

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: 9/24/19 **ONSITE SEWAGE DISPOSAL SYSTEM** P 566381-A

APPROVAL DATE: 3/21/2020 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 12229 Hayland Farm Way

SUBDIVISION: Walnut Creek LOT: 160 TAX ID: _____

CONTRACTOR: Freedom Septic EMAIL: casey@freedomseptic.com

CONTRACTOR ADDRESS: 2809 Liberty Road, Sykesville, MD 21784 PHONE: 410-795-2947

PROPERTY OWNER: Cairn Custom Homes EMAIL: _____

OWNER ADDRESS: 10548 Gorman Road, Laurel, MD 20723 PHONE: _____

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

PUMP MODEL: _____ PUMP SIZE _____ PUMP TANK CAPACITY: _____

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>131.25</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>11</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:		

ISSUED BY: Hank Oswald ISSUE DATE: 9/24/19 EXPIRATION DATE: 9/24/20

- 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 19003105
- 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.**



September 23, 2019

Dear Ma'am or Sir,

Please allow Freedom Septic to obtain permits to install septic systems for two lots:

Walnut Creek Lot 160
B18004044
12229 Hayland Farm Way
Ellicott City, MD 21042

Walnut Creek Lot 94
B19000419
5336 Catalpa Court
Ellicott City, MD 21042

We realize that permits had previously been issued to Fogles Septic, but we are switching contractors.

Thank you for your assistance.

Respectfully,

A handwritten signature in black ink that reads "M. Steven Appler". The signature is written in a cursive style with a large, sweeping flourish at the end.

M. Steven Appler
Principal – Cairn Custom Homes, LLC

Transmittal

Via: Fax Mail Messenger E-Mail To Be Picked Up
 Fax (original to follow via U.S. Mail)

To: Bureau of Environmental Health 8930 Stanford Blvd. Columbia, Maryland 21046-4544	Attn: Fax: Phone: 410-313-2640
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From: Dave Harward	CC:
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Re: Walnut Creek, Pres. Lot 160	W.O.# 04001-6022
Date: Feb 5, 2019	Pages: 0 Page(s) Including this cover

We are forwarding: <input checked="" type="checkbox"/> Prints <input type="checkbox"/> Copy of Letter <input type="checkbox"/> Specifications <input type="checkbox"/> Shop drawings <input type="checkbox"/> Other <input type="checkbox"/> Urgent <input type="checkbox"/> For your use <input type="checkbox"/> As requested <input checked="" type="checkbox"/> For Review & Comment

Remarks:

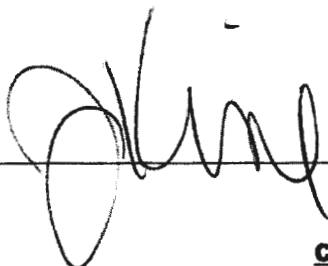
Re: Walnut Creek, Lot 160, 12229 Hayland Farm Way

Spencer, We've addressed your comments. Here are 3 copies OSDS Plan for your review & approval.

Thank You,

Dave

Fisher, Collins, & Carter, Inc. Ph. 410-461-2855



CONFIDENTIALITY NOTICE

This transmission contains confidential information which may be legally privileged, and is intended only for the use of the individual named above. If you are not the intended recipient, you are hereby notified that any distribution (except to the intended recipient), copying, or disclosure of this transmission is strictly prohibited.

Freemon, Robert

From: Freemon, Robert
Sent: Tuesday, February 05, 2019 3:55 PM
To: 'Dave Harward, III'
Cc: 'Stephanie Tuite'
Subject: RE: 12229 Hayland Farm Way Lot 160

Hi,

The septic plan looks approvable however the elevations still need correcting and the well note needs correcting. The elevations of the existing ground shown on the profile do not correspond with the elevations listed. The listed d-box invert is lower than the trench invert. This does not allow for fall. The well tag number shown on the site plan is correct but in the well note its not. One additional minor comment is to revise the gravity sewer note to say, "No gravity sewer service to basement for Lot 160". It's a little confusing to say no gravity sewer service to lot 160 when we are designing a gravity system. Once these are corrected I can approve the plan and building permit.

Robert "Spencer" Freemon
Howard County Health Department
8930 Stanford Blvd. Columbia, MD 21045
Bureau of Environmental Health
Well and Septic Program
Phone: 410-313-6357
Email: rfreemon@howardcountymd.gov
Website: <https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>

From: Dave Harward, III <DaveH@fcc-eng.com>
Sent: Tuesday, February 05, 2019 12:40 PM
To: Freemon, Robert <rfreemon@howardcountymd.gov>
Subject: RE: 12229 Hayland Farm Way Lot 160

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

Spencer,

Sorry to bother you. Our client is worried.

Thank You1
Dave

From: Dave Harward, III
Sent: Tuesday, January 29, 2019 7:42 AM
To: 'Freemon, Robert'
Subject: RE: 12229 Hayland Farm Way

Good Morning Spencer,

We've printed off new prints of the plans with the comments addressed. They will be delivered this morning.

I'm sorry if we failed to get this to you earlier. Our client's been wondering why the delay on the approval, so anything you can do to try to review and hopefully approve this plan this time, would be greatly appreciated.

Thanks,
Dave.



From: Freemon, Robert [mailto:rfreemon@howardcountymd.gov]
Sent: Monday, January 28, 2019 12:08 PM
To: Dave Harward, III
Subject: FW: 12229 Hayland Farm Way

Dave,
As far as I know the last septic plan I received was on 12/21. That plan was reviewed and comments were sent out on 1/8. See forwarded email and let me know.

Robert "Spencer" Freemon
Howard County Health Department
8930 Stanford Blvd. Columbia, MD 21045
Bureau of Environmental Health
Well and Septic Program
Phone: 410-313-6357
Email: rfreemon@howardcountymd.gov
Website: <https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>

From: Freemon, Robert
Sent: Tuesday, January 08, 2019 1:21 PM
To: Tony Fertitta <tonyf@fcc-eng.com>
Cc: Stephanie Tuite <Stephanie@fcc-eng.com>
Subject: RE: 11079 GAITHER FARM RD

Hey Tony,
I am looking into it. The documents I have seen so far show some lot changes and a mix of perc notes. I think I may have found some information on this lot however I need to take a closer look at it to be sure. On another note I have attached my comments for Walnut Creek, Lot 160. If you have any questions let me know.

Robert "Spencer" Freemon
Howard County Health Department
8930 Stanford Blvd. Columbia, MD 21045
Bureau of Environmental Health
Well and Septic Program
Phone: 410-313-6357

Email: rfreemon@howardcountymd.gov

Website: <https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>

From: Tony Fertitta [mailto:tonyf@fcc-eng.com]

Sent: Tuesday, January 08, 2019 12:00 PM

To: Freemon, Robert

Subject: FW: 11079 GAITHER FARM RD

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

any luck

From: Tony Fertitta

Sent: Thursday, January 03, 2019 11:51 AM

To: Freemon, Robert

Subject: 11079 GAITHER FARM RD

Could you please send me perc info on this property 11079 gaither farm road thanks



Right Click the Card to add me to your Contacts



Bureau of Environmental Health

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Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

MEMORANDUM

TO: Fisher, Collins & Carter, Inc.
10272 Baltimore National Pike
Ellicott City, MD 21042

FROM: Robert Freemon *RF*
Well & Septic Program

RE: Walnut Creek, Lot 160
12229 Hayland Farm Way
Ellicott City, MD 21042
(Septic Plan Comments)

DATE: 12/21/2018

After review of the septic plan for 12229 Hayland Farm Way here are my comments.

- Move the septic tank away from the graded swale. The septic tank does not have to be 25ft from it since it is a graded small swale however we do not want the tank to be within or close its path.
- ✓ Move all trenches as far south as possible. Although this is an approved SDA we would like to leave the Northern side of the SDA as a last option due to the neighboring well being less than 200ft down grade.
- ✓ Add a slot in the dividing wall of the septic tank. Label it to be 4' wide and 2" in height.
- Remove note 3 since there is no electrical work to be done.
- ✓ Highlight the lot on the vicinity map.
- X • Make sure all elevations between the different sections of the plan correspond with one another.

**FISHER, COLLINS.
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS
and LAND SURVEYORS**

Terrell A. Fisher, P.E., L.S.
Earl D. Collins, P.E.
Charles J. Crovo, Sr., P.E., L.S.

Paul W. Kriebel, P.E.
Mark L. Robel, P.L.S.
Aldo M. Vitucci, P.E.
Frank Manalansan II, L.S.
Stephanie Tuite, RLA, P.E., LEED AP BD&C

Transmittal

Via: Fax Mail Messenger E-Mail To Be Picked Up
 Fax (original to follow via U.S. Mail)

To: Bureau of Environmental Health 8930 Stanford Blvd Columbia, MD 21046-4544	Attn: Spencer Fax: (410) 313-2648 Phone: (410) 313-2640
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From: Tony Fertitta	CC:
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Re: Walnut Creek Lot 160	W.O.# 04001-6022
Date: December 27, 2018	Pages: 4 Page(s) Including this cover

We are forwarding: <input checked="" type="checkbox"/> Prints <input type="checkbox"/> Copy of Letter <input type="checkbox"/> Specifications <input type="checkbox"/> Shop drawings <input type="checkbox"/> Other <input type="checkbox"/> Urgent <input type="checkbox"/> For your use <input type="checkbox"/> As requested <input type="checkbox"/> For Review & Comment
--

Remarks:

Spencer:

Enclosed please find Two (3) prints of the drawing entitled " Septic Install Plan- Walnut Creek Phase 3 Lot 160" dated December 27, 2018.

If we may be of any further assistance, please do not hesitate to call.

Very truly yours,

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This transmission contains confidential information which may be legally privileged, and is intended only for the use of the individual named above. If you are not the intended recipient, you are hereby notified that any distribution (except to the intended recipient), copying, or disclosure of this transmission is strictly prohibited.

**FISHER, COLLINS
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS
and LAND SURVEYORS**

Transmittal

Terrell A. Fisher, P.E., L.S.
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Frank Manalansari II, L.S.
Stephanie Tuite, RLA, P.E., LEED AP BD&C

Via: Fax Mail Messenger E-Mail To Be Picked Up
 Fax (original to follow via U.S. Mail)

To: **Bureau of Environmental Health**
8930 Stanford Blvd
Columbia, MD 21046-4544

Attn: **Dana**
Fax: **(410) 313-2648**
Phone: **(410) 313-2640**

From: **Tony Fertitta**

CC:

Re: **Walnut Creek Lot 160**

W.O.# **04001-6022**

Date: **November 29, 2018**

Pages: **4** **Page(s) Including this cover**

We are forwarding: Prints Copy of Letter Specifications Shop drawings Other
 Urgent For your use As requested For Review & Comment

Remarks:

Dana:

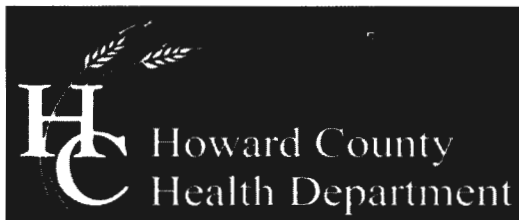
Enclosed please find Two (3) prints of the drawing entitled " Septic Install Plan- Walnut Creek Phase 3 Lot 160" dated November 29, 2018.

If we may be of any further assistance, please do not hesitate to call.

Very truly yours,

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Twitter: HowardCoHealthDep

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

MEMORANDUM

TO: Fisher, Collins & Carter, Inc.
10272 Baltimore National Pike
Ellicott City, MD 21042

FROM: Robert Freemon *RF*
Well & Septic Program

RE: Walnut Creek, Lot 160
12229 Hayland Farm Way
Ellicott City, MD 21042
(Septic Plan Comments)

DATE: 1/8/2018

After review of the septic plan for 12229 Hayland Farm Way here are my comments.

- Make sure all elevations between the different sections of the plan correspond with one another. Between the listed system elevations and “Septic Profile” there are several inconsistencies. The ground elevation at the septic tank and the invert elevations between the d-box and initial trenches need to be corrected.
- There needs to be a softer bend in the septic line coming out of the house. Severe bends in the line before the septic tank increase the risk of clogging.
- Trenches are required to have 11’ of spacing between them. There should be no more and no less than the required spacing (as best as possible). We do not want to waste space but we also do not want to encroach on the trenches.

Transmittal

Via: Fax Mail Messenger E-Mail To Be Picked Up
 Fax (original to follow via U.S. Mail)

To: Bureau of Environmental Health 8930 Stanford Blvd. Columbia, Maryland 21046-4544	Attn: <i>Spencer</i> Fax: Phone: 410-313-2640
---	--

From: Dave Harward	CC:
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Re: Walnut Creek, Pres. Lot 160	W.O.# 04001-6022
Date: Jan. 29, 2019	Pages: 0 Page(s) Including this cover

We are forwarding: <input checked="" type="checkbox"/> Prints <input type="checkbox"/> Copy of Letter <input type="checkbox"/> Specifications <input type="checkbox"/> Shop drawings <input type="checkbox"/> Other <input type="checkbox"/> Urgent <input type="checkbox"/> For your use <input type="checkbox"/> As requested <input checked="" type="checkbox"/> For Review & Comment

Remarks:

Re: Walnut Creek, Lot 160, 12229 Hayland Farm Way

Spencer, We've addressed your comments. Here are 3 copies OSDS Plan for your review & approval.

Thank You,

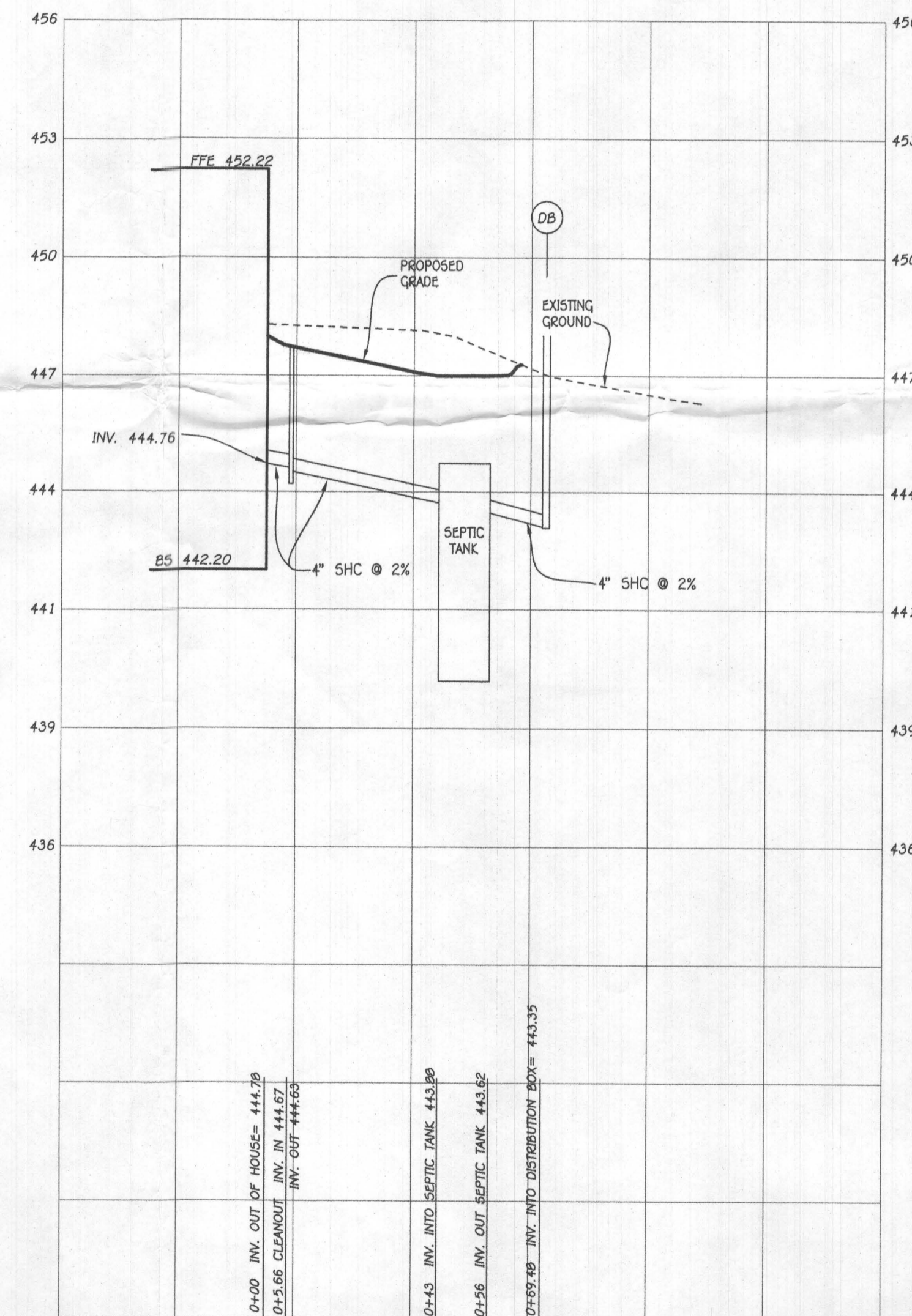
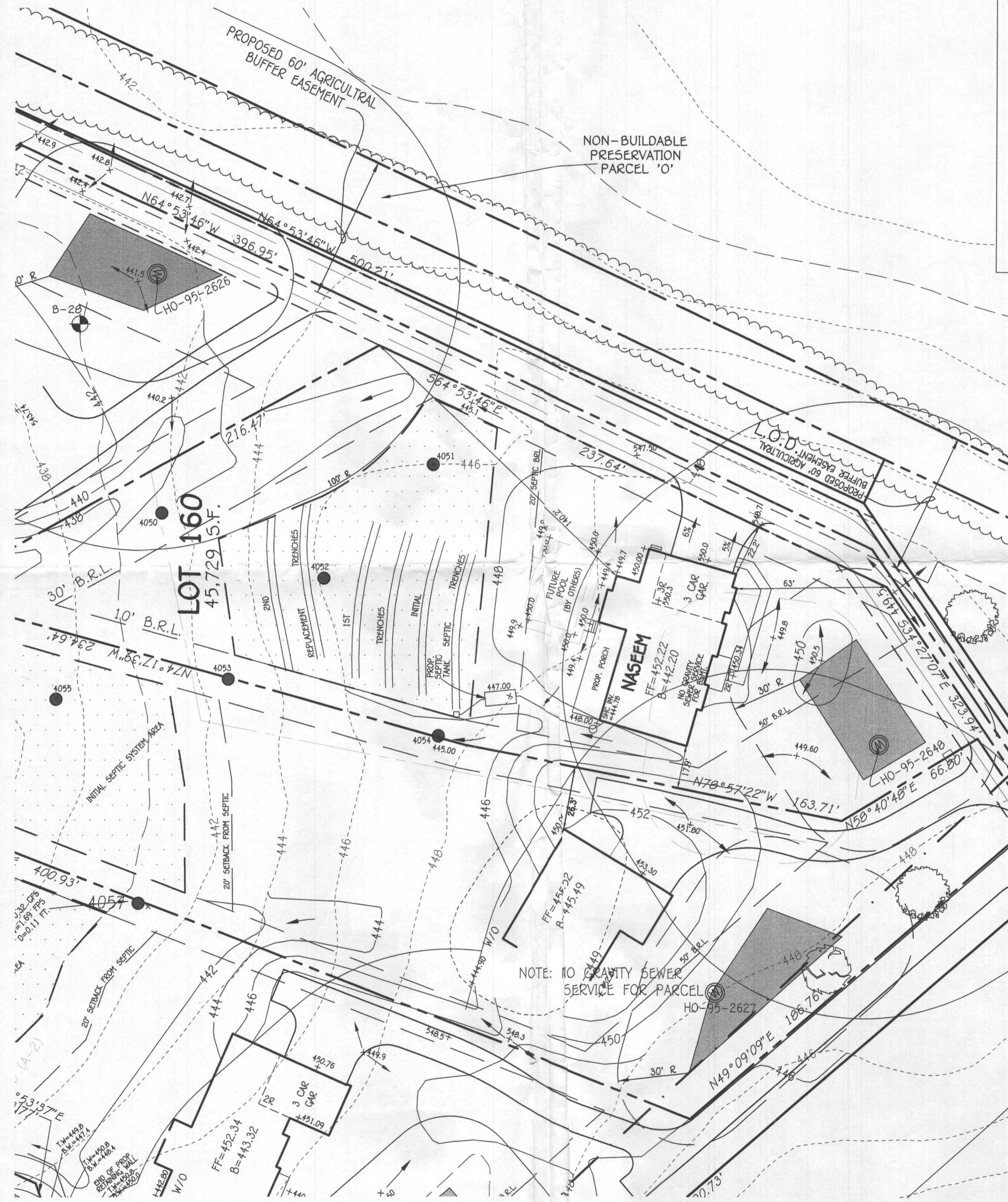
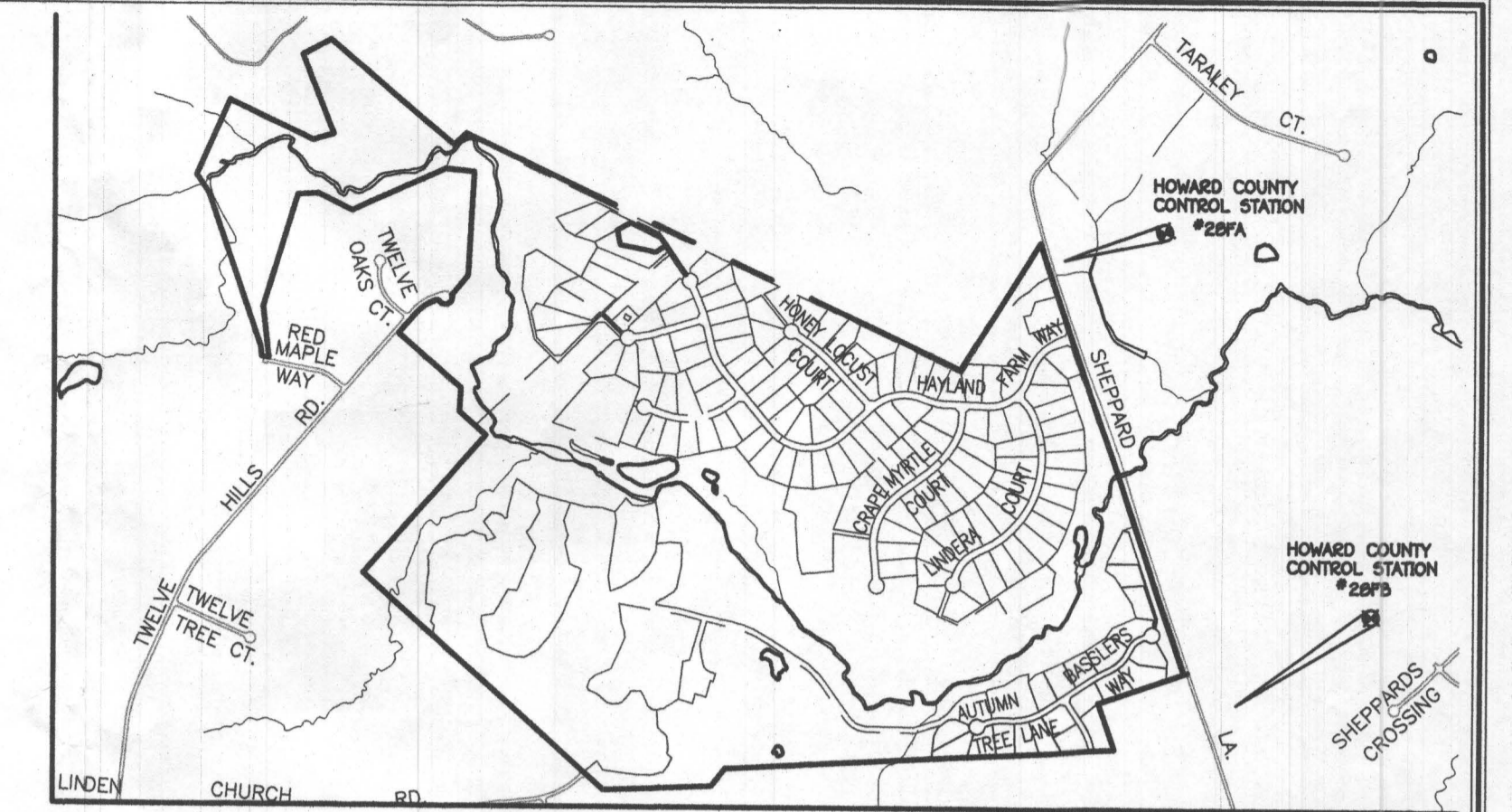
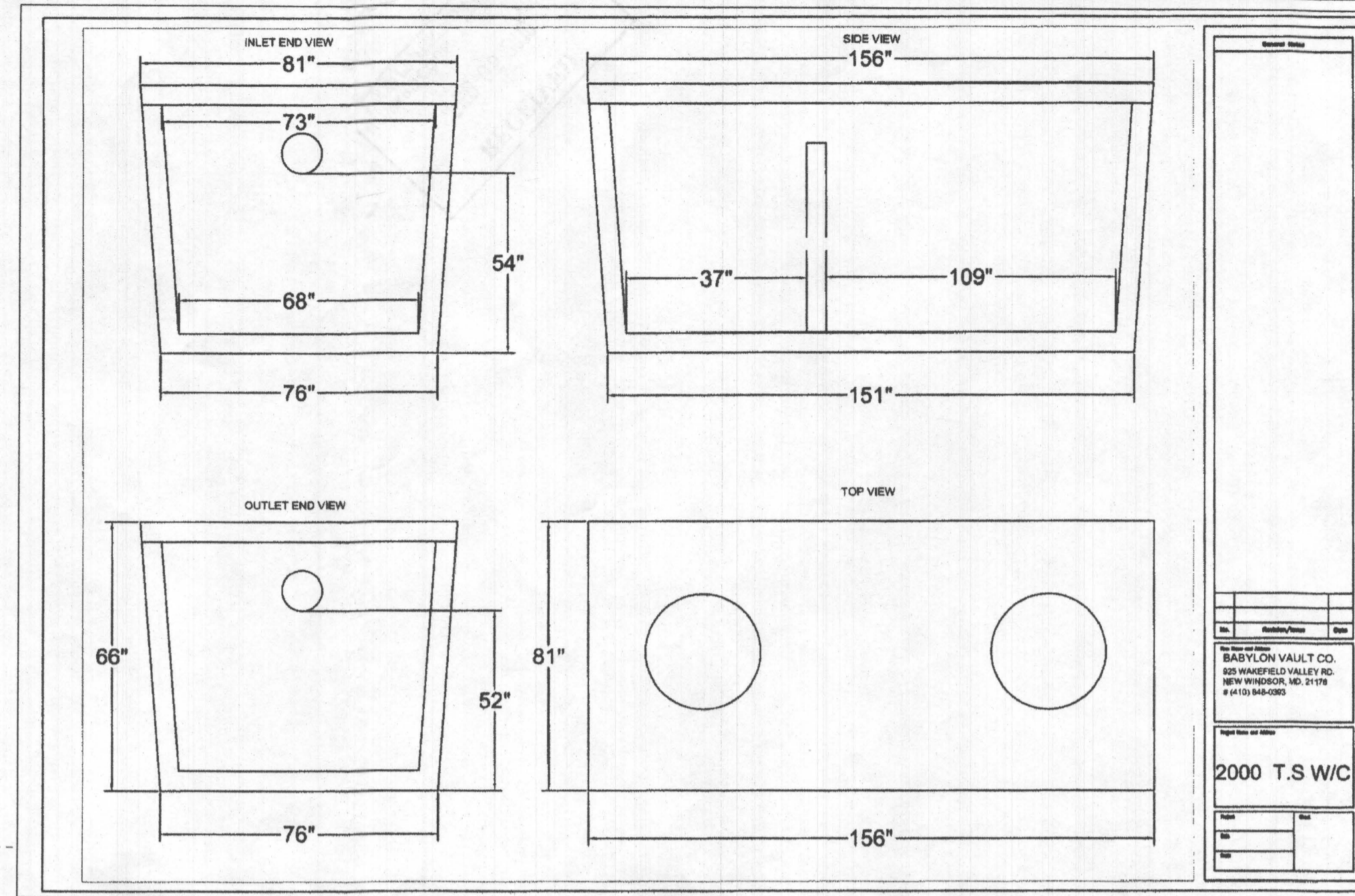
Tony

Fisher, Collins, & Carter, Inc. Ph. 410-461-2855

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2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. THE WELL HO-95-2648 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
4. 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.

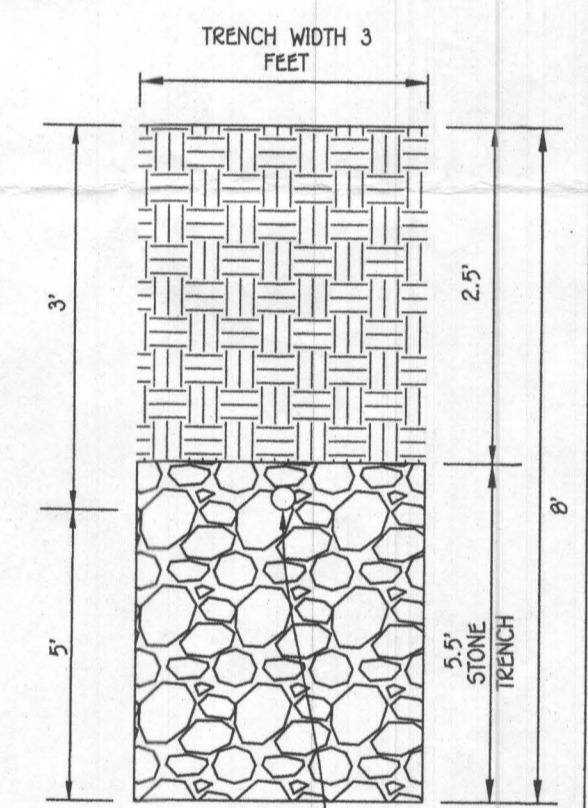


NOTE: NO GRAVITY SEWER SERVICE FOR BASEMENT LOT 160.

FFE 452.22
BSE 442.20
INV. OUT OF HOUSE = 444.71
PROP. GROUND AT CLEANOUT #1 = 447.8
INV. INTO CLEANOUT = 441.63
INV. OUT OF CLEANOUT = 444.53
EX. GROUND AT SEPTIC TANK = 445.80
PROP. GRADE ABOVE SEPTIC TANK = 445.80
TOP OF SEPTIC TANK = 441.80
INV. INTO SEPTIC TANK = 443.80
INV. OUT OF SEPTIC TANK = 443.63
EX. GROUND AT DISTRIBUTION BOX = 446.2
INV. INTO DISTRIBUTION BOX = 443.35
INV. OUT OF DISTRIBUTION BOX = 443.3

Approved Septic System Plan
Howard County Health Department
Signature: *[Signature]* Date: 1/17/2019

TRENCH DATA:
TRENCH 1:
EX. GROUND ABOVE = 446.2
INV. IN = 443.2
BOTTOM TRENCH = 438.2
TRENCH 2:
EX. GROUND ABOVE = 446.4
INV. IN = 443.5
BOTTOM TRENCH = 438.4



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 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 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+(2*4)) = 0.42
TRENCH LENGTH = 937.5 SF x 0.42 = 131.25 FEET
(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'

2ND REPLACEMENT 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 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 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+(2*4)) = 0.42
TRENCH LENGTH = 937.5 SF x 0.42 = 131.25 FEET
(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'

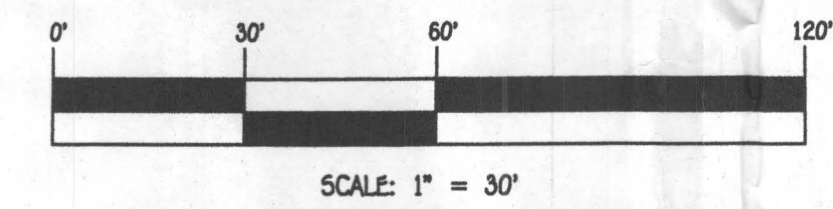
1ST REPLACEMENT SYSTEM
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
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(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'

**LOT 160
SEPTIC SYSTEM
INSTALLATION SITE PLAN
WALNUT CREEK
PHASE THREE**

(A Subdivision of Subdivisible Sub-Parcel 'A' - Walnut Creek, Phase Two) & (A Revision to Non-Buildable Preservation Parcel 'U' and 'V' - 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: JAN. 28, 2019

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
160	12229 HAYLAND FARM WAY

FISHER, COLLINS & CARTER, INC.
CIVIL, ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21046
(410) 461-2299

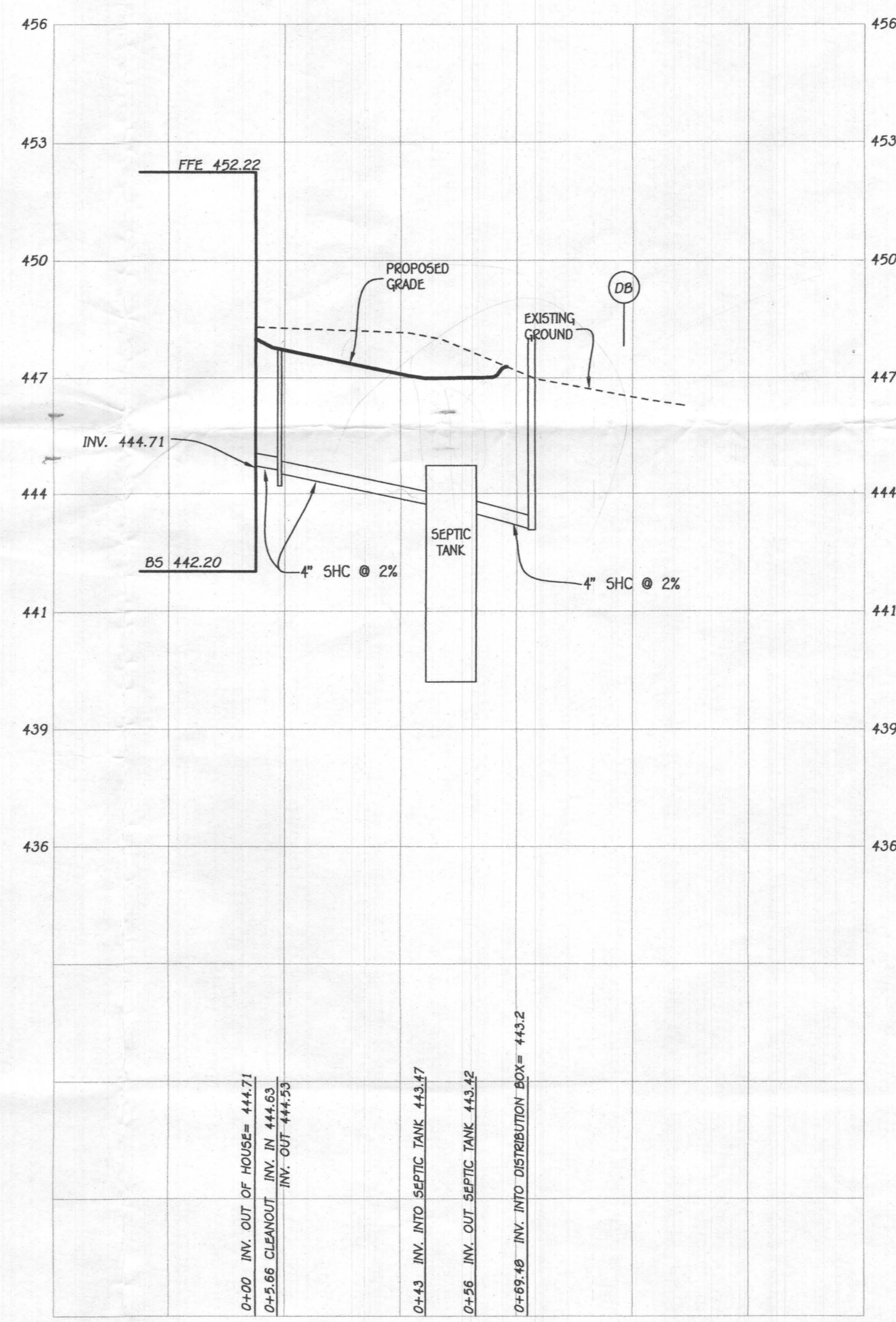
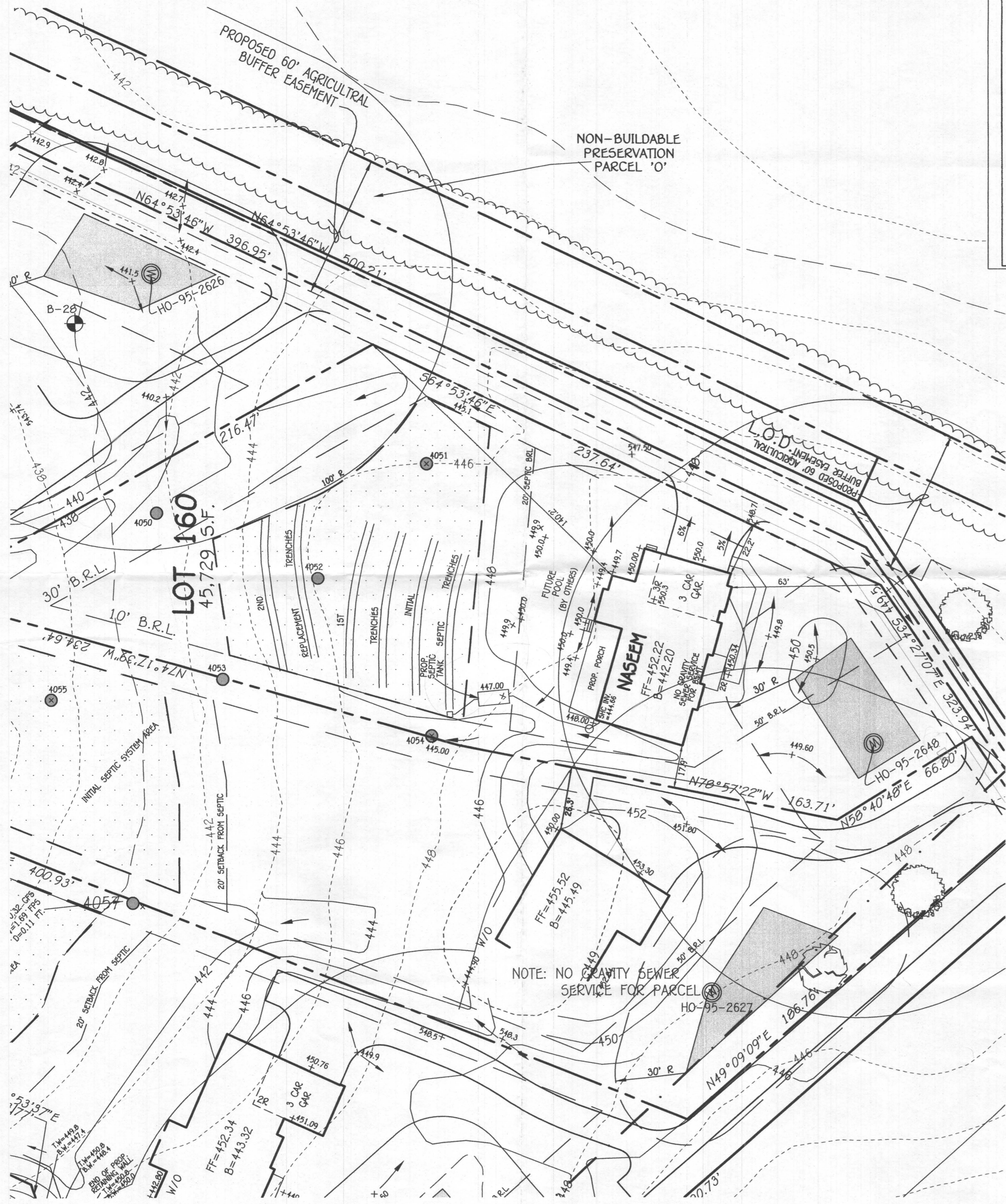
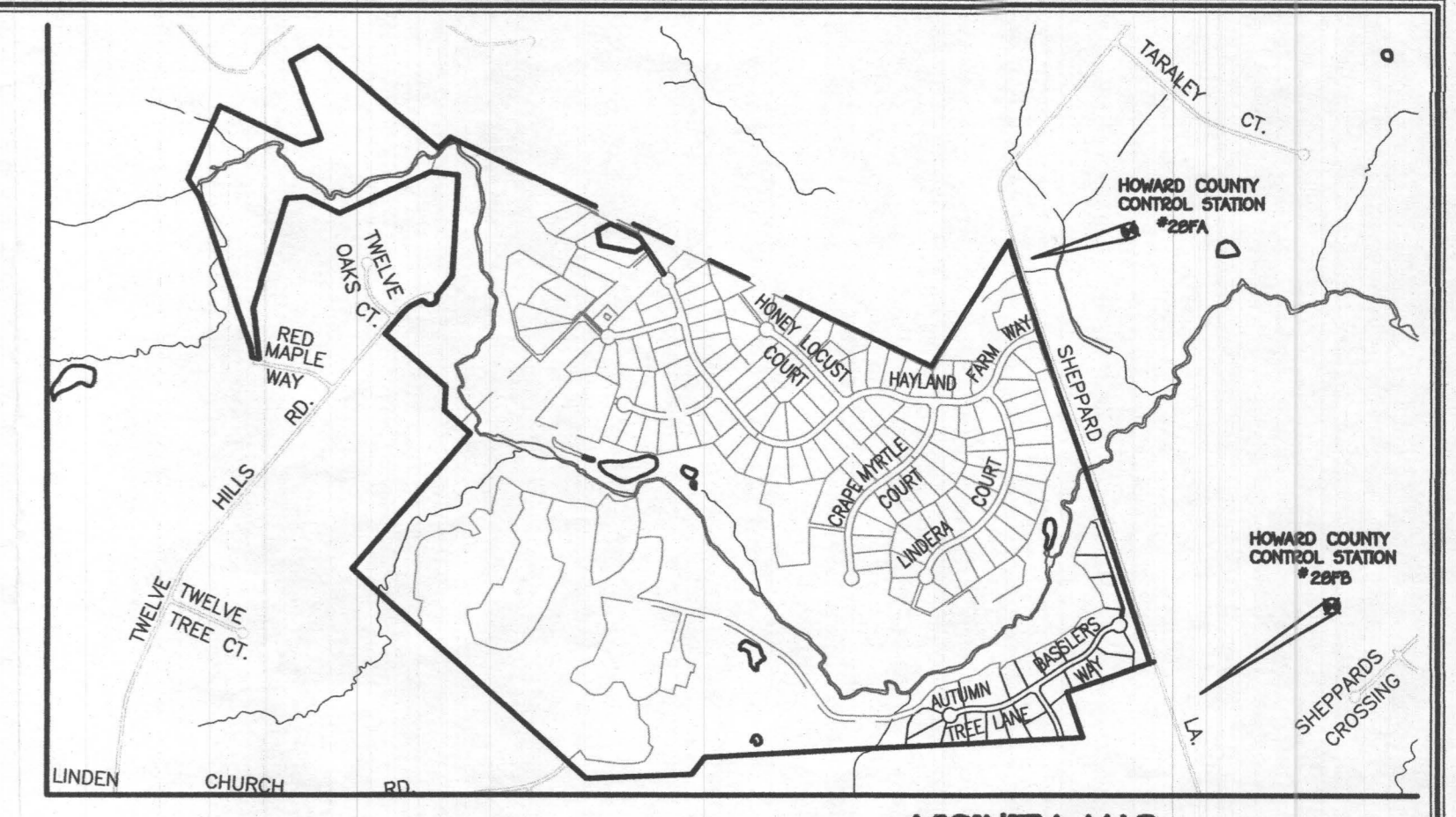
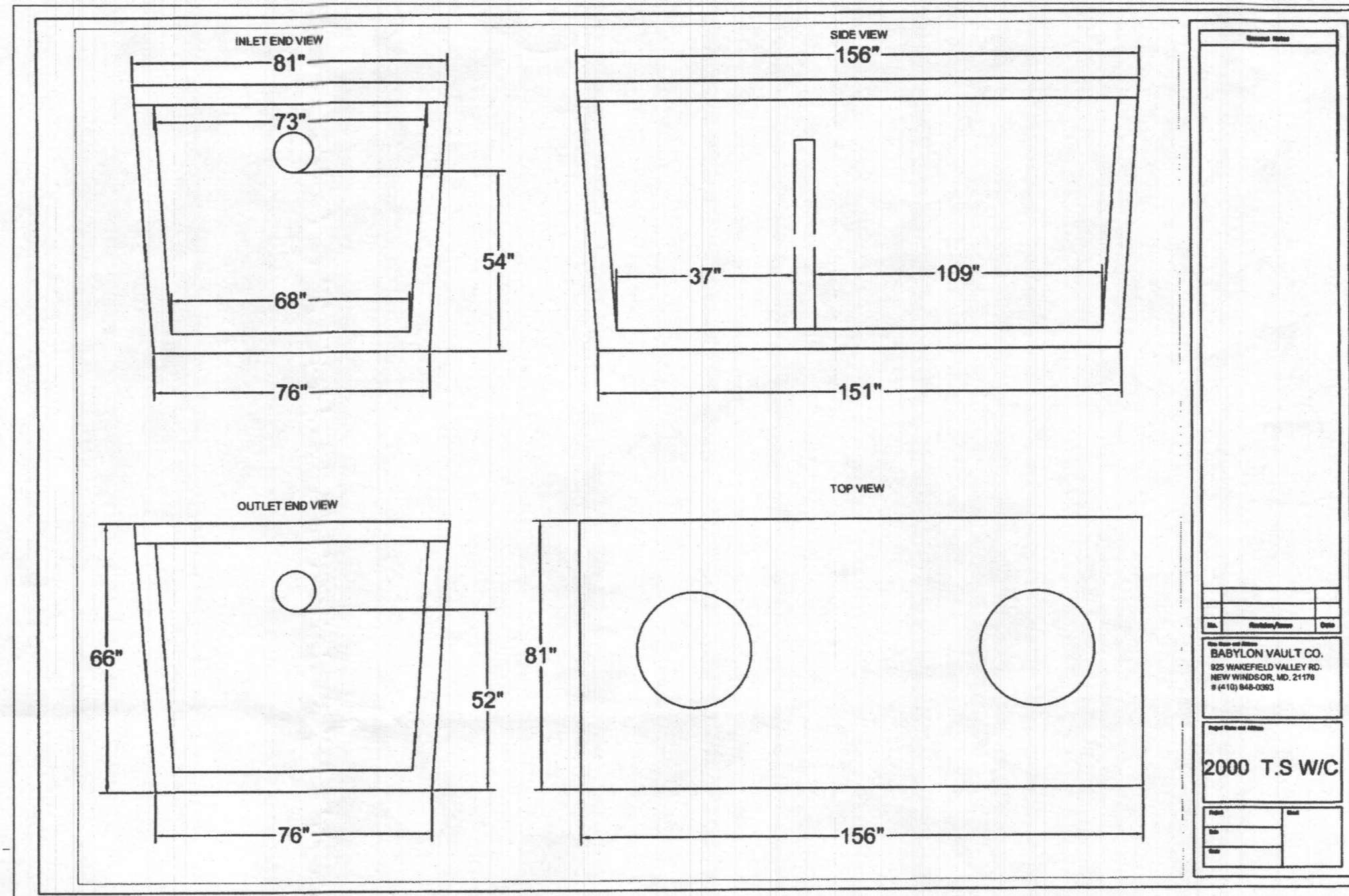


PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.
[Signature] 2/5/19
Signature Of Professional Engineer DATE

SEPTIC PROFILE
SCALE: 1" = 30'

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

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. THE WELL HO-95-2624 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
4. 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.



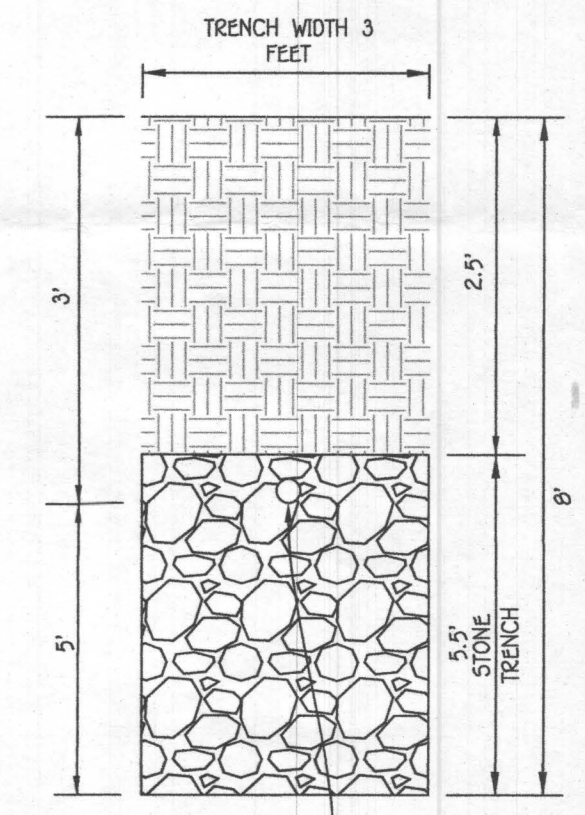
FFE 452.22
BSE 442.20
INV. OUT. OF HOUSE = 444.71
PROP. GROUND AT CLEANOUT #1 = 447.8
INV. INTO CLEANOUT = 444.63
INV. OUT. OF CLEANOUT = 444.53
EX. GROUND AT SEPTIC TANK = 445.80
PROP. GRADE ABOVE SEPTIC TANK = 445.80
TOP OF SEPTIC TANK = 444.72
INV. INTO SEPTIC TANK = 443.47
INV. OUT. OF SEPTIC TANK = 443.42
EX. GROUND AT DISTRIBUTION BOX = 446.2
INV. INTO DISTRIBUTION BOX = 443.2
INV. OUT. OF DISTRIBUTION BOX = 443.1

NOTE: NO GRAVITY SEWER SERVICE FOR LOT 160.

TRENCH DATA:

TRENCH 1:
EX. GROUND ABOVE = 446.2
INV. IN = 443.2
BOTTOM TRENCH = 438.2

TRENCH 2:
EX. GROUND ABOVE = 446.4
INV. IN = 443.5
BOTTOM TRENCH = 438.4

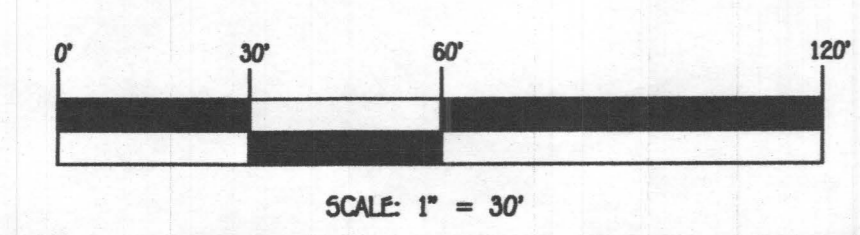


INITIAL SYSTEM
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 FEET
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+(2x4)) = 0.42
TRENCH LENGTH = 937.5 SF x 0.42 = 131.25 FEET
(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

1ST REPLACEMENT 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 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 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+(2x4)) = 0.42
TRENCH LENGTH = 937.5 SF x 0.42 = 131.25 FEET
(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

2ND REPLACEMENT 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 FEET
TRENCH DEPTH = 0 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 4 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+(2x4)) = 0.42
TRENCH LENGTH = 937.5 SF x 0.42 = 131.25 FEET
(USE 2 TRENCHES AT 65.63 L.F.)
TRENCH SPACING = 2D+W = ((2x4) + 3) = 11' USE 11'

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 V. Vitucci
Signature Of Professional Engineer
1/20/19
DATE

OWNER/DEVELOPER
CAKIN CUSTOM HOMES
10548 GORMAN ROAD
LAUREL, MARYLAND 20723
410-618-7362

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
160	12229 HAYLAND FARM WAY

**LOT 160
SEPTIC SYSTEM
INSTALLATION SITE PLAN
WALNUT CREEK
PHASE THREE**

(A Re-subdivision of Buildable Bulk Parcel 'H' - Walnut Creek, Phase Two) & (A Revision to Non-Buildable Preservation Parcel 'L' and 'M' - Walnut Creek, Phase Two)
ZONING: RC-DIG & RC-DDO
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JAN. 28, 2019