.5  
TOP OF SEPTIC TANK = 425.14  
INV. INTO SEPTIC TANK = 424.14  
INV. OUT OF SEPTIC TANK = 423.89  
PROP. GROUND AT CLEANOUT #2 = 425.7  
INV. INTO CLEANOUT = 421.87  
INV. OUT OF CLEANOUT = 420.84  
EX. GROUND AT DISTRIBUTION BOX = 423.7  
INV. INTO DISTRIBUTION BOX = 419.6  
INV. OUT OF DISTRIBUTION BOX = 419.5

NOTE: NO GRAVITY SEWER SERVICE FOR PARCEL T

**INITIAL SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET  
TRENCH DEPTH = 0 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3.5 FEET  
SF OF DRAINFIELD = 900 GPD / 0.8 = 1125 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x3.5)) = 0.45  
TRENCH LENGTH = 375 SF x 0.45 = 168.75 FEET (USE 2 TRENCHES AT 84.38 LF.)  
TRENCH SPACING = 2D+W = ((2x3.5) + 3) = 10' USE 10'

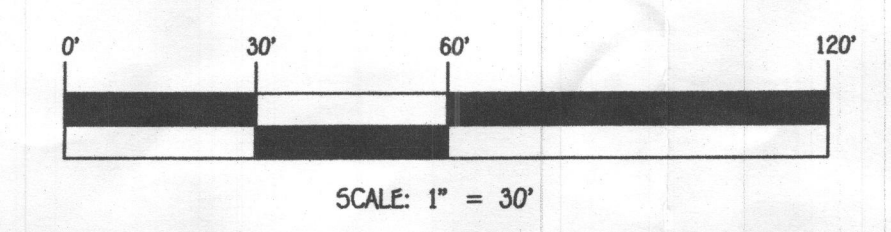
**1ST REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 0 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 0.417  
TRENCH LENGTH = 104.25 SF x 0.417 = 104.25 FEET (USE 2 TRENCHES AT 52.13 LF.)  
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

TRENCH DATA:  
TRENCH 1:  
EX. GROUND ABOVE = 423.5  
INV. IN = 419.5  
BOTTOM TRENCH = 415.5  
TRENCH 2:  
EX. GROUND ABOVE = 422.0  
INV. IN = 418.0  
BOTTOM TRENCH = 414.0



INITIAL TRENCH DETAIL  
SCALE: 1" = 2'

PLAN  
SCALE: 1" = 30'



PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.

*Michael J. D'Amico*  
Signature of Professional Engineer  
10/1/18  
DATE

SEPTIC PROFILE  
SCALE: 1" = 30'

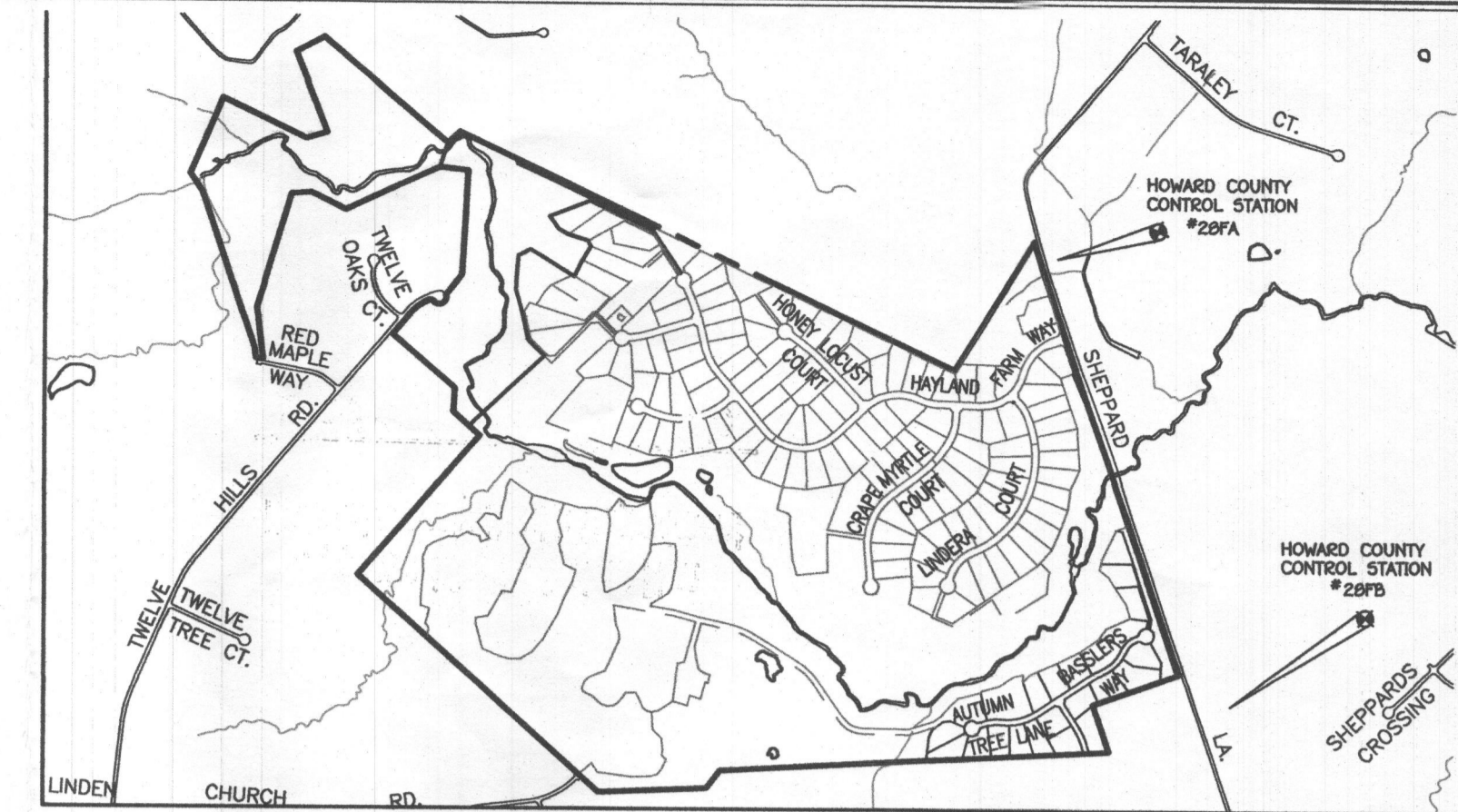
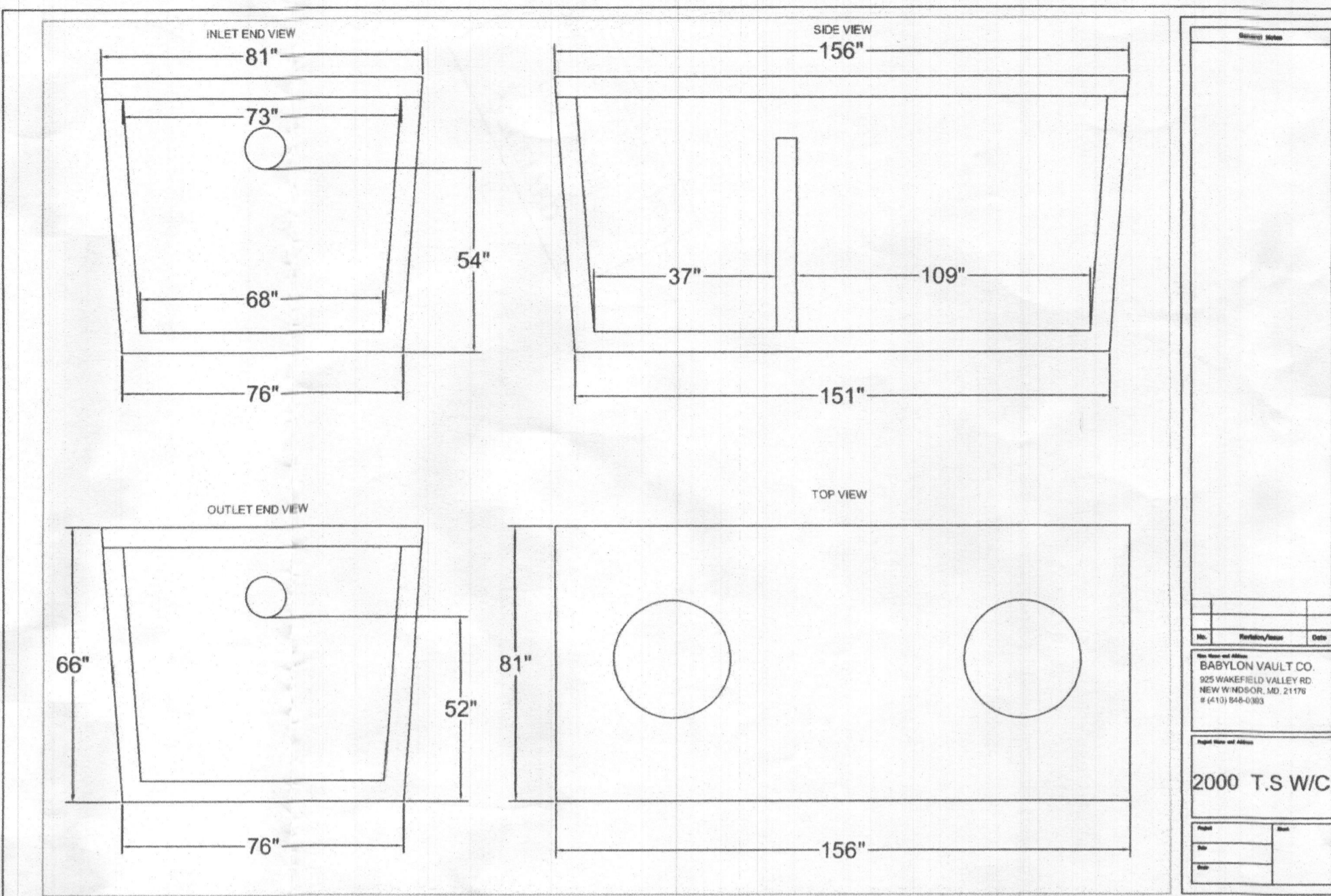
OWNER/DEVELOPER  
CAREN CUSTOM HOMES  
10548 GORMAN ROAD  
LAUREL, MARYLAND 20773  
410-818-7382

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
PARCEL T	12241 HAYLAND FARM WAY

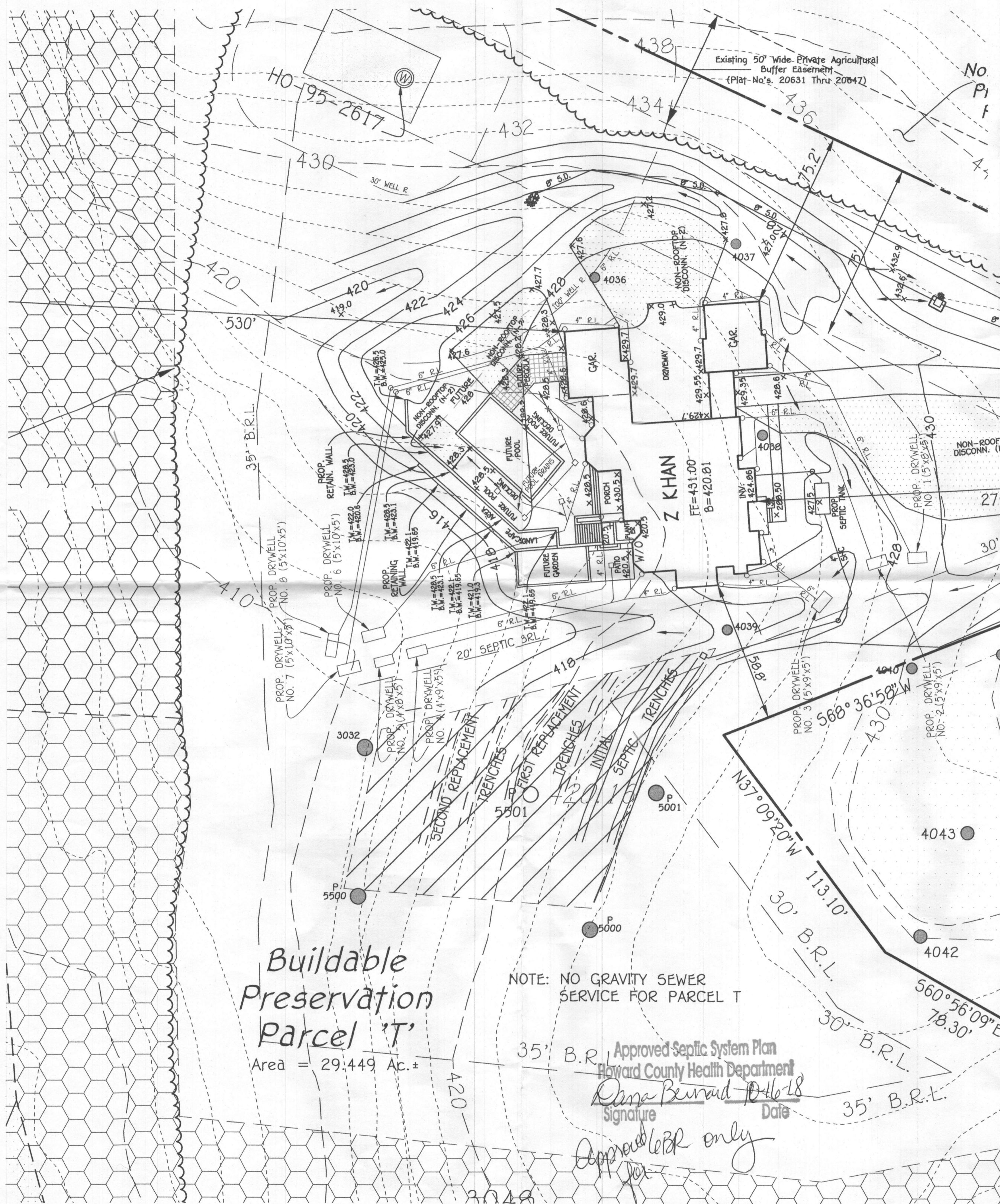
Approved System Plan BUILDABLE PRESERVATION PARCEL 'T'  
Howard County Health Department  
*Michael J. D'Amico* 10-15-18  
SEPTIC SYSTEM INSTALLATION SITE PLAN  
WALNUT CREEK  
PHASE THREE

(A Resubdivision of Buildable Bulk Parcel 'T' - Walnut Creek, Phase Two) & (A Revision to Non-Buildable Preservation Parcels 'L' and 'M' - Walnut Creek, Phase Two)  
ZONED: RC-DEO & RR-DEO  
TAX MAP NO. 28 GRID NOS. 4, 5, 10-12, 17, AND 18 PARCEL NO. 49  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 2, 2018

1. ANY CHANGE 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.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-95-2617 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.



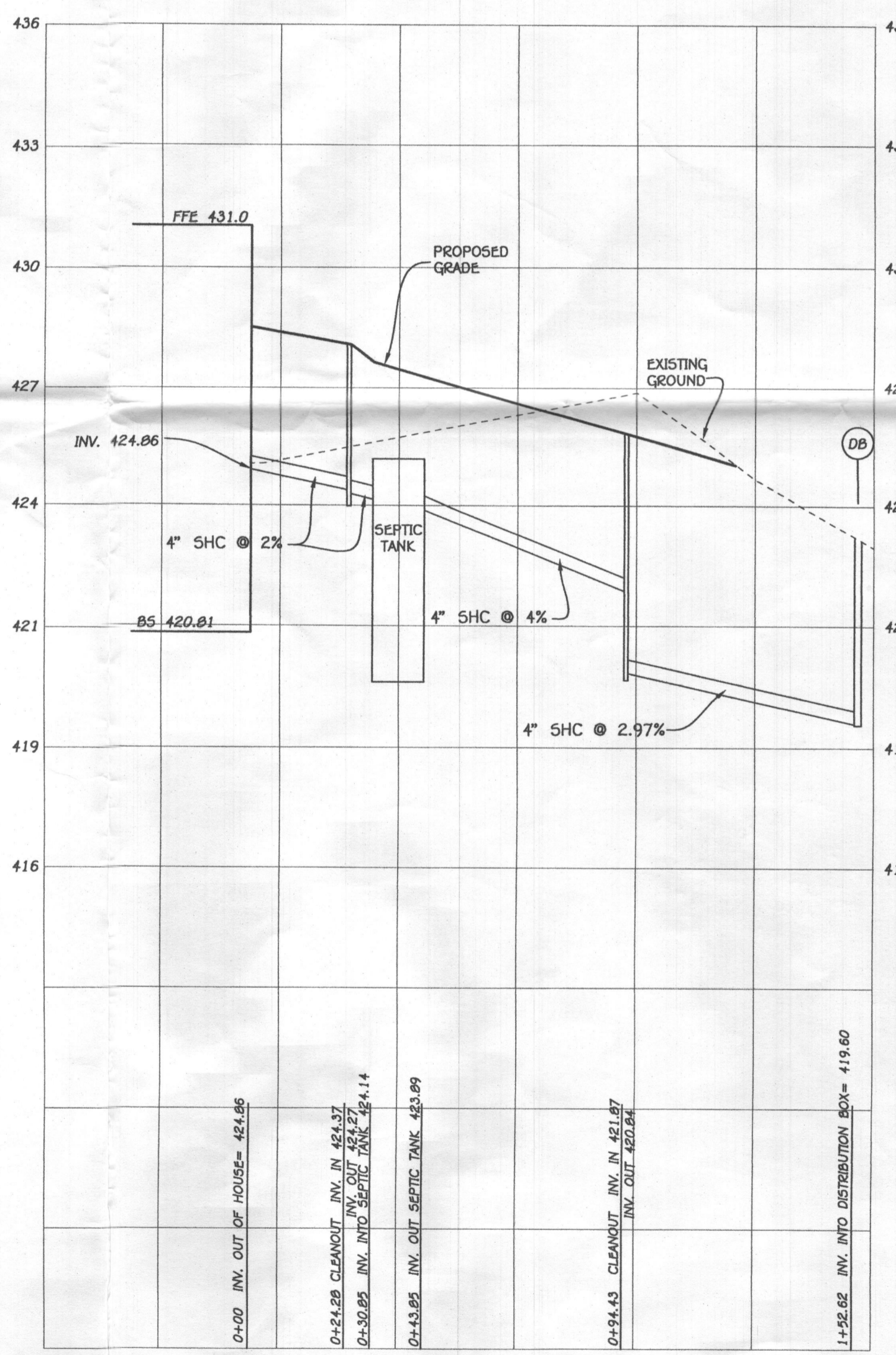
VICINITY MAP  
SCALE: 1" = 1200'



Buildable Preservation Parcel 'T'  
Area = 29,449 Ac.±

NOTE: NO GRAVITY SEWER SERVICE FOR PARCEL T

Approved Septic System Plan  
Howard County Health Department  
Date: 10-15-18  
Signature: [Signature]



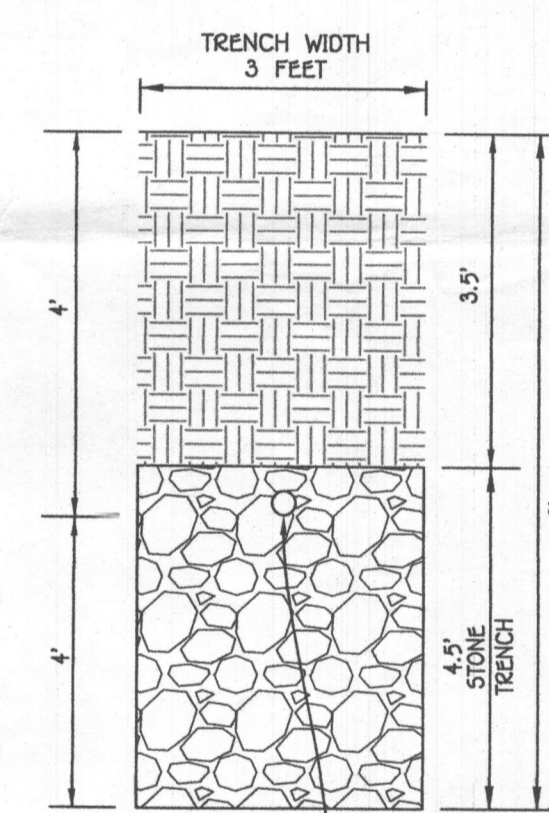
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PROP. GRADE ABOVE SEPTIC TANK = 427.5  
TOP OF SEPTIC TANK = 425.14  
INV. INTO SEPTIC TANK = 424.14  
INV. OUT OF SEPTIC TANK = 423.09  
PROP. GROUND AT CLEANOUT #2 = 425.7  
INV. INTO CLEANOUT = 421.07  
INV. OUT OF CLEANOUT = 420.84  
EX. GROUND AT DISTRIBUTION BOX = 423.7  
INV. INTO DISTRIBUTION BOX = 419.6  
INV. OUT OF DISTRIBUTION BOX = 419.5

NOTE: NO GRAVITY SEWER SERVICE FOR PARCEL T

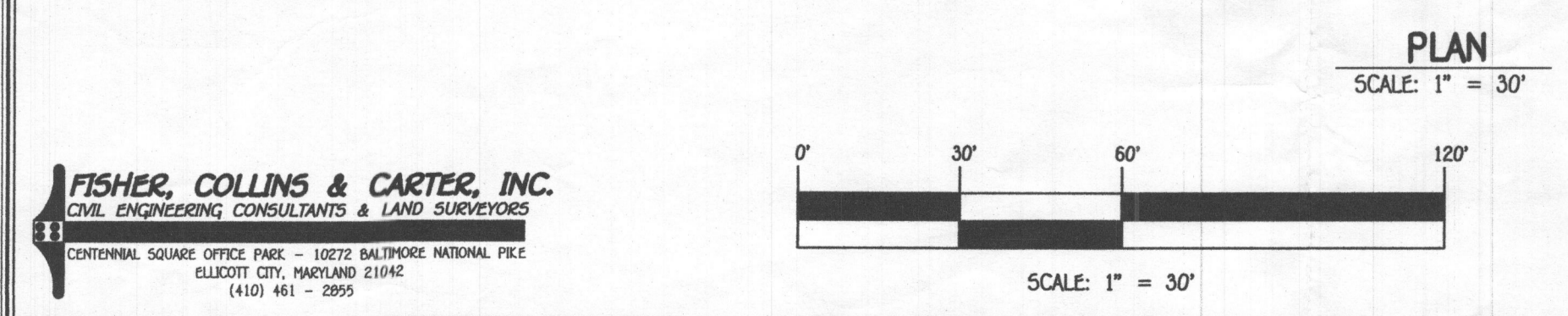
**INITIAL SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET  
TRENCH DEPTH (D) = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
SF OF DRAINFIELD = 900 GPD / 0.8 = 1125 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x8)) = 0.45  
TRENCH LENGTH = 375 SF x 0.45 = 168.75 FEET  
(USE 2 TRENCHES AT 84.38 LF.)  
TRENCH SPACING = 2D+W = ((2x8) + 3) = 19' USE 10'

**1ST REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 6 BEDROOMS  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH (D) = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x8)) = 0.417  
TRENCH LENGTH = 104.25 SF x 0.417 = 104.25 FEET  
(USE 2 TRENCHES AT 52.13 LF.)  
TRENCH SPACING = 2D+W = ((2x8) + 3) = 19' USE 11'

TRENCH DATA:  
TRENCH 1:  
EX. GROUND ABOVE = 423.5  
INV. IN = 419.5  
BOTTOM TRENCH = 415.5  
TRENCH 2:  
EX. GROUND ABOVE = 422.0  
INV. IN = 418.0  
BOTTOM TRENCH = 414.0



INITIAL TRENCH DETAIL  
SCALE: 1" = 2'



PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.

Signature: [Signature] DATE: 10/1/18

SEPTIC PROFILE  
SCALE: 1" = 30'

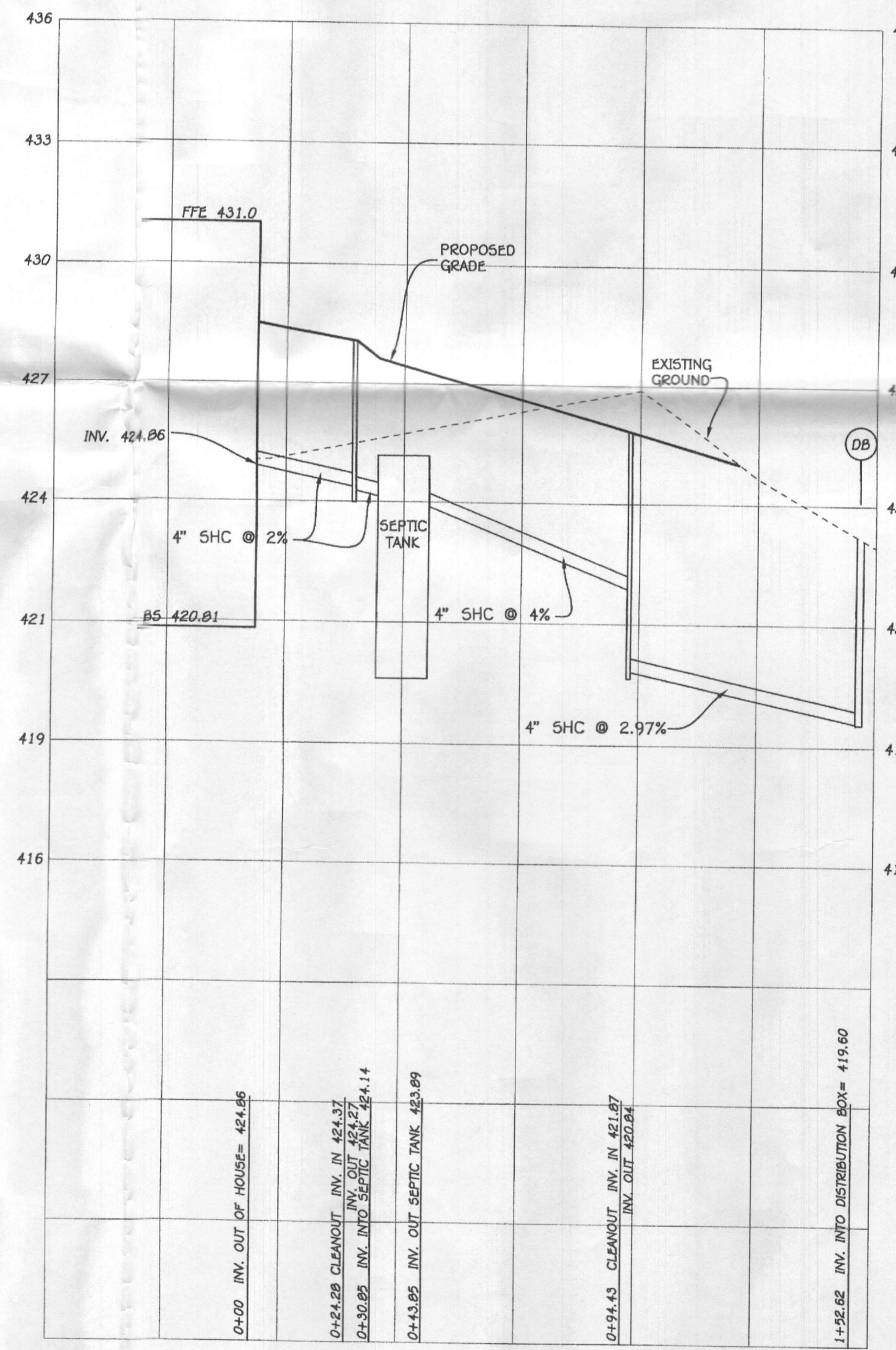
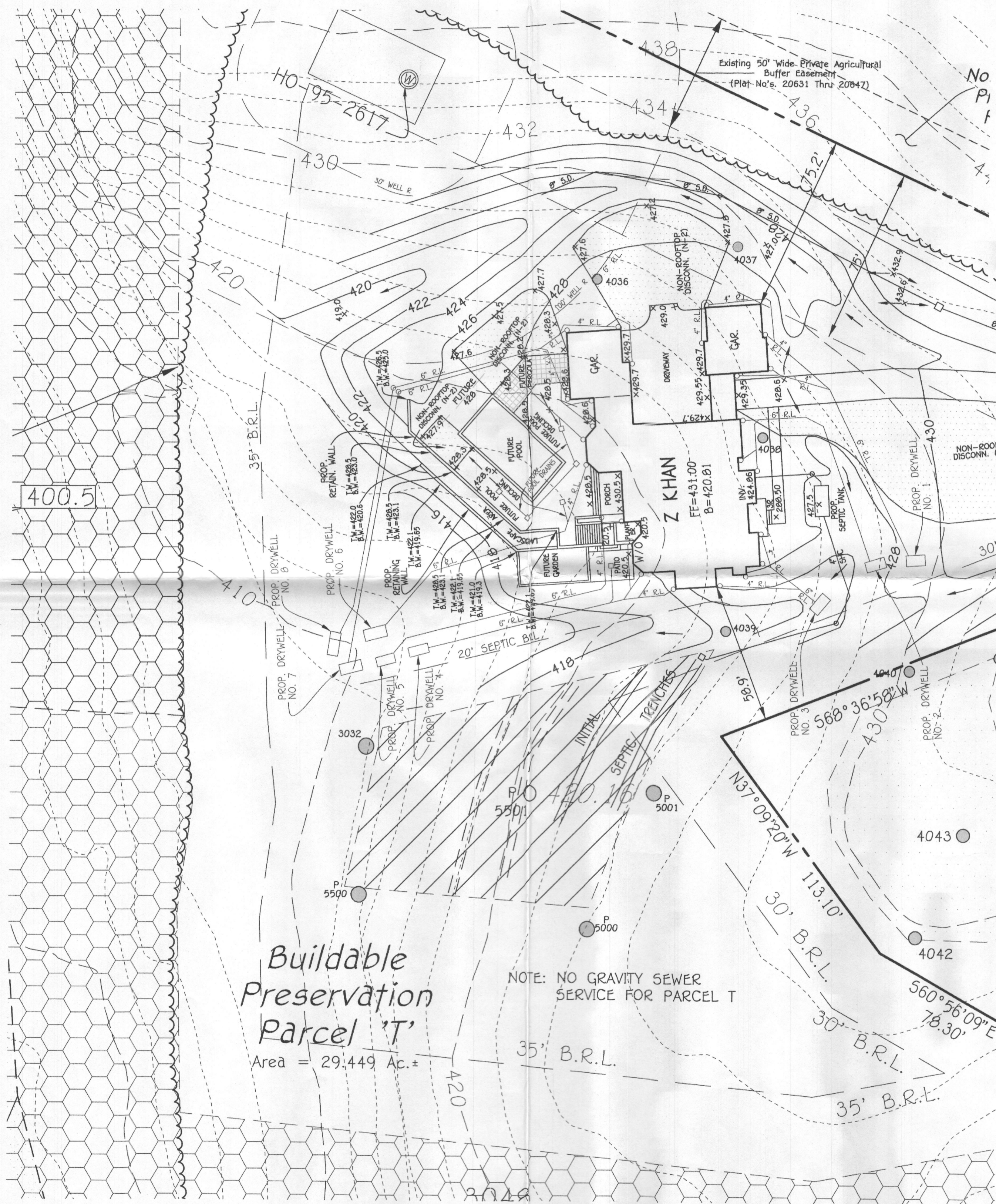
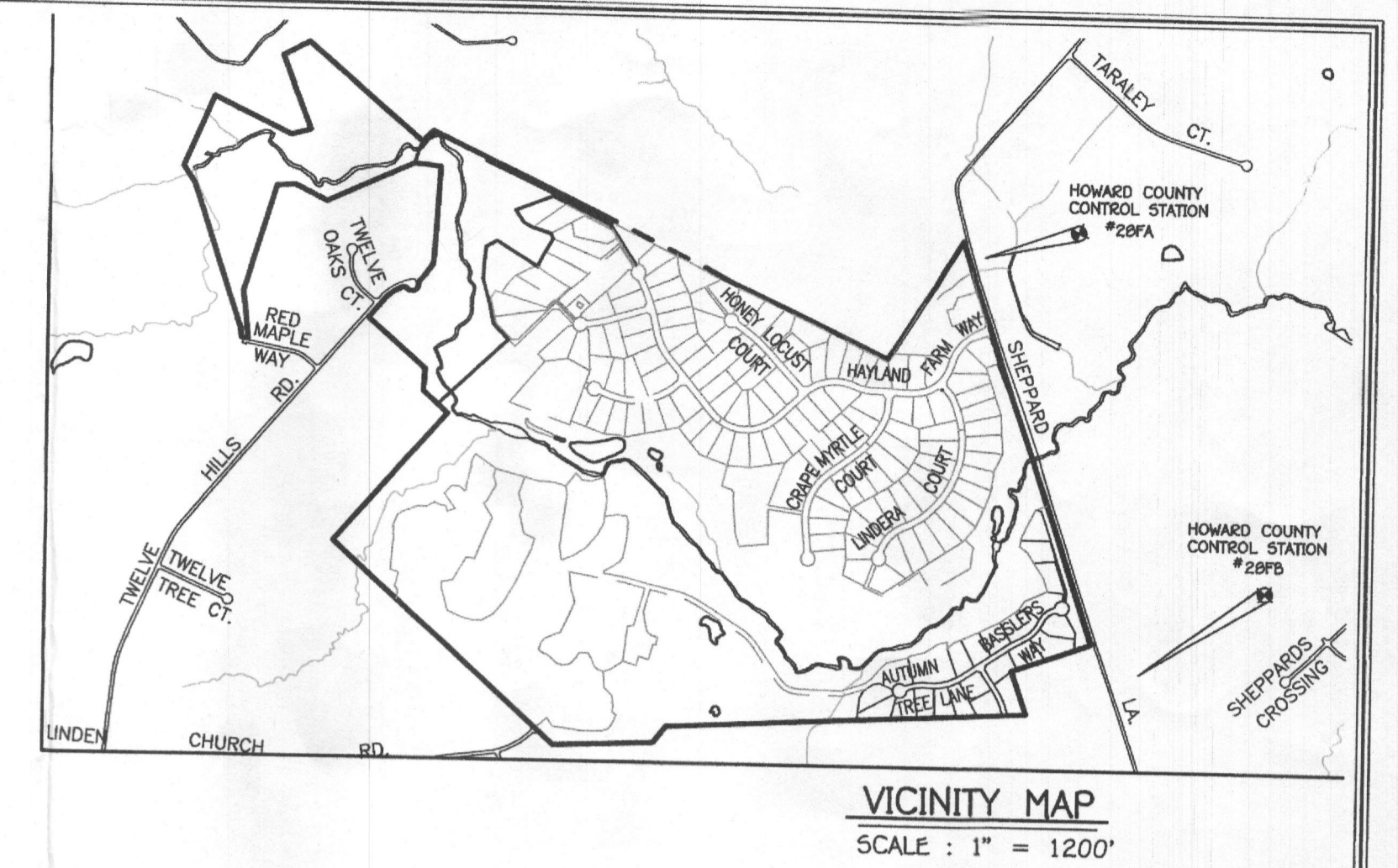
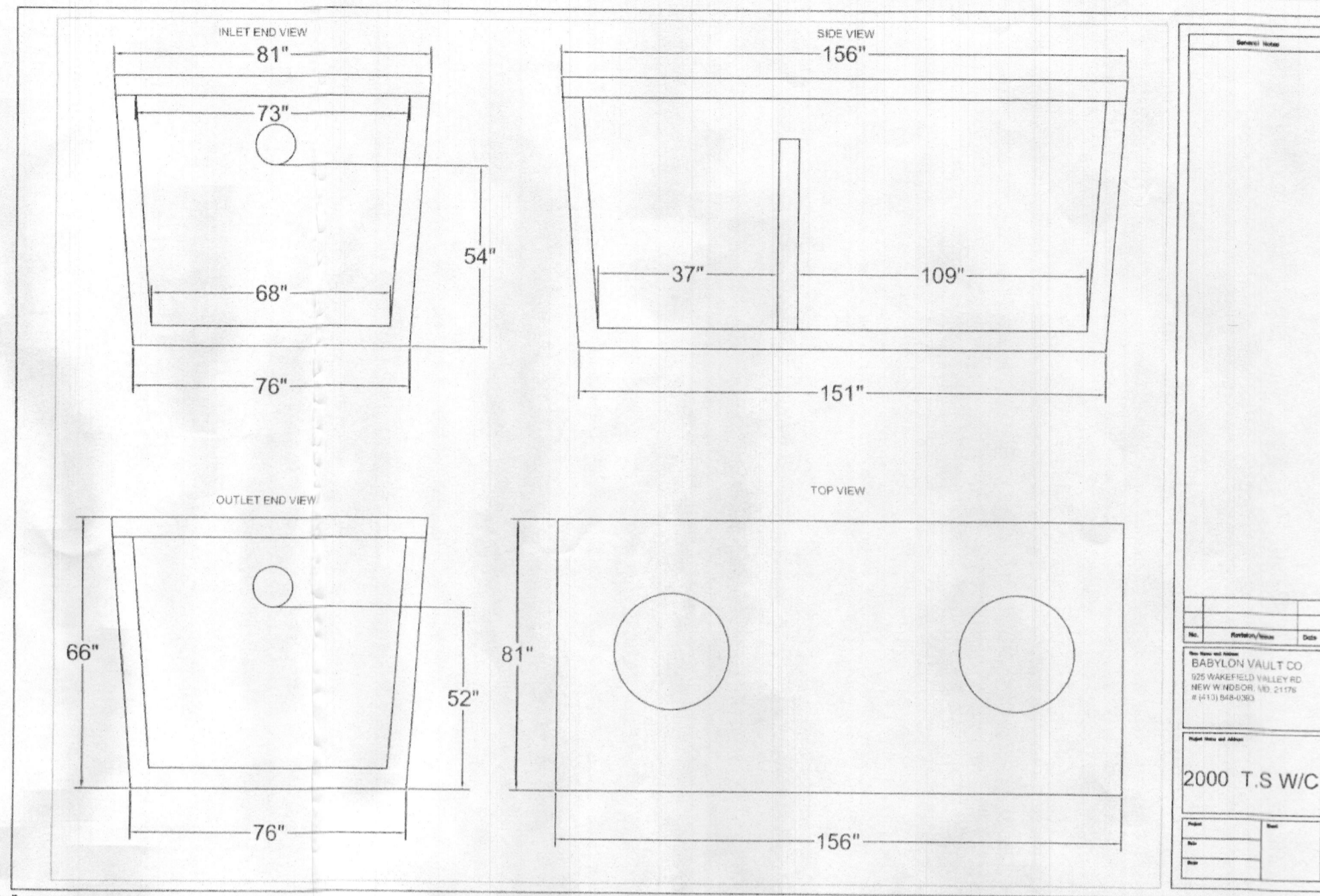
OWNER/DEVELOPER  
CURN CUSTOM HOMES  
10548 GORMAN ROAD  
LAUREL, MARYLAND 20723  
410-818-7382

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
PARCEL T	12241 HAYLAND FARM WAY

Approved Septic System Plan  
Howard County Health Department  
Date: 10-15-18  
Signature: [Signature]  
**BUILDABLE PRESERVATION PARCEL 'T' SEPTIC SYSTEM INSTALLATION SITE PLAN WALNUT CREEK PHASE THREE**

(A Re-subdivision of Buildable Bulk Parcel 'T' - Walnut Creek, Phase Two) & (A Revision to Non-Buildable Preservation Parcels '1' and '4' - Walnut Creek, Phase Two)  
ZONED: RC-DEO & RR-DEO  
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49 FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 2, 2018

1. ANY CHANGE 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.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-95-2617 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

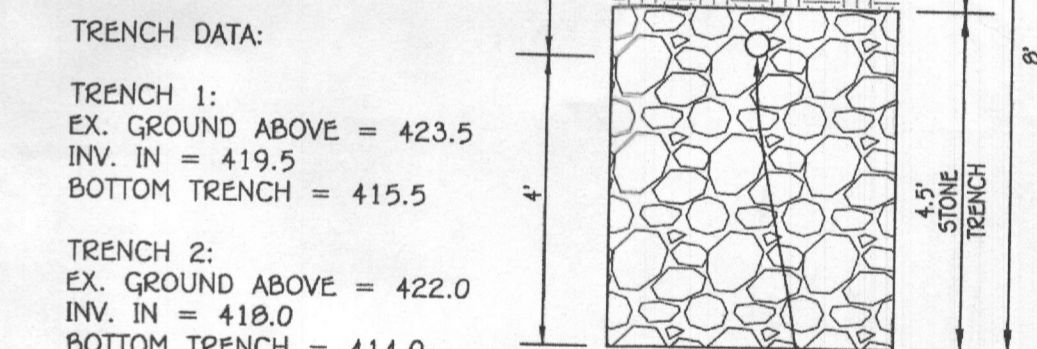


FFE 431.00  
BSE 420.81  
INV. OUT OF HOUSE = 424.86  
PROP. GRADE AT CLEANOUT #1 = 428.1  
INV. INTO CLEANOUT = 424.37  
EX. GROUND AT CLEANOUT = 424.27  
PROP. GRADE ABOVE SEPTIC TANK = 426.00  
TOP OF SEPTIC TANK = 427.5  
INV. INTO SEPTIC TANK = 424.14  
INV. OUT OF SEPTIC TANK = 423.89  
PROP. GRADE AT CLEANOUT #2 = 425.7  
INV. INTO CLEANOUT = 421.87  
EX. GROUND AT DISTRIBUTION BOX = 423.7  
INV. INTO DISTRIBUTION BOX = 419.6  
INV. OUT OF DISTRIBUTION BOX = 419.5

NOTE: NO GRAVITY SEWER SERVICE FOR PARCEL T

**INITIAL SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 3.5 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x3.5)) = 0.45  
TRENCH LENGTH = 312.5 SF x 0.45 = 140.63 FEET (USE 2 TRENCHES AT 70.31 L.F.)  
TRENCH SPACING = 20+W = ((2x3.5) + 3) = 10' USE 10'

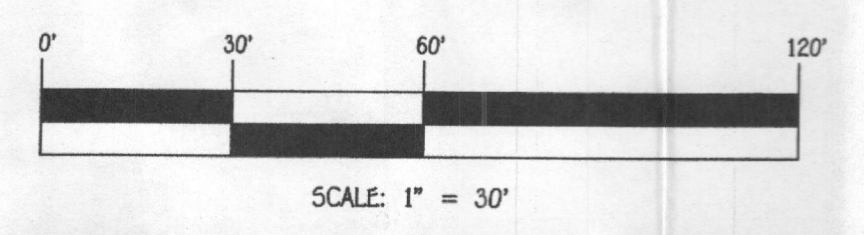
**1ST REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = .417  
TRENCH LENGTH = 208.33 SF x .417 = 86.88 FEET  
TRENCH SPACING = 20+W = ((2x4) + 3) = 11' USE 11'



**INITIAL TRENCH DETAIL**  
SCALE: 1" = 2'

**2ND REPLACEMENT SYSTEM**  
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 4 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = .417  
TRENCH LENGTH = 208.33 SF x .417 = 86.88 FEET  
TRENCH SPACING = 20+W = ((2x4) + 3) = 11' USE 11'

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10725 BALDWIN NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21046  
(410) 461-2895



**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.

Signature of Professional Engineer  
Date

**SEPTIC PROFILE**  
SCALE: 1" = 30'

**OWNER/DEVELOPER**  
CAIRN CUSTOM HOMES  
10548 GORMAN ROAD  
LAUREL, MARYLAND 20723  
410-818-7382

**ADDRESS CHART**

LOT NUMBER	STREET ADDRESS
PARCEL T	12241 HAYLAND FARM WAY

Approved Septic System Plan  
Howard County Health Department  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
8/30/18

**BUILDABLE PRESERVATION PARCEL 'T' SEPTIC SYSTEM INSTALLATION SITE PLAN WALNUT CREEK PHASE THREE**

(A Revision to Non-Buildable Preservation Parcel 'L' and 'M' - Walnut Creek, Phase Two)  
ZONED: RC-DEO & RR-DEO  
NO. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49  
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: JUNE 6, 2018