



CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County: Harnett

Pre-Construction Conference Required: Yes No

PIN/Lot Identifier: 9691-79-0896.000

Issued To: HHHunt Homes Raleigh-Durham LLC

Property Location: 942 Hollies Pines Road, Broadway, NC

AOWE/PE Plans/Evaluations Provided: Yes No If yes, name and license number of AOWE/PE: PE 27458

Facility Type: Single-Family Dwelling Unit

Number of bedrooms: 4 Number of Occupants: 8 or less Other: _____

New Expansion Repair System Relocation Change of Use

Basement? Yes No Basement Fixtures? Yes No

Crawl Space? Yes No Slab Foundation? Yes No

Type of Wastewater System* III f (Initial) III e (Repair)

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Design Daily Flow: 480 GPD Wastewater Strength: Domestic High Strength Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? Yes No
(if yes, please provide engineering documentation)

Effluent Standard: DSE HSE NSF/ANSI 40 TS-I TS-II RCW

Type of Water Supply: Private well Public well Shared well Municipal Supply Spring Other: _____

Installation Requirements/Conditions

Septic Tank Size: 1,000 gallons Total Trench/Bed Length: 648 feet Trench/Bed Spacing: 6 feet on center

Trench/Bed Width: 12-18 inches LTAR: 0.30 gpd/ft² Usable Depth to LC (Initial)*: >52" **Limiting condition*

Soil Cover: 12-18 inches Slope Corrected Maximum Trench/Bed Depth*: 30 inches **Measured on the downhill side of the trench*

Pump Tank Size (if applicable): _____ gallons Requires more than 1 pump? Yes No

Pump Requirements: _____ ft. TDH vs. _____ GPM Grease Trap Size (if applicable): _____ gallons

Distribution Method: Serial D-Box or Parallel Pressure Manifold(s) LPP Other: _____

Artificial Drainage Required: Yes No If yes, please specify details: _____

Legal Agreements (If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)

Multi-party Agreement Required [.0204(g)]: Yes No Declaration of Restrictive Covenants: Yes No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: Yes No

Management Entity Required: Yes No Minimum O&M Requirements: _____

Permit conditions:

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. ***This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes.*** The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of 15A NCAC 18E, or 15A NCAC 18A 1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: B. Scott Mitchell

AOWE/PE Signature: [Signature]

Date: March 14, 2024

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).

See attached site sketch

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date Initials

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This

Construction Authorization is determined to be:

Incomplete (If box is checked, information in this section is required.)

The following items are missing: _____

Copies of this were sent to the AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date of Issuance: _____

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: _____

See attached site sketch

Re-submittal of Construction Authorization

LHD USE ONLY: This CA resubmittal received: _____ by _____

Date *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a5) for issuance of the Construction Authorization:

I, _____ hereby attest that the information required to be included with this re-submittal
Authorized Onsite Wastewater Evaluator (Print Name)
 is accurate and complete to the best of my knowledge and that the proposed Construction Authorization meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

Signature of Authorized On-Site Wastewater Evaluator *Date*

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Construction Authorization

The review for completeness of this Construction Authorization re-submittal was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization is determined to be:

Incomplete (If box is checked, information in this section is required.)

The following items are missing:

Copies of this were sent to the AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date: _____

Mitchell Environmental, P.A.

I hereby authorize representatives of Mitchell Environmental, P.A., to provide subsurface wastewater evaluations and septic system designs on my behalf, for the issuance of an IP and CA, for the property identified below.

For Improvement Permit (IP) issuance:

"The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)."

For Construction Authorization (CA) issuance:

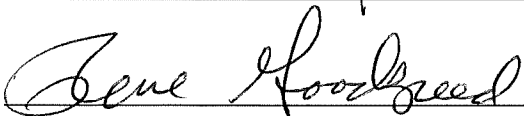
"The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5), and (a6)."

The LSS evaluation attached to this application was used to produce and design a subsurface wastewater septic system for permitting to obtain an IP and CA in accordance with G.S. 130A-335(a2), (a3), (a5), and (a6).

Subject Property (Address, PIN, etc.): 942 Hollies Pine Road

Property Owner Name (Print): HH Hunt Homes

Owner Representative (Print): Rene Goodspeed

Owner Representative (Sign): 

Date: 3/15/2024

Mitchell Environmental, P.A.

SEPTIC SYSTEM DESIGN

for

HOLLIES PINES- LOT 2
Broadway, Harnett County, North Carolina

Submitted to:

Harnett County Health Department
307 Cornelius Harnett Blvd.
Lillington, NC 27546

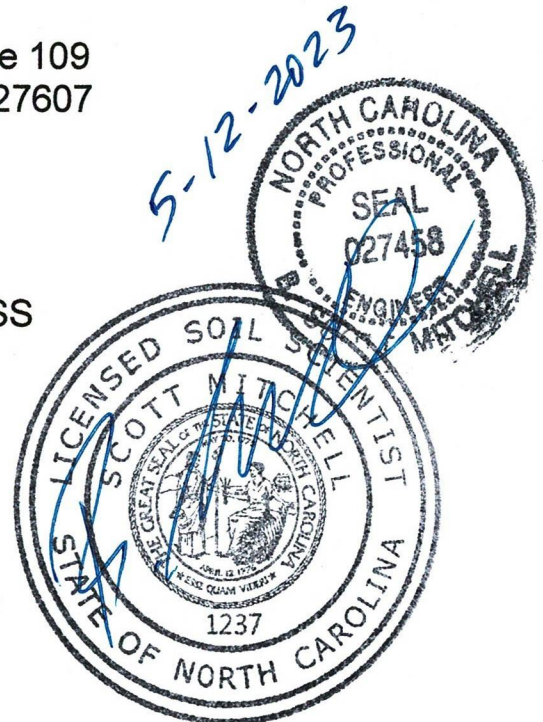
Prepared for:

HHHunt Homes
1401 Sunday Drive, Suite 109
Raleigh, North Carolina 27607

Prepared by:

Scott Mitchell, PE, LSS
Adam Aycok, EI

DATE: May 12, 2023
PROJECT NO.: 1922



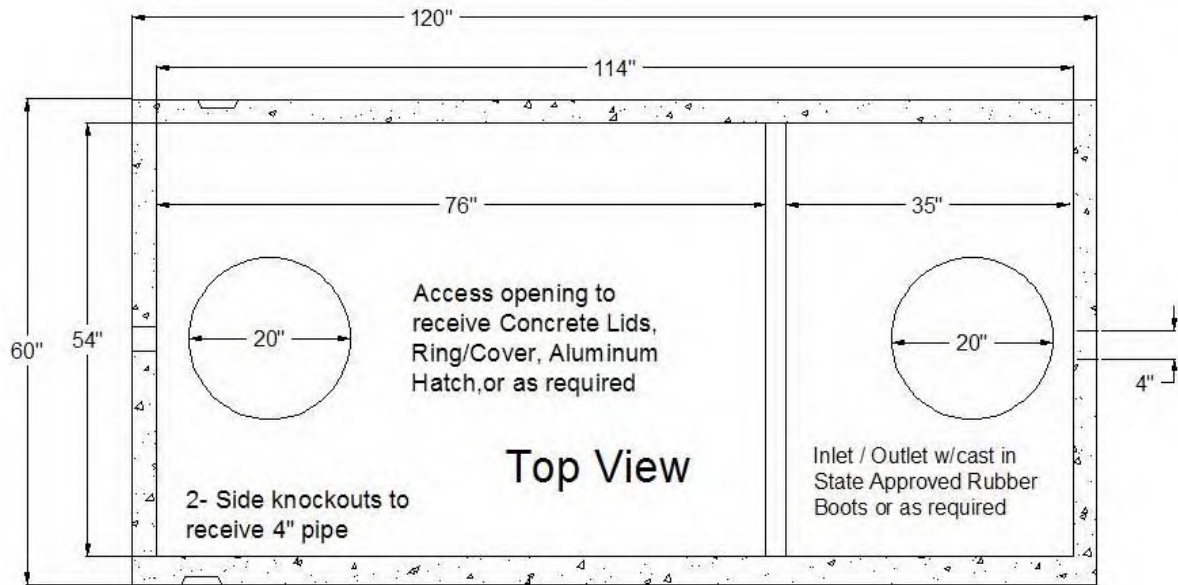


Harnett County GIS

PID: 139692 0014 90
PIN: 9691-79-0896.000
Account Number: 1500051599
Owner: HHHUNT HOMES RALEIGH-DURHAM LLC
Mailing Address: 1 FENTON MAIN ST STE 280 CARY, NC 27511-7752
Physical Address: 942 HOLLIES PINES RD BROADWAY, NC 27505 ac
Description: LOT#2 PINEDAROSA 1 MAP#2020-109
Surveyed/Deeded Acreage: 0.57
Calculated Acreage: 0.58
Deed Date: 1662008400000
Deed Book/Page: 4165 - 0651
Plat(Survey) Book/Page: 2020 - 109
Last Sale: 2022 - 9
Sale Price: \$240000
Qualified Code: A
Vacant or Improved: V
Transfer of Split: T
Actual Year Built: 2023
Heated Area : 2260 SqFt
Building Count : 1

Building Value: \$169133
Parcel Outbuilding Value: \$0
Parcel Land Value: 22740
Market Value: \$191873
Deferred Value: \$0
Total Assessed Value: \$191873
Zoning: RA-30 - 0.58 acres (100.0%)
Zoning Jurisdiction: Harnett County
Wetlands: No
FEMA Flood: Minimal Flood Risk
Within 1mi of Agriculture District: Yes
Elementary School: Boone Trail Elementary
Middle School: Western Harnett Middle
High School: Western Harnett High
Fire Department: Boone Trail
EMS Department: Medic 12, D12 EMS
Law Enforcement: Harnett County Sheriff
Voter Precinct: Boone Trail
County Commissioner : Lewis Weatherspoon
School Board Member: Duncan Jagers





STB - 345 - Top Seam

Approval Date: 12 - 09 - 99

Liquid Capacity 1007 Gallons

Non Traffic Rated

Reinforcing Schedule: # 3 Grade 60 Rebar

4500 PSI Concrete w/ State Approved Structural Fiber

Est. Weight: 8,200 lbs.

Manufactured By:

GARNERS

Septic Tanks, Inc.

Eddie Garner, President

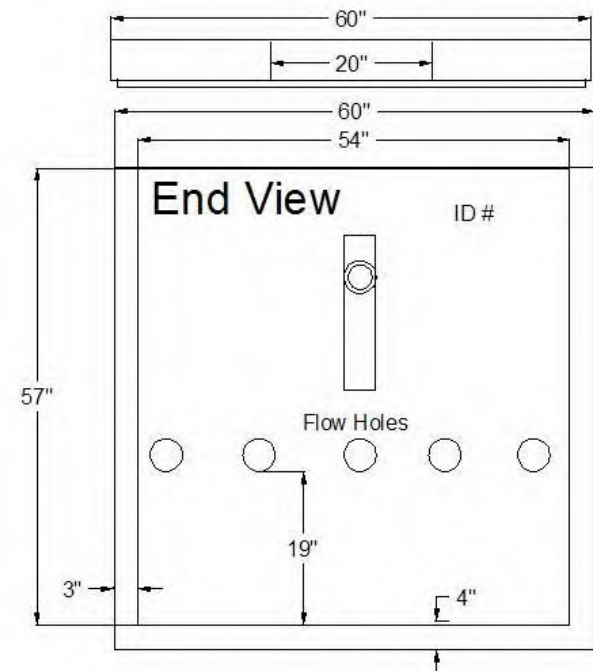
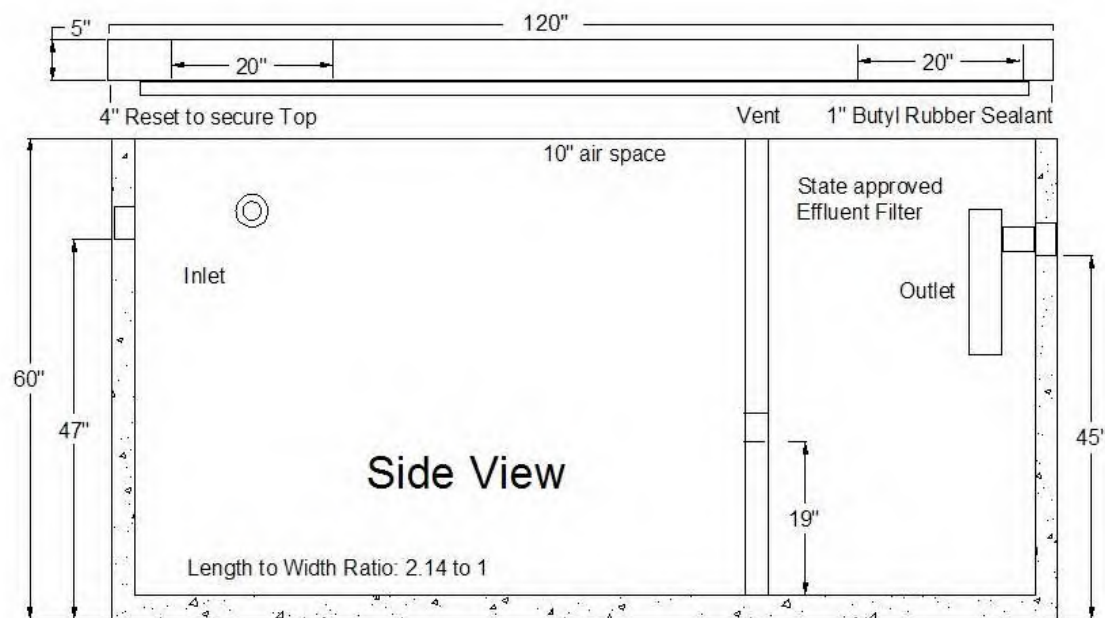
919-718-5181

121 Stanton Hill Road

Carthage, NC 28327

Fax 919-775-2229

Eddie@garnersseptic tanks.com



PL-68 Filter and Tee

PL-68 is much more than just an effluent filter. The housing can also be used as an inlet baffle (tee) or an outlet baffle. The housing is designed to accept Polylok’s snap in gas deflector to deflect gas bubbles away from the tee and to keep the solids in the tank.

Features:

- Offers 68 linear feet of 1/16” filter slots, which significantly extends time between cleaning.
- Accepts 3/4” PVC handle.
- Locks in any 360° position when used with PL-68 Tee.
- PL-68 Housing can be used as an inlet or outlet tee.
- Gasket prevents bypass.

PL-68 Installation:

Ideal for residential waste flows up to 800 gallons per day (GPD). Easily installs in any new or existing 4” outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-68 filter into tee.
5. Replace and secure the septic tank cover.

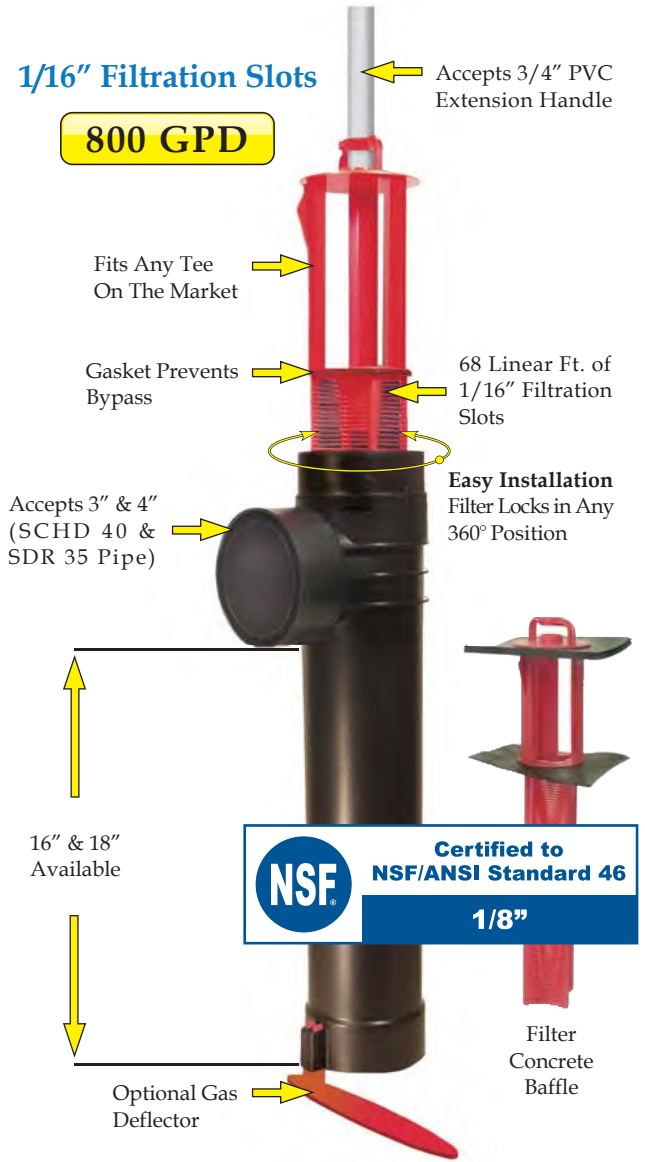
PL-68 Maintenance:

The PL-68 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-68 out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.

Related Products:

PL-68 Filter Concrete Baffle
 Extend & Lok™



Extend & Lok™
 Easily installs into existing tanks.



Spacer Bushing
 4” SCHD 40 to SDR 35

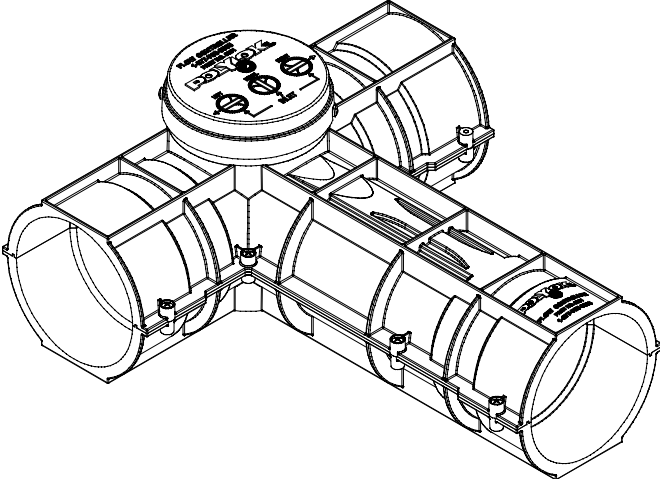
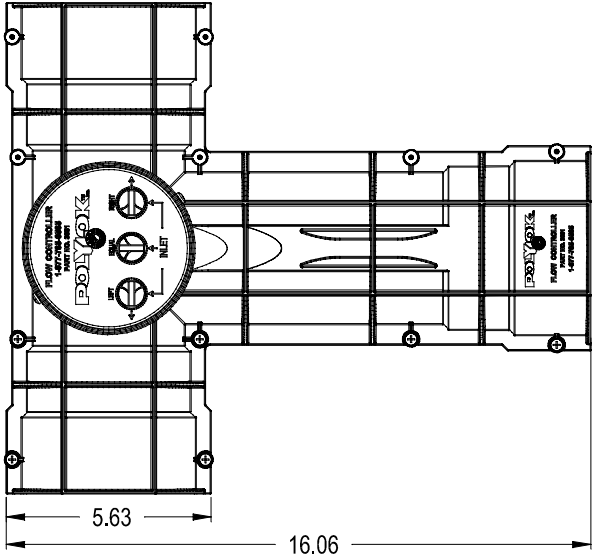


Spacer Bushing
 4” SCHD 40 to 110mm Pipe



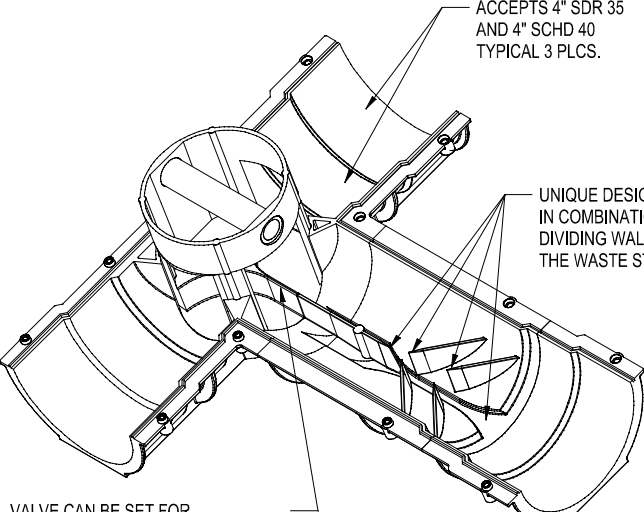
2” Extender

POLYLOK FLOW CONTROLLER
 PART NO. 3051
 MATERIAL - ABS

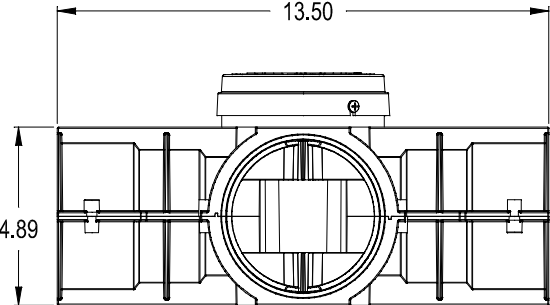
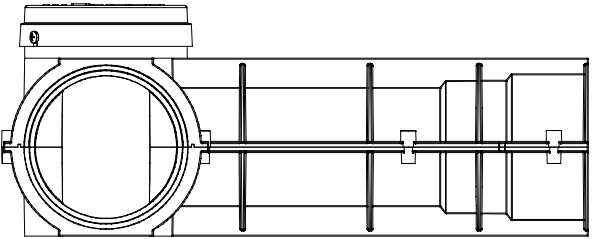


ACCEPTS 4" SDR 35
 AND 4" SCHD 40
 TYPICAL 3 PLCS.

UNIQUE DESIGN USING A DOUBLE SET OF VEINS
 IN COMBINATION WITH A CHANNEL SPLIT BY A
 DIVIDING WALL. THIS ENABLES AN EQUAL SPLIT OF
 THE WASTE STREAM, EVEN AT A 2% SHIFT IN SOIL.



VALVE CAN BE SET FOR
 EQUAL DISTRIBUTION (FACTORY SET)
 ALL DISTRIBUTION RIGHT
 ALL DISTRIBUTION LEFT



Crumpler's No-Rock™ Fabric Wrapped Large Diameter (LDP) Septic Pipe



Crumpler Plastic Pipe, Inc.

Manufacturers of Corrugated Plastic Drainage Pipe

Phone 910-525-4046 / (800) 334-5071

Post Office Box 2068

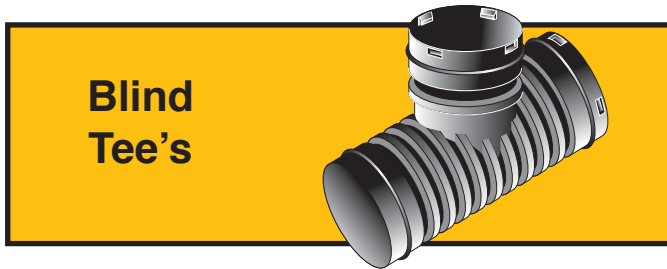
Roseboro, North Carolina 28382

Web Site: www.cpp-pipe.com





Crumpler's No-Rock™ Fabric Wrapped Large Diameter (LDP) Septic Pipe

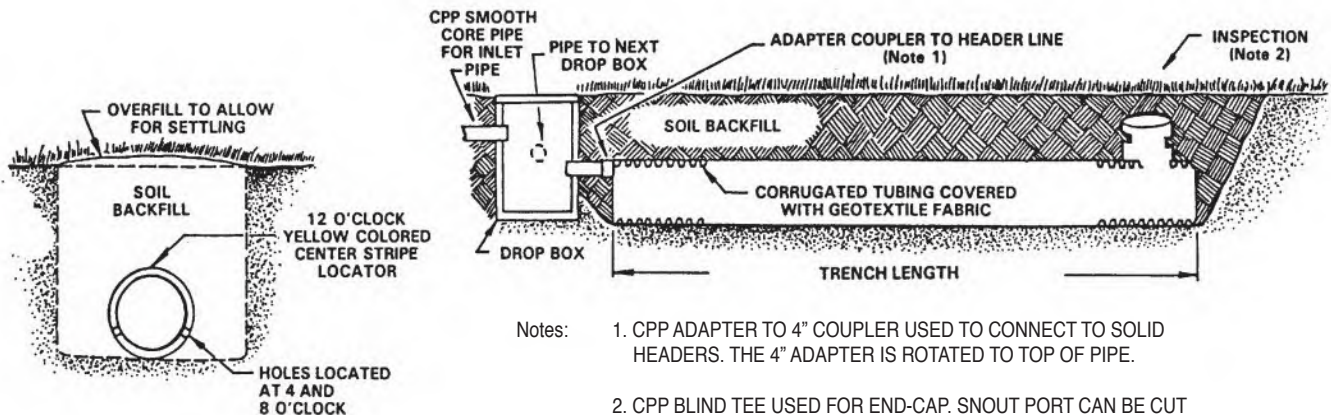


Blind Tee's



Snap Combo End Cap/4'' Reducer/Adapter

CPP Gravelless LDP Trench Construction Details



- Notes:
1. CPP ADAPTER TO 4" COUPLER USED TO CONNECT TO SOLID HEADERS. THE 4" ADAPTER IS ROTATED TO TOP OF PIPE.
 2. CPP BLIND TEE USED FOR END-CAP. SNOUT PORT CAN BE CUT OUT FOR INSTALLING A CLEAN OUT ADAPTER THAT ALLOWS FOR POST INSTALLATION INSPECTION.

	TYPE	SIZE	PART NO.	PACKAGE DESCRIPTION	PRICE
		8"	0830020B	CRUMPLER'S NO-ROCK™ SEPTIC - 20 ft. with filter wrap	
		10"	1030020B	CRUMPLER'S NO-ROCK™ SEPTIC - 20 ft. with filter wrap	

Large diameter (LDP) CPP GRAVELLESS septic tank trench systems use a filter wrap that allows for the installation of septic treatment pipes without gravel. The advantage in using CPP NO-ROCK is evident in areas where there is a shortage of inexpensive quality rock or where the shape and topography of a lot hinder the access of heavy construction equipment. Less equipment use means more trees can be saved,



less lot grading is needed, and thus fuel and labor are saved. Additionally, narrow trenches for 8" and 10" CPP pipes create a reduced OC (On-Center) Spacing between parallel septic trenches. An 8" CPP pipe can fit in a 10" wide trench and a 10" CPP pipe in a 12" wide trench. Thus Lot space is saved for other uses.

- Eliminates Rock
- Saves On Lot Grading
- Saves Trees On Lot
- Saves on Installation Labor
- Saves Fuel
- Increases Lot Value



Crumpler's No-Rock™ Fabric Wrapped Large Diameter (LDP) Septic Pipe



	TYPE	SIZE	PART NO.	PACKAGE DESCRIPTION	PRICE
			8"	0830020B	CRUMPLER'S NO-ROCK™ SEPTIC - 20 ft. with filter wrap
		10"	1030020B	CRUMPLER'S NO-ROCK™ SEPTIC - 20 ft. with filter wrap	

Large diameter GRAVELLESS septic tank trench systems were developed as an alternative to 4" pipe systems in gravel-filled trenches for use in soils that most conventional 4" gravel would be allowed in. Organic Iron Ochre soils, however, are unsuitable for Filter Enclosed Gravelless Septic Pipes. The advantage in using the large diameter systems is evident in areas where there is a shortage of inexpensive quality rock, or where the shape and topography of a lot hinder the access of heavy construction equipment. The use of small trenchers for digging narrow trenches means more trees can be saved, less grading is needed, and thus fuel and labor are saved.

Crumpler's NO-ROCK™ septic systems include using either an 8" or a 10" corrugated HDPE pipe enclosed in a polypropylene filter wrap. ASTM-F-481 septic installation specification should be reviewed prior to installation. **Most states allow GRAVELLESS large diameter systems to be substituted for conventional systems in ANY SOIL TYPE deemed acceptable for a**

conventional system. One should check with local septic inspectors for locally approved soils.

Crumpler's NO-ROCK™ septic system may be substituted for any conventional 4" pipe gravel trench system utilizing distribution devices, serial distribution, hillside or stepdowns. However, it should not be substituted for bed systems. It should also be limited to domestic sewage, and not used where there will be large amounts of grease or oil such as in restaurants unless designed by an engineer.

The 8" size pipe will equal to 2-foot wide conventional trench; and the 10" size will equal a 2.5 foot wide trench. To determine the required linear footage of either pipe size, first determine the square footage by dividing the design sewage flow by the appropriate soil's long term application rate. Then divide this total square footage area figure by either 2 feet (for 8") or 2.5 feet (for 10") to establish the linear footage amount. Per chart below, on center (oc) spacing will be determined by actual trench width.

Example: A 3-bedroom house on a loam soil
0.6 gpd/ft² = loam soil's long term application rate.

3BR x 120 gpd = 360 gpd
360 gpd ÷ 0.6 gpd/ft² = 600 ft.

600 ft² ÷ 2ft = 300 linear ft of 8" or
600 ft² ÷ 2.5 ft = 240 linear ft of 10"
600 ft² ÷ 3 ft = 200 ft for conventional 4" gravel

SUGGESTED INSTALLATION OF STANDARDS

Nitrification trench bottom minimum width for 8"	10"
Nitrification trench bottom minimum width for 10"	12"
Nitrification line center spacing on 8"	5' oc
Nitrification line center spacing on 10"	6' oc
Nitrification trench bottom minimum depth	18"
Nitrification trench bottom maximum depth (24" preferred)	36"
Nitrification trench bottom slope	level to 1" per 100 ft
Nitrification line minimum cover	6"
Nitrification line maximum cover (12" preferred)	24"

To eliminate voids and clods under pipes 15" - 18" trenches is recommended unless sand backfill is used.

The corrugated pipe used shall comply with ASTM-F-667. Also the installer should be careful to note that the filter wrap is light

sensitive, and should not be exposed to sunlight for extended periods of time. The installer should also take care during installation to avoid tearing of the filter material. The protective plastic wrap that protects the filter should be disposed of off site.

WEB SITE: www.cpp-pipe.com / E-Mail: cppsales@cpp-pipe.com

(800) 334-5071

TOLL FREE USA/CANADA

OUR PIPE IS LABORATORY TESTED

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24 HOUR FAX SERVICE



Slope Correction Table



NOTE: Add the inches from Slope Table to the MSD¹ to determine the RSD²

PERCENT SLOPE	10" Trench	12" Trench	18" Trench	24" Trench	36" Trench
6	0.6	0.7	1.1	1.4	2.2
12	1.2	1.4	2.2	2.9	4.3
18	1.8	2.2	3.2	4.3	6.5
24	2.4	2.9	4.3	5.8	8.6
30	3	3.6	5.4	7.2	10.8
36	3.6	4.3	6.5	8.6	13.0
42	4.2	5.0	7.6	10.1	15.1
48	4.8	5.8	8.6	11.5	17.3
54	5.4	6.5	9.7	13.0	19.4
60	6	7.2	10.8	14.4	21.6

NOTE: For sloping sites a calculation of the additional required soil depth is necessary using the table above or the following formula: $RSD = MSD + (TW \times .S)$

Where; RSD = Required Soil Depth (inches),

MSD - Min. Soil Depth (Min. Soil Cover + Ht. of Sys. + Min. Separation) (in)

TW = Trench Width (inches), &

.S = Percent Slope (.00)

Example: Assume site for septic system dispersal field has a slope of 28% and the trench bottom is required to be 12 inches above a site limitation, such as, weathered rock or perched water table. Also, assume that the proposed site has a usable or acceptable soil depth of 38 inches. Further, a minimum soil cover of 6 inches is required over the dispersal system.

Trial 1: Conventional trench (36 inches wide, 12 inches gravel, 6 inches over) would require a usable soil depth of 40 inches. [40 inches RSD - 30 inches MSD + (36 inches TW x .28 S)] Thus, a conventional or 36 inch wide trench is unsuitable at this site.

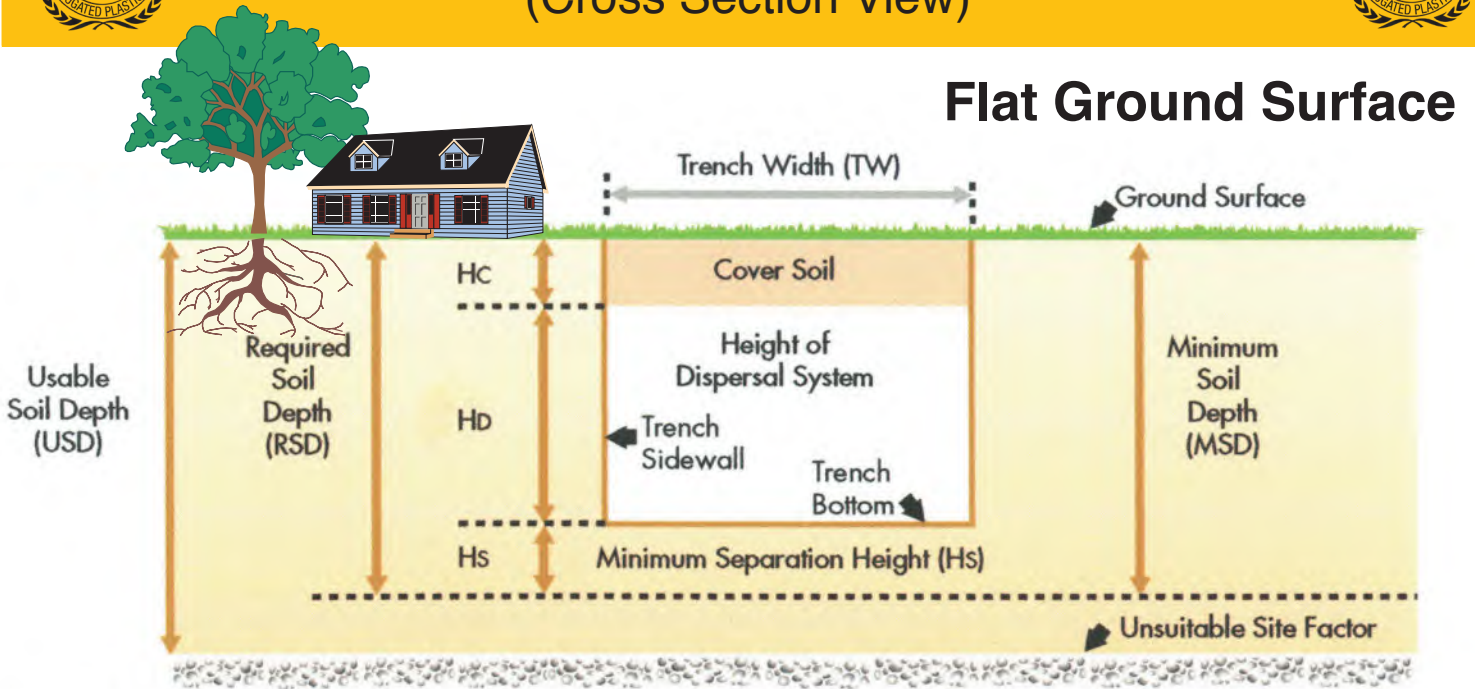
Trial 2: Crumpler NO ROCK™ 8 inch ID (10 in. OD) installed in a 12 inch wide trench would require a usable soil depth of 31.4 inches. [31.4 RSD = 28 inches MSD + (12 inches TW x .28 S)] Therefore, site is acceptable for Crumpler 8 in. NO ROCK™.

Trial 3: Crumpler NO ROCK™ 10 inch ID (12 in. OD) installed in an 18 inch wide trench would require a usable soil depth of 35 inches. [35 inches RSD = 30 inches MSD + (18 inches TW x .28 S)] Therefore, site is acceptable for Crumpler 10 inch NO ROCK™.

¹ MSD is the minimum soil depth at 0% slope and is the sum of the min. separation distance between trench bottom and limiting horizon (typ. 12 in), plus the system height, plus the min. soil cover (typ. 6 in.).

² RSD is the required soil depth to install a trench on a sloping site with the added inches to meet the minimum separation distance on the uphill side of the trench.

Septic Effluent Disposal Trenches on Sloping Sites (Cross Section View)



$MSD = H_c + H_d + H_s$
 $MSD = RSD$ on Flat Sites

Not To Scale

FIGURE 1

Sloping ground Surface

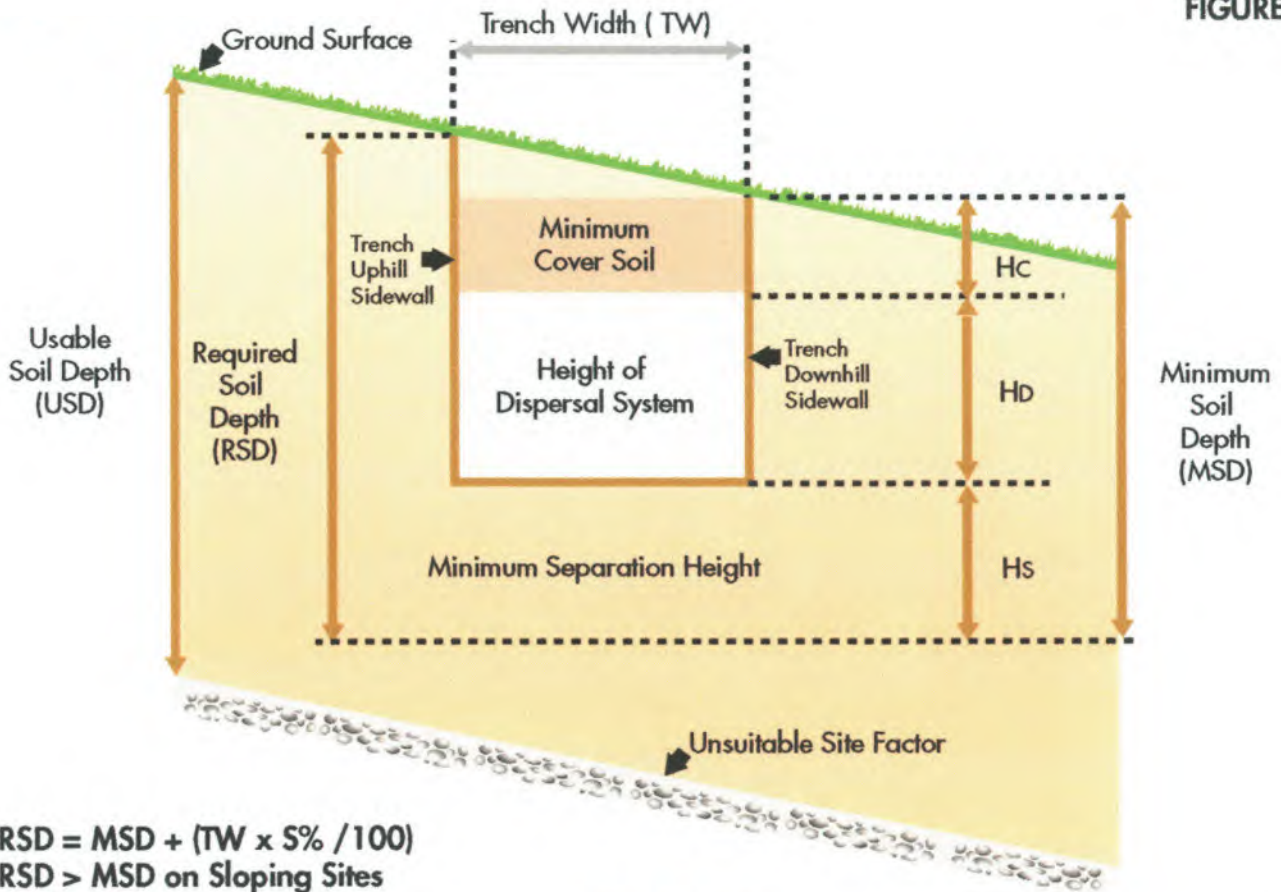
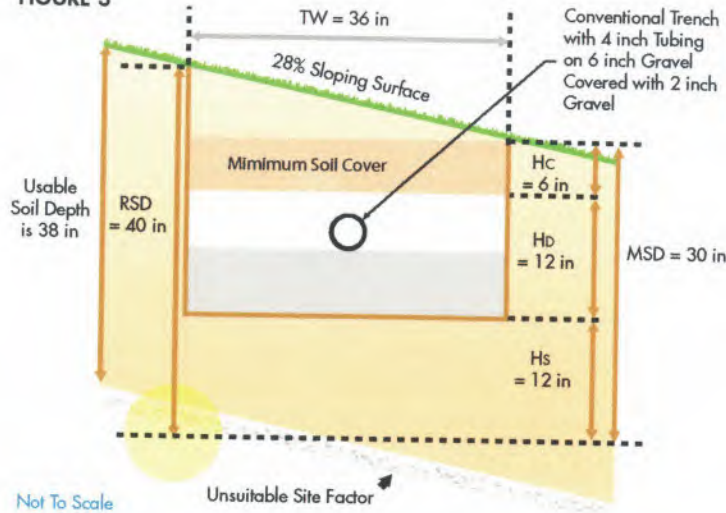


FIGURE 2

$RSD = MSD + (TW \times 5\% / 100)$
 $RSD > MSD$ on Sloping Sites
 $USD \geq RSD$

Not To Scale

FIGURE 3



Septic Effluent Disposal Trenches on Sloping Sites (Cross Section) Trial No. 1

Site has 28% slope and soil is 38 inches deep

- Trial No. 1:** Use 36 inch wide conventional trench system
- MSD** = 6 in + 12 in + 12 in = 30 inches
- RSD** = 30 in (36 in x 28%/100) = 40 inches
- RSD (40 in) > USD (38 in)**

Proposed System **Unsuitable** for Slope

Septic Effluent Disposal Trenches on Sloping Sites (Cross Section) Trial No. 2

Site has 28% slope and soil is 38 inches deep

- Trial No. 2:** Use CPP 8 inch NO-ROCK™ with 12 inch wide trench.
- MSD** = 6 in + 10 in + 12 in = 28 inches
- RSD** = 30 in (12 in x 28%/100) = 31.4 inches
- USD (38 in) > RSD (31.4 in)**

Proposed **CPP 8 inch NO-ROCK™** **Suitable** for Slope

FIGURE 4

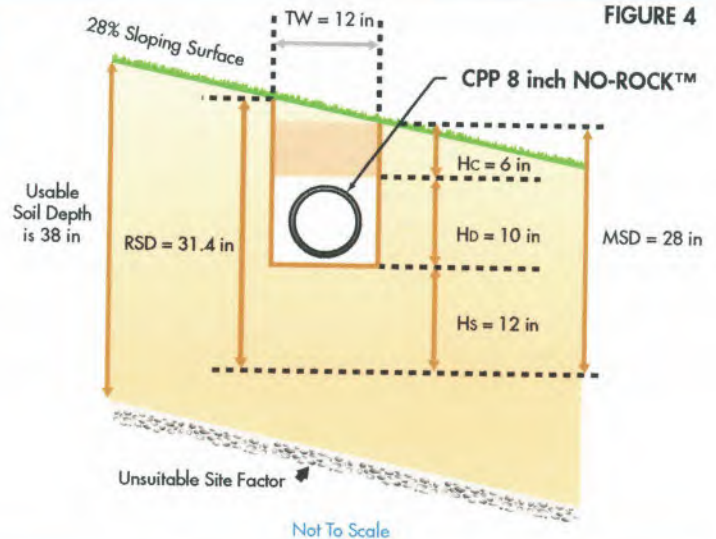
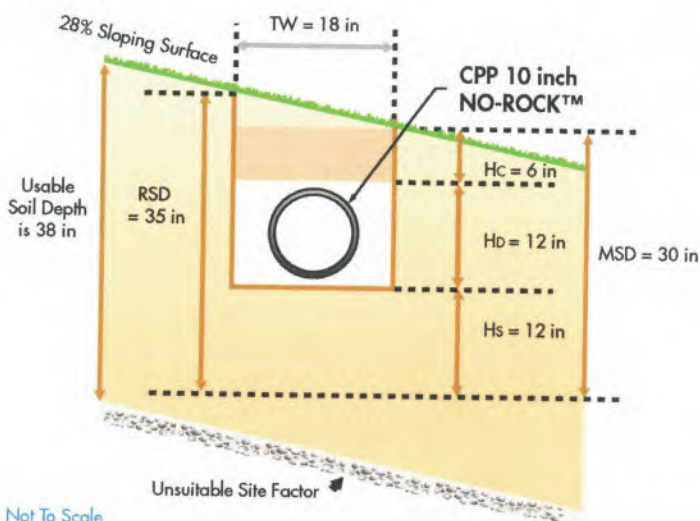


FIGURE 5



Septic Effluent Disposal Trenches on Sloping Sites (Cross Section) Trial No. 3

Site has 28% slope and soil is 38 inches deep

- Trial No. 3:** Use CPP 10 inch NO-ROCK™ with 18 inch wide trench.
- MSD** = 6 in + 12 in + 12 in = 30 inches
- RSD** = 30 in (18 in x 28%/100) = 35 inches
- USD (38 in) > RSD (35 in)**

Proposed **CPP 10 inch NO-ROCK™** **Suitable** for Slope



Crumpler's No-Rock™ Fabric Wrapped Large Diameter (LDP) Septic Pipe



1
NC State University layout of CPP No-Rock Septic at the Ed Booth field Learning Lab.



2
Laser Level adjustment setting prior to trenching sequence.



3
Laser Level check of trench depth grade and bag encased protected pipe moved onto trench site. The plastic bags protect the filter wrap from extended storage UV deterioration and natural handling abuses.



4
Protective plastic bags removed just prior to trench placement.



5
Protective plastic bags removed from the site for disposal elsewhere.



6
Trenching complete, and ready for Side-Wall rake prep sequence.



7
CPP No-Rock Septic pipes allow for narrow trenches that offer a closer OC spacing, which requires a reduced land area foot print compared to conventional 3-foot wide trenches.



8
A Blind Tee with a screw off Clean Out Plug is placed at the end of each individual line. This allows for a line inspection.



9
Final cover sequence begins.



10
Narrow trenches allow for faster, less cumbersome of equipment about the site during the final cover phase, and this saves equipment time on the job.

To Spec (HDPE) Corrugated Plastic Pipe Spec as:

ASTM General Construction

CPP-ASTM-F-677 (3" - 24")
CPP-ASTM-F-2306 (12" - 60")
CPP-ASTM-F-2648 (2"-60")

AASHTO Highway Construction

CPP-AASHTO-M-252 (3" - 10")
CPP-AASHTO-M-294 (12" - 60")

OUR PIPE IS LABORATORY TESTED



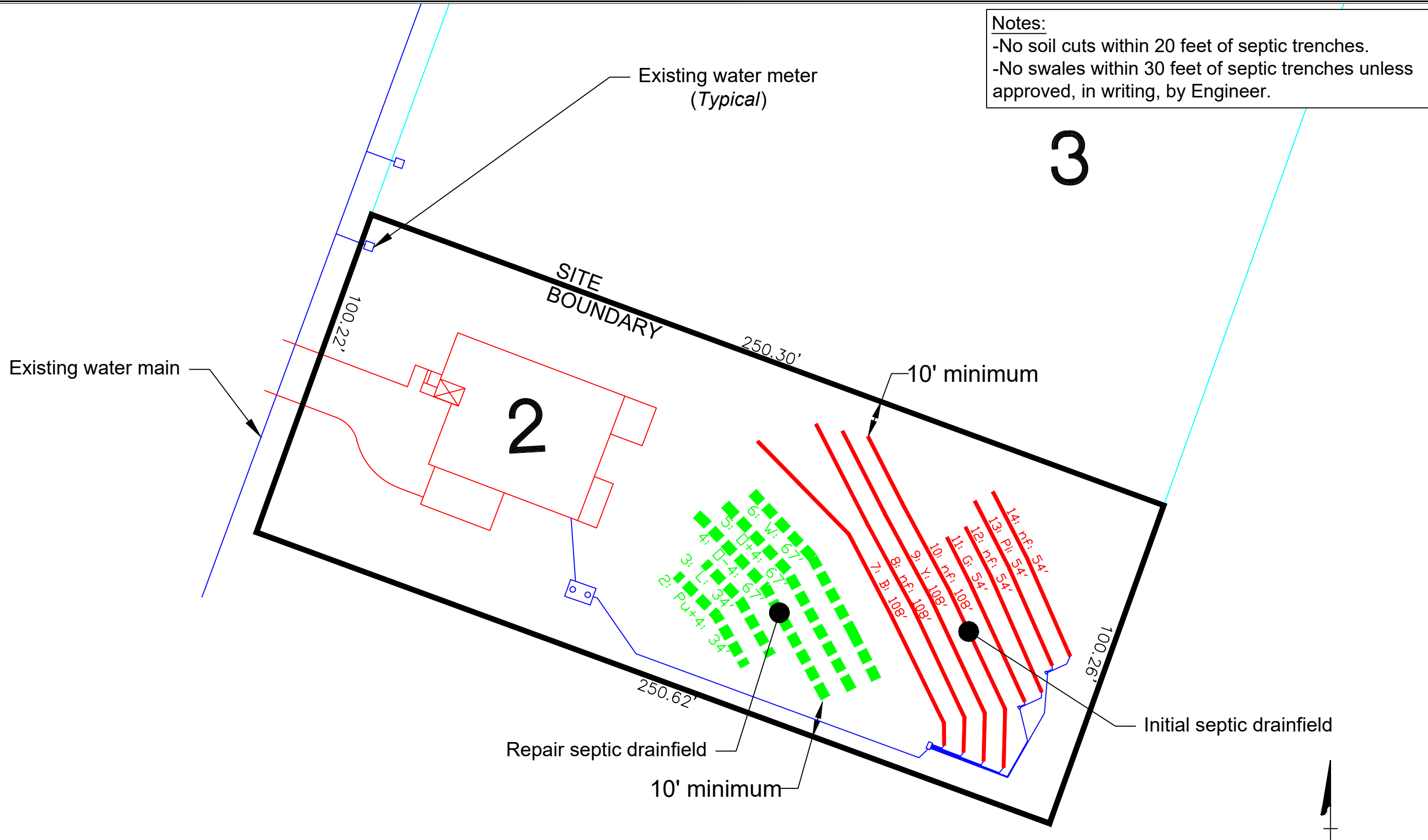
PHONE 910-525-4046 / (800) 334-5071
24 HR. FAX SERVICE (800) CPP-PIPE

WEB SITE: www.cpp-pipe.com



The East Coast's Largest Producer Under One Roof





Notes:
 -No soil cuts within 20 feet of septic trenches.
 -No swales within 30 feet of septic trenches unless approved, in writing, by Engineer.

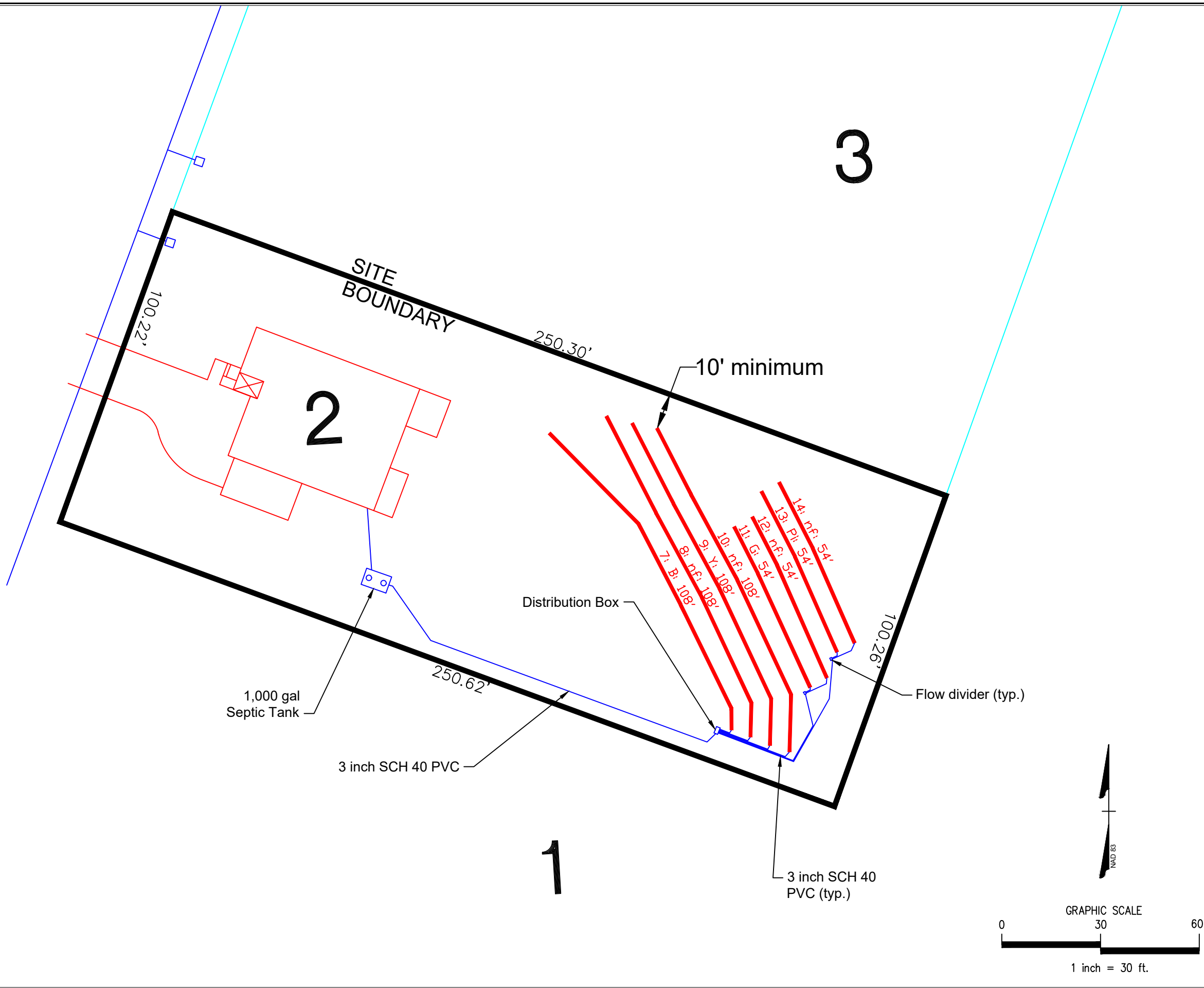
3

2

1

4-Bedroom
 LTAR: 0.3 gpd/ft²
 Initial: Gravity-to-10" large diameter pipe utilizing lines 7-14 (648')
 Repair: Gravity-to-Horizontal Panel Block utilizing lines 2-6 (269')

SHEET NUMBER		1 of 5	
PREPARED FOR :		H Hunt Homes of Raleigh	
DATE :		May 12, 2023	
DESIGNER CONTACT:		ADAM AYCOCK, EI	
DRAWN BY:		ADAM AYCOCK, EI	
REVISION NO.	DATE	REVISION NO.	DATE
Original Submittal	May 12, 2023	Revision 1	-----
Revision 2	-----	Revision 3	-----
Revision 3	-----	Master Set	-----
MITCHELL ENVIRONMENTAL, PA C-2917 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526			
Hollies Pines Lot 2 Overall Septic			



MITCHELL ENVIRONMENTAL, PA
C-2917

1501 LAKESTONE VILLAGE LANE
SUITE 205
FUQUAY VARINA, NC 27526

PREPARED FOR : HHunt Homes of Raleigh
1401 Sunday Drive, Suite 109
Raleigh, NC 27607

DATE : May 12, 2023

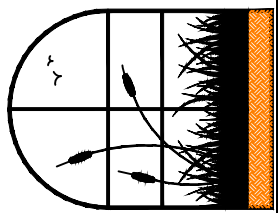
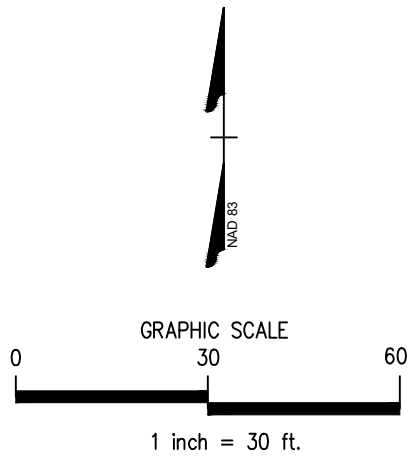
DESIGNER CONTACT:
ADAM AYCOCK, EI

DRAWN BY:
ADAM AYCOCK, EI

REVISION NO.	DATE
Original Submittal	May 12, 2023
Revision 1	-----
Revision 2	-----
Revision 3	-----
Master Set	-----

SHEET NUMBER
2 of 5

Hollies Pines
Lot 2
Initial Nitrification Field



MITCHELL ENVIRONMENTAL, PA
C-2917
1501 LAKESTONE VILLAGE LANE
SUITE 205
FUQUAY VARINA, NC 27526

PREPARED FOR : HHunt Homes of Raleigh
 1401 Sunday Drive, Suite 109
 Raleigh, NC 27607

DATE : May 12, 2023

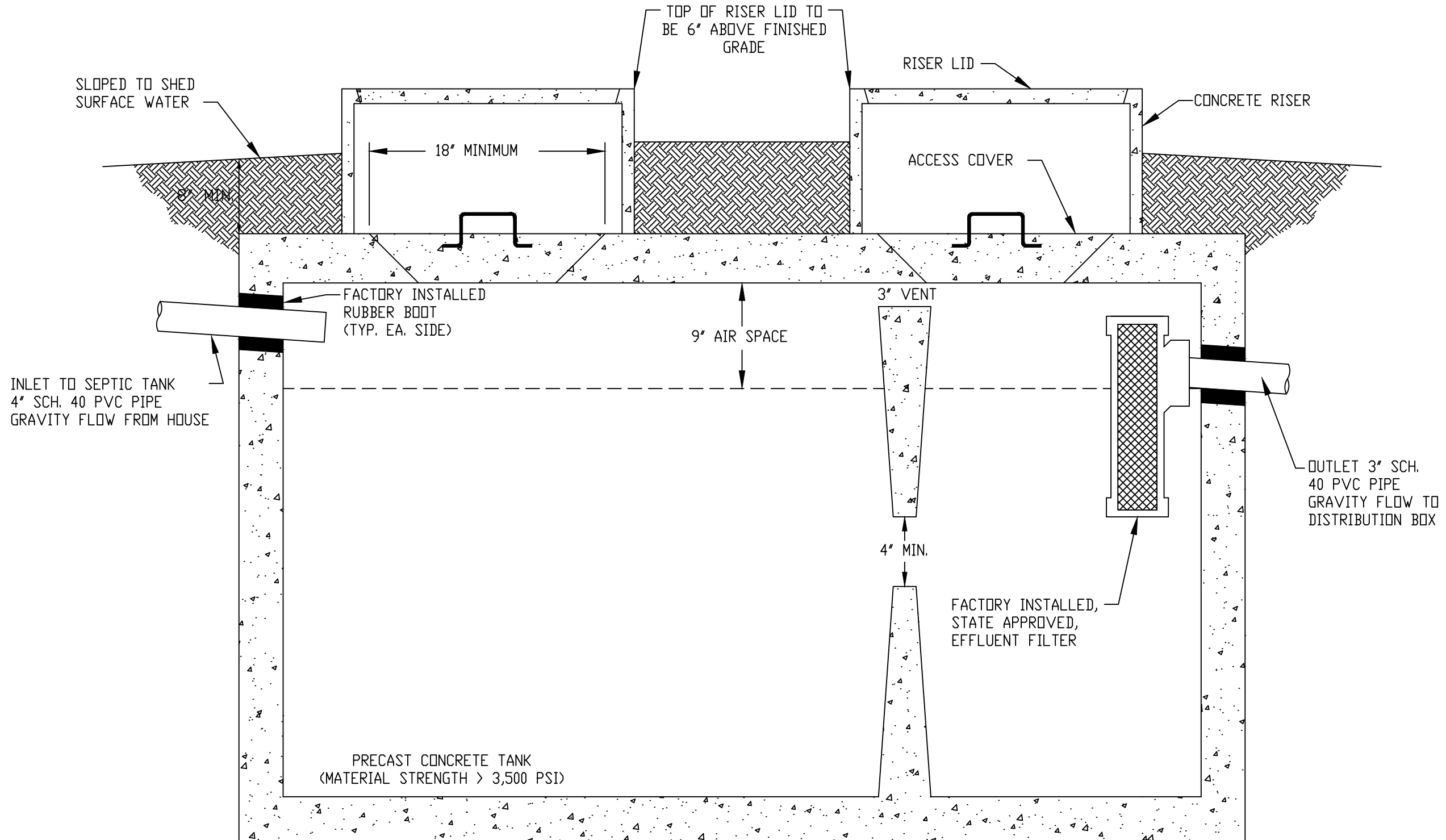
DESIGNER CONTACT:
 ADAM AYCOCK, EI

DRAWN BY:
 ADAM AYCOCK, EI

REVISION NO.	DATE
Original Submittal	May 12, 2023
Revision 1	-----
Revision 2	-----
Revision 3	-----
Master Set	-----

SHEET NUMBER
3 of 5

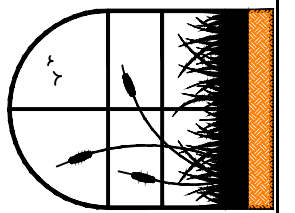
Hollies Pines
 Lot 2
 Repair Nitrification Field



1,000 GALLON SEPTIC TANK

SEPTIC TANK DETAIL
N.T.S.

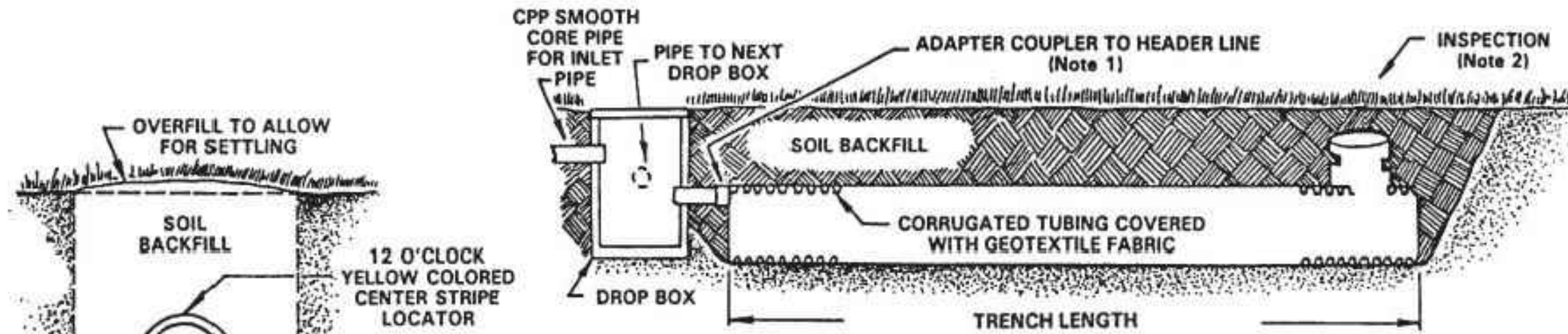
SHEET NUMBER		4 of 5	
PREPARED FOR : HHunt Homes of Raleigh 1401 Sunday Drive, Suite 109 Raleigh, NC 27607		DATE : May 12, 2023	
DESIGNER CONTACT: ADAM AYCOCK, EI		DRAWN BY: ADAM AYCOCK, EI	
REVISION NO.	DATE	REVISION NO.	DATE
Original Submittal	May 12, 2023	Revision 1	---
Revision 2	---	Revision 3	---
Revision 3	---	Master Set	---
MITCHELL ENVIRONMENTAL, PA C-2917 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526		Hollies Pines Lot 2 Septic Tank Detail	



Trench Width = 12 Inches Minimum
 Trench Depth = 24-30 Inches

Trench Spacing = 6 Feet (Center-to-Center, Minimum)

CPP Gravelless LDP Trench Construction Details



- Notes:
1. CPP ADAPTER TO 4" COUPLER USED TO CONNECT TO SOLID HEADERS. THE 4" ADAPTER IS ROTATED TO TOP OF PIPE.
 2. CPP BLIND TEE USED FOR END-CAP. SNOOT PORT CAN BE CUT OUT FOR INSTALLING A CLEAN OUT ADAPTER THAT ALLOWS FOR POST INSTALLATION INSPECTION.

SHEET NUMBER		5 of 5	
DATE		May 12, 2023	
REVISION NO.	Original Submittal	Revision 1	Revision 2
REVISION NO.	Revision 3	Master Set	
PREPARED FOR :	HHunt Homes of Raleigh 1401 Sunday Drive, Suite 109 Raleigh, NC 27607		
DATE :	May 12, 2023	MANUFACTURING CONTACT:	CRUMPLER PLASTIC PIPE
DRAWN BY:		CRUMPLER PLASTIC PIPE	
MITCHELL ENVIRONMENTAL, PA C-2911 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526			

Hollis Pines
 Lot 2
 Trench Detail