

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: 8-8-22 ONSITE SEWAGE DISPOSAL SYSTEM P 572129

APPROVAL DATE: 12/7/2022 PERMIT: CONSTRUCTION A

PROPERTY ADDRESS: 7012 Colt Place

SUBDIVISION: Willowshire LOT: 29 TAX ID:

CONTRACTOR: Chavis Enterprises EMAIL: serlock@chavisenterprisesllc.com

CONTRACTOR ADDRESS: 316 Bepko Road, Forest Hill MD 21050 PHONE: 410-835-1200

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: [X] MDE [X] MANUFACTURER: Norweld

PROPERTY OWNER: Toll Mid Atlantic EMAIL:

OWNER ADDRESS: 250 Gibraltar Rd Norsham PA PHONE: 410-872-9105

BAT UNIT MODEL: TNT LP 1000 PUMP SIZE: 2000 PUMP TANK CAPACITY:

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 11/1/2022 DATE RECORDED: 12/1/2022

DISTRIBUTION SYSTEM: [] GRAVITY [X] PRESSURE DOSED BEDROOMS: 7 APPLICATION RATE: 1.2

Table with trench specifications: LINEAR FEET REQUIRED: 145.83', INLET DEPTH: 2.5', TRENCH WIDTH: 3', MAXIMUM BOTTOM DEPTH: 6', MINIMUM SPACE BETWEEN TRENCHES: 10', EFFECTIVE AREA BEGINNING DEPTH: 3'

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

NOTES: 3 trenches @ 49', see install plan for more details

ISSUED BY: Hank Oswald ISSUE DATE: EXPIRATION DATE: 8-8-23

- 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
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 ATT.

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH INLET BOTTOM

NUMBER OF TRENCHES

TOTAL LENGTH

ABSORPTION AREA

DISTRIBUTION BOX LEVEL

DISTRIBUTION BOX BAFFLE

DISTRIBUTION BOX PORT

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES

MANUFACTURER BACKRIVER

CAPACITY INTLP 1000 GAL

SEAM LOC TOP

TANK LID DEPTH

BAFFLES BAT

BAFFLE FILTER BAT

MANHOLE LOC BAT

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED BAT

DATE ON LID 07/30/2022

PUMP/SEPTIC TANK LEVEL YES

MANUFACTURER BACKRIVER

CAPACITY 2000 GAL

SEAM LOC TOP

TANK LID DEPTH

BAFFLES -

BAFFLE FILTER -

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED NO

DATE ON LID 08/20/2022

NORWECO

2x TANK

PRE-CONSTRUCTION:

09/22/2022 LAID OUT 3x 49' TRS. OK TO START

INSTALLATION: 09/23/2022 TANKS SET. SHC NEEDS RAISE. 09/26/2022

SHC RAISED - S2 BEDDED 10V 57 STONE. 9/27/22 contractor onsite but

worki-g on pump & pump chamber, no work on drainfield yet, NO SHC yet - 9/28/22-site inspection- contractor

onsite worki-g on trenches, top 2 are completed, worki-g on 3rd (bottom) trench which meets construction

specs, told Chavis to backfill and leave ends open for insp. ok to continue. 09/29/2022 FM

AND MANIFOLD INSTALLED 11/17/2022 electrical not installed. Call

for reinspection 11/28/2022 Pump + ALARM FUNCTION. DHP 22'. PE INSPECT

ELECTRICAL PANEL FOR USEL 11/30/2022 PUMP 1/10 ALARM R/P

FINAL INSPECTOR

DATE OF APPROVAL

11/30/2022

12/7/2022

BAT start-up cert. rec'd. (FRM)

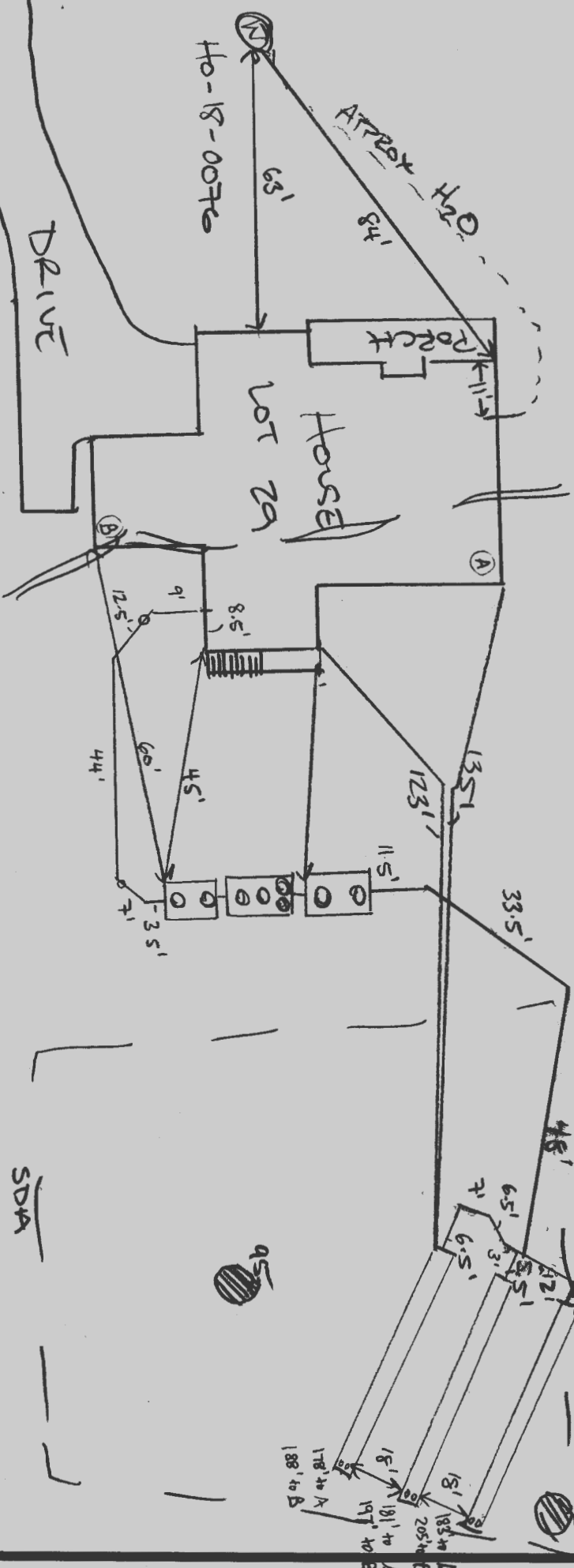
2012 COLT PLACE

NOT TO SCALE 1/2" = 30'

LOT 30

PROP LINE

8' WELLS ARC



HOUSE

PORCH

HO-18-0076

APPROX 142'

DRIVE

LOT 29

PROP LINE

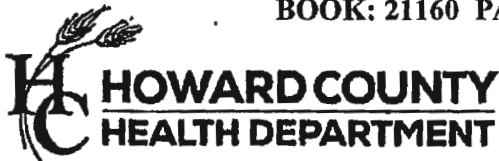
93

LOT 28

94

SDA

NORWECO TMT UP 1000 GAT



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 11th day of Oct., among Samir and Lindsay Bhasin, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County"

Lot 29,

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 7012 Colt Pl. 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 Records of Howard County, Maryland, Tax Map # 27, Block # 18, Parcel # 56, Reference # 21500-09 and Tax Account # 60316 ("the Property")

Table with recording fees: County Agreement Recording Fee 20.00, Search Fee 40.00, Deed 60.00, Total 120.00. Includes date 12/01/2021 and time 11:28.

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 effective November 24, 2016. The pre-treatment device being installed is Norweco Model TNTLP-750 GPD

Handwritten notes: 20, 40, LA

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...
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...
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...
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

Handwritten mark: |||

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.

[Signature] 11/1/21
Howard County Health Department

[Signature] 10/11/21
Owner #1 Signature Date

Samir Bhasin
Owner #1 Print Name

[Signature] 10/11/21
Owner #2 Signature Date

Lindsay Frost-Bhasin
Owner #2 Print Name

Buyer #1 Signature Date

Buyer #1 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name



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

NORWECO CERTIFICATION

PROPERTY OWNER: TOLL MID-ATLANTIC	INSTALLATION COMPANY: CHAVIS SEPTIC
ADDRESS: 7012 COLT PLACE	CERTIFIED INSTALLER: JOSH CHAVIS
CITY, ZIPCODE & COUNTY: DAYTON, 21036, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 09-23-22
1000 GPD CONCRETE	START-UP DATE: 12-05-22
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: 34"	BURIAL DEPTH OF TANK: 36"
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

December 05,2022

Signature of BRP Representative

Vice-President

Date

Ryan Ketner

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Wednesday, June 15, 2022 11:26 AM
To: Michael Boyce; Ryan Ketner
Cc: Nathan Brandenburg; Silvast, Zackary
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29
Attachments: [Untitled].pdf

HANK
COMMENTS

Hi Michael:

I spoke to Jeff Williams this morning. He is also in agreement on this. We would like to see the following on the plan for Willowshire, Lot 29:

- DONE 1.) Move manifold and adjust lowest trench forward as shown. Manifold should be level. (see attachment)
- DONE 2.) Show manifold/lateral figure with elevations. When pumping uphill laterals should be higher than the manifold.
- ?? 3.) Show charts
- DONE 4.) Show drywell line elevation on septic profile. You don't have to show sleeve on septic line (only for well lines).

Let me know if you have any questions.

Thanks,

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>
Sent: Monday, June 13, 2022 11:13 AM
To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

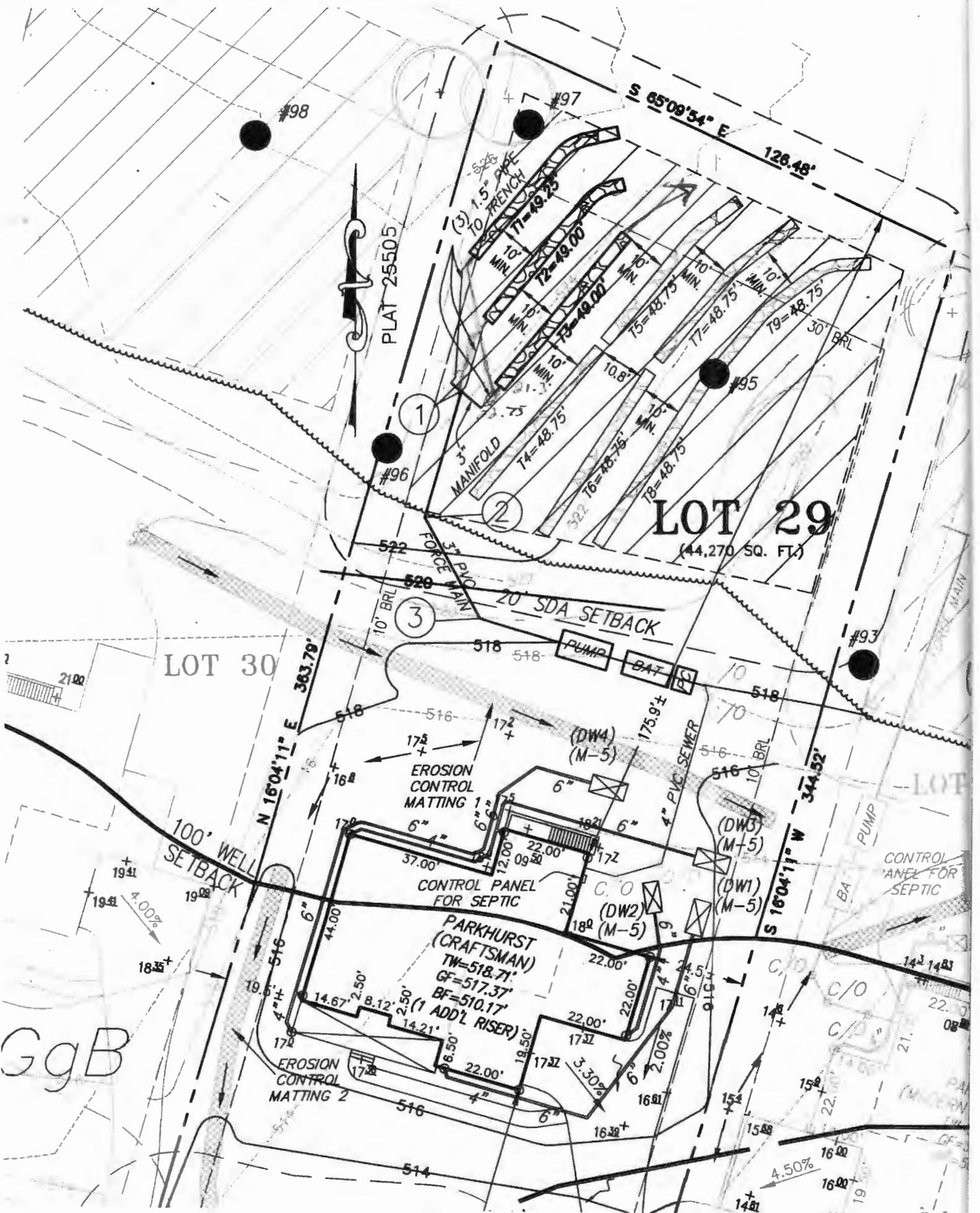
[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Thanks Hank

Michael Boyce
Regional Director – ESE, Survey

ESE Consultants, Inc.
6731 Columbia Gateway Drive, Suite 120, Columbia, MD 21046
P: 410-381-3058 C: 410-365-4175
mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Monday, June 13, 2022 11:06 AM
To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29



Bricker commented on, took that comment as that's what he meant. If you want me to change the manifold to how you have it and redo all the comps, that's fine.....

Please let us know your thoughts on the below.

Thanks,

Ryan Ketner

Survey Designer IV

ESE Consultants, Inc.

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

P: 410-381-3052 C: 443-889-4429 Fax: 410-872-9141

rketner@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Monday, June 6, 2022 2:33 PM

To: Ryan Ketner <rketner@eseconsultants.com>

Subject: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Ryan:

The BAT/LPD Plan for 7012 Colt Place (Willowshire Lot 29) has been reviewed with the following comments:

1. Provide emergency storage calculation. **This is shown on the plan clearly at the top next to the BAT Tank schematic for Typical Pump Chamber Detail**
2. Provide a separate chart for trench design (please see attached LPD worksheet) **Doesn't the Low Pressure Distribution System Calculations provide this?**
3. Show drywell pipe elevation on *Septic Profile*. **This was missed – can add this**
4. Show a 10 foot sleeve on SHC at intersection of drywell pipe. How do you want this shown? **Never had to show this before in all the plans we've done**
5. Show a manifold distribution network similar to figure 4.1 (please see attached LPD Manual page #3) on plan. **The Typical End Feed Lateral Detail shows this and this is how its been excepted for years.**
6. While the unfinished basement floor plan doesn't show a full bath rough in, it likely has one. With the windows in the basement, it's possible that one or more rooms could meet the definition of a bedroom upon finishing this space. You may want to consider sizing the septic to handle 8 bedrooms. **We've accounted for this already for 7 Bedrooms.**

1.) 5 Bedrooms (4 on 2nd Floor and 1 on 1st Floor)

2.) 1 Bedroom (Finished Loft)

3.) 1 Bedroom (Basement)

Should you have any questions, please don't hesitate to ask.

Thanks,

Hank

Hank Oswald, L.E.H.S.

Howard County Health Department

Well & Septic Program

410.313.1786

hoswald@howardcountymd.gov

5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy?

I've copied my supervisor Zack Silvast on this email.

Thanks,

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>

Sent: Wednesday, June 8, 2022 12:02 PM

To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Hank,

I understand that you are trying to get as much info on plans for installers as possible, but in the last few emails you have requested additional work that adds hours to the plans, and for the ones submitted, are holding up permits longer in what is already a long and tedious process.

We have been submitting and getting approved these BAT plans, LPD plans etc. for over two years now as shown on what you have now. For the ones in review now, please consider the time and cost involved, and let us know what absolutely has to be addressed (I feel they should be good as they are) and going forward if you are going to require this additional information, please provide a comprehensive checklist we can follow so we don't have to keep revising what is needed every couple months. We need to be able to tell the client how much the fee for the design is going to increase and the reason for the increase.

thanks

Michael Boyce

Regional Director – ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Wednesday, June 8, 2022 11:40 AM

To: Ryan Ketner <rketner@eseconsultants.com>

Cc: Michael Boyce <MBOYCE@eseconsultants.com>

Subject: FW: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Ryan:

I was talking with one of the field inspectors (Kevin Wolf) in the office about this plan this morning. In addition to my comments, he is also recommends that you change the "typical" end feed trench detail to actually match the # holes per lateral/trench in the chart, and show a separate detail for each lateral/trench for the initial system (only). Again not required, but he did say that this has created a some confusion for the installer in the past.

Thanks,

Hank

From: Oswald, Hank
Sent: Tuesday, June 7, 2022 11:32 AM
To: Ryan Ketner <rketner@eseconsultants.com>
Cc: Michael Boyce <MBOYCE@eseconsultants.com>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

He Ryan:

1. The actual calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.
2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.
3. Okay. Thanks.
4. I've been taught that a sleeve is required where the septic line intersects a well or drywell linr. You can show it on the piping layout with label. It will probably be an 8 inch sleeve.
5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy?

Thanks,

Hank

From: Ryan Ketner <rketner@eseconsultants.com>
Sent: Monday, June 6, 2022 3:01 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>
Cc: Michael Boyce <MBOYCE@eseconsultants.com>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Please see blow in Green, the only thing we missed was the elevation of the drywell pipe on the septic profile. Everything else has been a standard with a few years we've been submitting these. Not trying to argue, don't know if this is a reviewer difference or a County new standard. We try to show everything on the plan so there are no extra sheets etc. Each plan should hold and account for itself.

I've gone many rounds in the past with Bricker to get this to look the way they are today, don't mean to sound rude. Also on another project I had a long manifold kinda like the way you were showing and Bricker told me to minimize it and offset the pipes 1' so I change that per that comment and what he says where the laterals join the manifold they should be at least 1' apart. You can see I had them more than 1' apart on the previous BAT plan that

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, June 8, 2022 1:45 PM
To: Michael Boyce; Ryan Ketner
Cc: Nathan Brandenburg; Silvast, Zackary
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29
Attachments: [Untitled]layout.pdf; pump tank detail.pdf

Mr. Boyce:

1. There is a calculation for volume of liquid. Typically, it's the inside space between high water alarm and inlet elevation. Please see attachment. "The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high water alarm."
2. We need an approved septic plan prior to BP approval. That's always been the case. It's our responsibility to ensure we have an adequate septic system design plan for the future homeowner.
3. Apparently, this will be addressed.
4. I suppose I could redline the plan with this change, but you have to make revision to the plan anyway so why not add it?
5. Please see attached proposed manifold/lateral adjustment in red.
6. Ryan stated there's a bedroom in the basement. That's why I requested the floor plan. You have to scroll down to see his comments. Thanks for confirming no bathroom rough-in in basement.

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>
Sent: Wednesday, June 8, 2022 1:12 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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Hank,

The issue of time on our end is what it would take to resize the sheets to add all this stuff and then to add it. As you can see on the plan there is no room to add additional details etc. The information requested is provided on the plan already in a different format, that has been acceptable for the last two years.

For comments of current submissions the issue is timing to get permits. Making revisions and resubmitting would hold permit process.

Plan review comments:

1. The actual emergency storage calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.

That is the emergency storage required, and we note that it is provided. There is no calculation to do, it's a one day storage. This was discussed with Bricker a while ago and shown as he requested.

2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.

We can add this chart going forward, I don't see why we should hold permits up for existing submissions. However, this information is provided on the plan already. The ground invert and bottom are by the trench detail the rest is in the LPD system calculations.

3. Okay. Thanks.
4. I've been taught that a sleeve is required where the septic line intersects a well or drywell line. You can show it on the piping layout with label. It will probably be an 8 inch sleeve. We can show this going forward, but for the plans in review this could be an easy red line on your end.
5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*. We can add going forward, however this has not been required prior and should not hold up existing submissions.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed. Assume this has to do with the unfinished basement. Not sure what is being asked here.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy? Toll provided the architectural plans, our design is based on them, with a finished loft, and unfinished basement. The unfinished basement won't be roughed in for bath. However we did the design with 7 BR since 7 BR would fit. As the house is sold it is a 6 br house, so IF the basement is ever remodeled, the design is done for that.

Michael Boyce

Regional Director - ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Wednesday, June 8, 2022 12:32 PM

To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Mr. Boyce:

I understand. These plan reviews are time consuming. I've attached a list of BAT plan requirements. We don't have a list of LPD plan requirements. Can you be more specific about what you don't want to revise per my last set of comments (see below)? These seem like simple changes or a quick answer to a floor plan question.

Plan review comments:

1. The actual emergency storage calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.
2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.
3. Okay. Thanks.
4. I've been taught that a sleeve is required where the septic line intersects a well or drywell line. You can show it on the piping layout with label. It will probably be an 8 inch sleeve.

Oswald, Hank

From: Oswald, Hank
Sent: Monday, June 6, 2022 2:33 PM
To: 'Ryan Ketner'
Subject: BAT Plan_7012 Colt Place_Willowshire Lot 29
Attachments: LPD Design Manual.pdf; Low Pressure Dosing System Worksheet_2.27.2020.docx; proposed pipe layout.pdf

Hi Ryan:

The BAT/LPD Plan for 7012 Colt Place (Willowshire Lot 29) has been reviewed with the following comments:

1. Provide emergency storage calculation.
(The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high water alarm.)
2. Provide a separate chart for trench design (please see attached LPD worksheet)
3. Show drywell pipe elevation on *Septic Profile*.
4. Show a 10 foot sleeve on SHC at intersection of drywell pipe.
5. Show a manifold distribution network similar to figure 4.1 (please see attached LPD Manual page #3) on plan.
6. While the unfinished basement floor plan doesn't show a full bath rough in, it likely has one. With the windows in the basement, it's possible that one or more rooms could meet the definition of a bedroom upon finishing this space. You may want to consider sizing the septic to handle 8 bedrooms.

Should you have any questions, please don't hesitate to ask.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786
hoswald@howardcountymd.gov

Oswald, Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>
Sent: Wednesday, June 8, 2022 1:56 PM
To: Oswald, Hank; Ryan Ketner
Cc: Nathan Brandenburg; Silvast, Zackary
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Maybe we should meet in person, I feel like we are going in circles here.

- I understand there is a volume of liquid, that is what is stated on the plan. We are required to show one day storage, and that is what we are showing, I suppose we could show the math on the plan to verify that the numbers we show on the plan are correct.
- I understand the septic plan has to be approved for BP, that is why I don't want to hold up the review making changes if not needed.
- My recommendation for you redlining was in the event that was the only change.
- The manifold design is shown how we had been told to show it in the past, that was my point, we are fine changing going forward, however if it was acceptable in the past, then do we need to hold up this lot for the change. It was shown that way in response to comments a year and a half ago.

Michael Boyce

Regional Director – ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Wednesday, June 8, 2022 1:45 PM
To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

Mr. Boyce:

1. There is a calculation for volume of liquid. Typically, it's the inside space between high water alarm and inlet elevation. Please see attachment. "The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high water alarm."
2. We need an approved septic plan prior to BP approval. That's always been the case. It's our responsibility to ensure we have an adequate septic system design plan for the future homeowner.
3. Apparently, this will be addressed.
4. I suppose I could redline the plan with this change, but you have to make revision to the plan anyway so why not add it?
5. Please see attached proposed manifold/lateral adjustment in red.
6. Ryan stated there's a bedroom in the basement. That's why I requested the floor plan. You have to scroll down to see his comments. Thanks for confirming no bathroom rough-in in basement.

Oswald, Hank

From: Oswald, Hank
Sent: Wednesday, June 15, 2022 11:26 AM
To: Michael Boyce; Ryan Ketner
Cc: Nathan Brandenburg; Silvast, Zackary
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29
Attachments: [Untitled].pdf

Hi Michael:

I spoke to Jeff Williams this morning. He is also in agreement on this. We would like to see the following on the plan for Willowshire, Lot 29:

- 1.) Move manifold and adjust lowest trench forward as shown. Manifold should be level. (see attachment)
- 2.) Show manifold/lateral figure with elevations. When pumping uphill laterals should be higher than the manifold.
- 3.) Show charts
- 4.) Show drywell line elevation on septic profile. You don't have to show sleeve on septic line (only for well lines).

Let me know if you have any questions.

Thanks,

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>
Sent: Monday, June 13, 2022 11:13 AM
To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Thanks Hank

Michael Boyce
Regional Director – ESE, Survey

ESE Consultants, Inc.
6731 Columbia Gateway Drive, Suite 120, Columbia, MD 21046
P: 410-381-3058 C: 410-365-4175
mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Monday, June 13, 2022 11:06 AM
To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>
Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Mr. Boyce:

I've discussed this review with my supervisor, Zack Silvast. This morning, Zack indicated that he will need to meet with the Deputy Director, Jeff Williams. Hopefully this will occur tomorrow. He or I will get back to you.

Thanks,

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>

Sent: Wednesday, June 8, 2022 1:56 PM

To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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Maybe we should meet in person, I feel like we are going in circles here.

- I understand there is a volume of liquid, that is what is stated on the plan. We are required to show one day storage, and that is what we are showing, I suppose we could show the math on the plan to verify that the numbers we show on the plan are correct.
- I understand the septic plan has to be approved for BP, that is why I don't want to hold up the review making changes if not needed.
- My recommendation for you redlining was in the event that was the only change.
- The manifold design is shown how we had been told to show it in the past, that was my point, we are fine changing going forward, however if it was acceptable in the past, then do we need to hold up this lot for the change. It was shown that way in response to comments a year and a half ago.

Michael Boyce

Regional Director – ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Wednesday, June 8, 2022 1:45 PM

To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

Mr. Boyce:

1. There is a calculation for volume of liquid. Typically, it's the inside space between high water alarm and inlet elevation. Please see attachment. "The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high water alarm."
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3. Apparently, this will be addressed.
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5. Please see attached proposed manifold/lateral adjustment in red.
6. Ryan stated there's a bedroom in the basement. That's why I requested the floor plan. You have to scroll down to see his comments. Thanks for confirming no bathroom rough-in in basement.

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>

Sent: Wednesday, June 8, 2022 1:12 PM

To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Hank,

The issue of time on our end is what it would take to resize the sheets to add all this stuff and then to add it. As you can see on the plan there is no room to add additional details etc. The information requested is provided on the plan already in a different format, that has been acceptable for the last two years.

For comments of current submissions the issue is timing to get permits. Making revisions and resubmitting would hold permit process.

Plan review comments:

1. The actual emergency storage calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.

That is the emergency storage required, and we note that it is provided. There is no calculation to do, it's a one day storage. This was discussed with Bricker a while ago and shown as he requested.

2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.

We can add this chart going forward, I don't see why we should hold permits up for existing submissions. However, this information is provided on the plan already. The ground invert and bottom are by the trench detail the rest is in the LPD system calculations.

3. Okay. Thanks.
4. I've been taught that a sleeve is required where the septic line intersects a well or drywell line. You can show it on the piping layout with label. It will probably be an 8 inch sleeve. We can show this going forward, but for the plans in review this could be an easy red line on your end.
5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*. We can add going forward, however this has not been required prior and should not hold up existing submissions.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed. Assume this has to do with the unfinished basement. Not sure what is being asked here.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy? Toll provided the architectural plans, our design is based on them, with a finished loft, and unfinished basement. The unfinished basement won't be roughed in for bath. However

we did the design with 7 BR since 7 BR would fit. As the house is sold it is a 6 br house, so IF the basement is ever remodeled, the design is done for that.

Michael Boyce

Regional Director - ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Wednesday, June 8, 2022 12:32 PM

To: Michael Boyce <MBOYCE@eseconsultants.com>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>; Silvast, Zackary <zsilvast@howardcountymd.gov>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Mr. Boyce:

I understand. These plan reviews are time consuming. I've attached a list of BAT plan requirements. We don't have a list of LPD plan requirements. Can you be more specific about what you don't want to revise per my last set of comments (see below)? These seem like simple changes or a quick answer to a floor plan question.

Plan review comments:

1. The actual emergency storage calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.
2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.
3. Okay. Thanks.
4. I've been taught that a sleeve is required where the septic line intersects a well or drywell line. You can show it on the piping layout with label. It will probably be an 8 inch sleeve.
5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy?

I've copied my supervisor Zack Silvast on this email.

Thanks,

Hank

From: Michael Boyce <MBOYCE@eseconsultants.com>

Sent: Wednesday, June 8, 2022 12:02 PM

To: Oswald, Hank <hoswald@howardcountymd.gov>; Ryan Ketner <rketner@eseconsultants.com>

Cc: Nathan Brandenburg <NBRANDENBURG@tollbrothers.com>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Hank,

I understand that you are trying to get as much info on plans for installers as possible, but in the last few emails you have requested additional work that adds hours to the plans, and for the ones submitted, are holding up permits longer in what is already a long and tedious process.

We have been submitting and getting approved these BAT plans, LPD plans etc. for over two years now as shown on what you have now. For the ones in review now, please consider the time and cost involved, and let us know what absolutely has to be addressed (I feel they should be good as they are) and going forward if you are going to require this additional information, please provide a comprehensive checklist we can follow so we don't have to keep revising what is needed every couple months. We need to be able to tell the client how much the fee for the design is going to increase and the reason for the increase.

thanks

Michael Boyce

Regional Director – ESE, Survey

ESE Consultants, Inc.

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

P: 410-381-3058 C: 410-365-4175

mboyce@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>

Sent: Wednesday, June 8, 2022 11:40 AM

To: Ryan Ketner <rketner@eseconsultants.com>

Cc: Michael Boyce <MBOYCE@eseconsultants.com>

Subject: FW: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Ryan:

I was talking with one of the field inspectors (Kevin Wolf) in the office about this plan this morning. In addition to my comments, he is also recommends that you change the “typical” end feed trench detail to actually match the # holes per lateral/trench in the chart, and show a separate detail for each lateral/trench for the initial system (only). Again not required, but he did say that this has created a some confusion for the installer in the past.

Thanks,

Hank

From: Oswald, Hank

Sent: Tuesday, June 7, 2022 11:32 AM

To: Ryan Ketner <rketner@eseconsultants.com>

Cc: Michael Boyce <MBOYCE@eseconsultants.com>

Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

He Ryan:

1. The actual calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.
2. You're not required to add the trench chart to the plan, but I feel like the charts assist the installer with the installation.
3. Okay. Thanks.

4. I've been taught that a sleeve is required where the septic line intersects a well or drywell linr. You can show it on the piping layout with label. It will probably be an 8 inch sleeve.
5. The manifold network figure should be shown for the benefit of the installer. You can add the figure below the *Trench Detail*.
6. I've never seen this design before, and my immediate supervisor agrees that it should be changed.
7. Please provide floor plan for basement. My copy shows unfinished basement. Also, the loft is part of the 2nd floor plan. Does it have doors for privacy?

Thanks,

Hank

From: Ryan Ketner <rketner@eseconsultants.com>
Sent: Monday, June 6, 2022 3:01 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>
Cc: Michael Boyce <MBOYCE@eseconsultants.com>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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

Please see blow in Green, the only thing we missed was the elevation of the drywell pipe on the septic profile. Everything else has been a standard with a few years we've been submitting these. Not trying to argue, don't know if this is a reviewer difference or a County new standard. We try to show everything on the plan so there are no extra sheets etc. Each plan should hold and account for itself.

I've gone many rounds in the past with Bricker to get this to look the way they are today, don't mean to sound rude. Also on another project I had a long manifold kinda like the way you were showing and Bricker told me to minimize it and offset the pipes 1' so I change that per that comment and what he says where the laterals join the manifold they should be at least 1' apart. You can see I had them more than 1' apart on the previous BAT plan that Bricker commented on, took that comment as that's what he meant. If you want me to change the manifold to how you have it and redo all the comps, that's fine.....

Please let us know your thoughts on the below.

Thanks,

Ryan Ketner
Survey Designer IV

ESE Consultants, Inc.

6731 Columbia Gateway Drive, Suite 120, Columbia, MD 21046
P: 410-381-3052 C: 443-889-4429 Fax: 410-872-9141
rketner@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Monday, June 6, 2022 2:33 PM
To: Ryan Ketner <rketner@eseconsultants.com>
Subject: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Ryan:

The BAT/LPD Plan for 7012 Colt Place (Willowshire Lot 29) has been reviewed with the following comments:

1. Provide emergency storage calculation. **This is shown on the plan clearly at the top next to the BAT Tank schematic for Typical Pump Chamber Detail**
2. Provide a separate chart for trench design (please see attached LPD worksheet) **Doesn't the Low Pressure Distribution System Calculations provide this?**
3. Show drywell pipe elevation on *Septic Profile*. **This was missed – can add this**
4. Show a 10 foot sleeve on SHC at intersection of drywell pipe. How do you want this shown? **Never had to show this before in all the plans we've done**
5. Show a manifold distribution network similar to figure 4.1 (please see attached LPD Manual page #3) on plan. **The Typical End Feed Lateral Detail shows this and this is how its been excepted for years.**
6. While the unfinished basement floor plan doesn't show a full bath rough in, it likely has one. With the windows in the basement, it's possible that one or more rooms could meet the definition of a bedroom upon finishing this space. You may want to consider sizing the septic to handle 8 bedrooms. **We've accounted for this already for 7 Bedrooms.**

- 1.) 5 Bedrooms (4 on 2nd Floor and 1 on 1st Floor)
- 2.) 1 Bedroom (Finished Loft)
- 3.) 1 Bedroom (Basement)

Should you have any questions, please don't hesitate to ask.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786
hoswald@howardcountymd.gov

Oswald, Hank

From: Steven Krieg -MDE- <steven.krieg@maryland.gov>
Sent: Monday, June 6, 2022 11:33 AM
To: Travis Sterner -MDE-
Cc: Oswald, Hank; Matthew Geckle
Subject: Re: BAT Question

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

Folks

Actually Norweco is ok with 120 gpd/bedroom for sizing the Norweco. When you do the Math, 600 gpd / 5 bedrooms in their memo = 120 gpd/bedroom

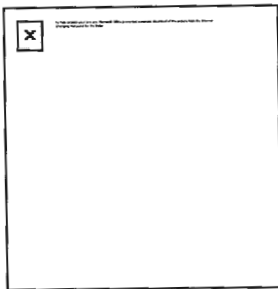
So a Norweco 1000 is OK for a 7 bedroom home although the designer may need to have flow equalization on something like this.

Travis, perhaps you get Norweco to revise their memo as we get this question repeatedly. gpd / bedroom

Remember we are not talking drainfield sizing at 150 gpd/ bedroom, we are talking BAT unit sizing.

Copying Matt Geckle.

Thanks



Steven Krieg, LEHS, REHS/RS
Regional Consultant
Water and Science Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230
steven.krieg@maryland.gov
410-537-3680 (O)

[Website](#) | [Facebook](#) | [Twitter](#)

On Mon, Jun 6, 2022 at 11:21 AM Travis Sterner -MDE- <travis.sterner@maryland.gov> wrote:
Hank,

Here is the latest information on bedrooms we have, if you haven't already seen it.

<https://mde.maryland.gov/programs/water/BayRestorationFund/OnsiteDisposalSystems/Documents/Bedroom%20Capacity%20for%20Field-verified%20Best%20Available%20Technology.pdf>

So the Norweco 1000 gpd is rated for 1000 gpd (that memo says not to use the 1000 for more than 1000 gpd designs). You are correct that according to our reg a 7 bedroom would produce 1050 gpd.

I would speak with the designer about it. Unless he makes a good case for the 1000 gpd unit, I would require the 1250 gpd unit to be installed there.

Some things to maybe consider.

Is this a small 7 bedroom home (if there is one)

Likely to have less than 8 people living there

Good question, and I get these gray "right on the break" questions like this often.

Travis Sterner, LEHS
BRF, BAT Section Head
Water Management Administration
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230
Travis.Sterner@Maryland.gov
(410) 537-3635 (office)
[Website](#) | [Facebook](#) | [Twitter](#)

Click here to complete a three question [customer experience survey](#). Travis E. Sterner, L.E.H.S

On Mon, Jun 6, 2022 at 10:44 AM Oswald, Hank <hoswald@howardcountymd.gov> wrote:

Hi Travis:

Good morning. I'm reviewing a BAT plan for a 7 bedroom residence, and the engineer is proposing a Norweco 1000. Do you know if this BAT unit is sufficient for the proposed 7 bedroom design (1,050 design flow)?

Thanks,

Hank

Hank Oswald, L.E.H.S.

Howard County Health Department

Well & Septic Program

410.313.1786

hoswald@howardcountymd.gov

[Click here](#) to complete a three question customer experience survey.

[Click here](#) to complete a three question customer experience survey.

Ryan Ketner

From: Bricker, Robert <RBricker@howardcountymd.gov>
Sent: Thursday, February 24, 2022 4:33 PM
To: Ryan Ketner
Cc: Michael Boyce
Subject: Willowshire Lot 29_BAT Site Plan

Good afternoon Ryan,

I am reviewing the distribution system for Lot 29 BAT Site Plan. I'm not sure that you have calculated the Friction Head correctly. For the conditions of the design, the maximum Friction Head should include the Force Main and Manifold (as you have) plus the flow resistance in the longest length of 1.5-inch pipe leading to a trench (which would be Lateral 1). The manuals will refer to the 1.5-inch pipe as Lateral before the first perforation. It is in fact part of the Lateral, though I tend to call it a 'lateral leader' to distinguish that part from the length within the trench.

Whatever it may be called, you calculate the friction head for the longest length (not the sum of lengths) using the flow rate in that pipe, then add the friction head that you have calculated for the 3-inch Force Main and Manifold.

Also, Laterals that join the manifold should be offset at least 1 foot from where the Force Main joins the Manifold, thereby aiding the system to pressurize equally in less time.

Robert Bricker, REHS/RS, L.E.H.S.
Environmental Sanitarian II
Bureau of Environmental Health, Well and Septic Program
8930 Stanford Blvd., Columbia, MD 21045

Phone: (410)313-2691
Email: rbricker@howardcountymd.gov

SHORTENED THE MANIFOLD AND
CORRECTED THE PIPE LENGTH PER
COMMENTS.

RCK 5/20/22



CONFIDENTIALITY NOTICE

This message and the accompanying documents are intended only for the use of the individual or entity to which they are addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable law. If the reader of this email is not the intended recipient, you are hereby notified that you are strictly prohibited from reading, disseminating, distributing, or copying this communication. If you have received this email in error, please notify the sender immediately and destroy the original transmission.

Oswald, Hank

From: Oswald, Hank
Sent: Tuesday, June 7, 2022 11:32 AM
To: 'Ryan Ketner'
Cc: Michael Boyce
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

He Ryan:

1. The actual calculation isn't shown on the plan. I only see the one day reserve min. #. I could be overlooking it.
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Hank

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Sent: Monday, June 6, 2022 3:01 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>
Cc: Michael Boyce <MBOYCE@eseconsultants.com>
Subject: RE: BAT Plan_7012 Colt Place_Willowshire Lot 29

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Ryan Ketner
Survey Designer IV

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P: 410-381-3052 C: 443-889-4429 Fax: 410-872-9141
rketner@eseconsultants.com www.eseconsultants.com

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Monday, June 6, 2022 2:33 PM
To: Ryan Ketner <rketner@eseconsultants.com>
Subject: BAT Plan_7012 Colt Place_Willowshire Lot 29

Hi Ryan:

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(The pump chamber must have the capacity to accommodate a pump positioned on a six-inch riser, one dose volume, and one days design flow storage capacity above the high water alarm.)
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- 1.) **5 Bedrooms (4 on 2nd Floor and 1 on 1st Floor)**
- 2.) **1 Bedroom (Finished Loft)**
- 3.) **1 Bedroom (Basement)**

Should you have any questions, please don't hesitate to ask.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786
hoswald@howardcountymd.gov

Ryan Ketner

From: Oswald, Hank <hoswald@howardcountymd.gov>
Sent: Tuesday, July 5, 2022 1:20 PM
To: Ryan Ketner
Cc: Michael Boyce; Vincent Paylor; Silvast, Zackary
Subject: RE: 4520 BAT Lot 29 (Unsigned)

*HANK EMAIL
AFTER COMMENTS
ANSWERED*

Hi Ryan:

The force main should connect to the manifold from underneath, and the three laterals should stem directly from the manifold. There shouldn't be a 3 foot section of 3 inch pipe extending off of the manifold leading to each trench.

I hope this helps. Please let me know if you have any other questions.

Thanks,

Hank

From: Ryan Ketner <rketner@eseconsultants.com>
Sent: Sunday, July 3, 2022 1:03 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>
Cc: Michael Boyce <MBOYCE@eseconsultants.com>; Vincent Paylor <vpaylor@eseconsultants.com>
Subject: 4520 BAT Lot 29 (Unsigned)

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

Hank,

Good afternoon, I hope your having a great weekend!

Is there any way you could take a look at the revised plan along with your comments before I send in a hard copy etc... This has now become a pressing Lot for Toll so when it hits your desk we would like this approved. I was looking at your markup and it kinda made sense to me, but I altered it some and moved the trenches to they are even off the manifold and not really losing much area of the septic disposal area. That revised the comps a little but it requires the same pump etc...

I added the lateral detail you wanted shown and I went ahead and put elevations and distances on it etc. to hopefully make things easier to understand. The only thing I'm confused about is how/when the lateral leaves the manifold. I have the manifold at 26' which would get center of Trench 1 lateral to center of 3rd trench lateral... do I just have that as the manifold and then the 3 pipes leaving from there is the laterals? I went ahead and calculated the 3 (3 foot) laterals that lead to the trenches as part of the manifold (35 feet total length). Now I know the manifold is supposed to be at the same elevation through out so how would the laterals tie into it?

I have the manifold invert set 1' lower than the lowest trench so it pumps up to each lateral and the force main 1' lower than the manifold where it turns up as we've always had that. The 3" manifold ties into the 1.5" trenches so I know it needs couplings and we have that in the calculations chart, just need to know if I should have the manifold just shown as the 26' straight part and then the couplies tie in there for the trenches... there's 3' between the manifold and the start of the distribution laterals.

Lastly, which charts do you want shown on the plan? This would be comment 3 on your attached comments.

Thanks,

Ryan Ketner

Survey Designer IV

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