Initial Application Date: _____ Application # _____

DRB # _____ CU # _____

COMMERCIAL

COUNTY OF HARNETT LAND USE APPLICATION

Central Permitting (Physical) 420 McKinney Pkwy, Lillington, NC 27546 (Mailing) PO Box 65 Lillington NC 27546 Phone: (910) 893-7525 opt # 1 Fax: (910) 893-2793 www.harnett.org/permits

LANDOWNER: Dwight Dillard Mailing Address: 3250 Campbell Road

City: Raleigh State: NC Zip: 27606 Contact # 919-868-1199 Email: n/a

APPLICANT*: John C Roberts Mailing Address: 1302 Roberts Road

City: Newport State: NC Zip: 28570 Contact # 252-725-1320 Email: john.roberts@groundtruthsoil.com

*Please fill out applicant information if different than landowner

CONTACT NAME APPLYING IN OFFICE: John C ROberts Phone # 252-725-1320

Address: 7450 NC 210 N Angier, NC 27501 PIN: 0673-14-4234.00

Zoning:_____ Watershed:_____ Flood:_____ Deed Book Page:_____/_____.

Setbacks – Front:_____ Back:_____ Side:_____ Corner:_____

PROPOSED USE:

❑ Multi-Family Dwelling No. Units: _____ No. Bedrooms/Unit: _____

☒ Business Sq. Ft. Retail Space: 0 Type: Interstate Battery # Employees: 6 Hours of Operation: 8-5

❑ Daycare # Preschoolers: _____ # Afterschoolers: _____ # Employees: _____ Hours of Operation: _____

❑ Industry Sq. Ft: _____ Type: _____ # Employees: _____ Hours of Operation:

❑ Church Seating Capacity: _____ # Bathrooms: _____ Kitchen: _____

❑ Accessory/Addition/Other (Size _____x_____) Use: _____

Water Supply: X County _____ Existing Well _____ New Well *(# of dwellings using well _____)* ***Must have operable water before final**
(Need to Complete New Well Application at the same time as New Tank)

Sewage Supply: _____ New Septic Tank ____ Expansion X Relocation____Existing Septic Tank ____ County Sewer
(Complete Environmental Health Checklist on other side of application if Septic

Comments: _____

Septic System is being impacted by Hwy 55 roadway project.

If permits are granted I agree to conform to all ordinances and laws of the State of North Carolina regulating such work and the specifications of plans submitted. I hereby state that foregoing statements are accurate and correct to the best of my knowledge. Permit subject to revocation if false information is provided.

John C Roberts _____ 8-17-2021

Signature of Owner or Owner's Agent **Date**

****This application expires 6 months from the initial date if permits have not been issued****

RECORDED DEED (OR OFFER TO PURCHASE) AND PLAT ARE REQUIRED WHEN APPLYING FOR LAND USE APPLICATION

****It is the owner/applicants responsibility to provide the county with any applicable information about the subject property, including but not limited to: boundary information, house location, underground or overhead easements, etc. The county or its employees are not responsible for any incorrect or missing information that is contained within these applications.****

Harnett COUNTY NORTH CAROLINA

This application expires 6 months from the initial date if permits have not been issued
APPLICATION CONTINUES ON BACK

****This application expires 6 months from the initial date if permits have not been issued****

This application to be filled out when applying for a septic system inspection.

County Health Department Application for Improvement Permit and/or Authorization to Construct

IF THE INFORMATION IN THIS APPLICATION IS FALSIFIED, CHANGED, OR THE SITE IS ALTERED, THEN THE IMPROVEMENT PERMIT OR AUTHORIZATION TO CONSTRUCT SHALL BECOME INVALID. The permit is valid for either 60 months or without expiration depending upon documentation submitted. (Complete site plan = 60 months; Complete plat = without expiration

☐ ***Environmental Health New Septic System***

- **All property irons must be made visible.** Place "pink property flags" on each corner iron of lot. All property lines must be clearly flagged approximately every 50 feet between corners.
- Place "orange house corner flags" at each corner of the proposed structure. Also flag driveways, garages, decks, out buildings, swimming pools, etc. Place flags per site plan developed at/for Central Permitting.
- Place orange Environmental Health card in location that is easily viewed from road to assist in locating property.
- If property is thickly wooded, Environmental Health requires that you clean out the **undergrowth** to allow the soil evaluation to be performed. Inspectors should be able to walk freely around site. ***Do not grade property***.
- ***All lots to be addressed within 10 business days after confirmation. $25.00 return trip fee may be incurred for failure to uncover outlet lid, mark house corners and property lines, etc. once lot confirmed ready.***

☐ ***Environmental Health Existing Tank Inspections***

- Follow above instructions for placing flags and card on property.
- Prepare for inspection by removing soil over **outlet end** of tank as diagram indicates, and lift lid straight up (*if possible*) and then **put lid back in place**. (Unless inspection is for a septic tank in a mobile home park)
- **DO NOT LEAVE LIDS OFF OF SEPTIC TANK**

"MORE INFORMATION MAY BE REQUIRED TO COMPLETE ANY INSPECTION"

SEPTIC

If applying for authorization to construct please indicate desired system type(s): can be ranked in order of preference, must choose one.

{__} Accepted {__} Innovative {__} Conventional {__} Any

{ X} Alternative {__} Other _____

The applicant shall notify the local health department upon submittal of this application if any of the following apply to the property in question. If the answer is "yes", applicant **MUST ATTACH SUPPORTING DOCUMENTATION**:

{ X}YES {__} NO Does the site contain any Jurisdictional Wetlands?

{__}YES { X} NO Do you plan to have an irrigation system now or in the future?

{__}YES { X} NO Does or will the building contain any drains? Please explain._____

{ X }YES {___} NO Are there any existing wells, springs, waterlines or Wastewater Systems on this property?

{__}YES { X} NO Is any wastewater going to be generated on the site other than domestic sewage?

{__}YES { X} NO Is the site subject to approval by any other Public Agency?

{__}YES { X} NO Are there any Easements or Right of Ways on this property?

{ X}YES {__} NO Does the site contain any existing water, cable, phone or underground electric lines?

If yes please call No Cuts at 800-632-4949 to locate the lines. This is a free service.

I Have Read This Application And Certify That The Information Provided Herein Is True, Complete And Correct. Authorized County And State Officials Are Granted Right Of Entry To Conduct Necessary Inspections To Determine Compliance With Applicable Laws And Rules. I Understand That I Am Solely Responsible For The Proper Identification And Labeling Of All Property Lines And Corners And Making The Site Accessible So That A Complete Site Evaluation Can Be Performed.

The North Carolina Administrative Code requires **applications for septic permits** to be signed by the owner of the property to be evaluated or by the owner's legal representative. Applications submitted by an owner's legal representative must include this completed and signed document. ***Please note that the person named the legal representative on this document must make the application. The signature of the person named the legal representative on this document must also appear at the bottom of this document.***

I, Dwight W. Dillard / Dillard Enterprises Inc., hereby authorize
(property owner's full name)

_____ to serve as my legal
(legal representative's full name)

representative for submitting an application for an evaluation by the HARNETT County Health Department of property owned by me for the purpose of obtaining a permit to install, repair or expand an on-site wastewater system. I understand that submittal of the application for evaluation also authorizes the HARNETT County Health Department to perform said evaluation on my property.

Property Owner's Address: 3250 Campbell Road
Raleigh, NC 27606

Property Owner's Phone: 919-868-1199

Parcel Identification Number (PIN): 0673-14-4234.000

Parcel Size: 2.462 **Parcel Location:** 7450 NC 210 N
Angier NC 27501

Signature: D. Wayne Dillard **Date:** 4-19-2021
(property owner's full name)

Signature: John C Roberts **Date:** 8-17-2021
(legal representative's full name)

Residential Subsurface Wastewater Treatment and Disposal System Proposal

NCDOT Parcel 112
PIN: 0673-14-4234.000
7450 NC 210 N
Angier, NC
Ground Truth Job # 21-147

Prepared For:

Dwight Dillard
3250 Campbell Road
Raleigh, NC 27606

Prepared By:

Ground Truth Soil Consulting, PLLC
1302 Roberts Road
Newport, NC 28570
(252) 725-1320

August 17, 2021

John C. Roberts

INTRODUCTION & SITE DESCRIPTION

A Soil & Site Evaluation was performed for the tract located at 7450 NC 210 N, Angier, NC (PIN: 0673-14-4234.000). Ground Truth Soil Consulting, PLLC (Ground Truth) was retained to prepare a proposal for an on-site wastewater treatment and disposal system that would allow for the construction of a commercial facility with 6 employees and a daily wastewater flow of 150 GPD. The lot was evaluated in accordance with North Carolina statutes for waste disposal ("Laws and Rules for Sewage Treatment and Disposal Systems", amended December 6, 2018").

The NCDOT project R5705A is proposed to impact the existing drainfield. A relocation permit is requested to relocate the septic drainfield.

The field survey was conducted in June through August 2021 by John C. Roberts, LSS. Soil borings were advanced via a hand auger and evaluated under moist conditions using procedures listed in the *Field book for Describing and Sampling Soils, Version 3.0*. Soil color was determined using a Munsell Soil Color Chart. Observations of the landscape as well as soil properties (depth, texture, structure, soil wetness, restrictive horizons, etc.) were recorded. It was determined sufficient amount of Provisionally Suitable Group III soils are available within the project area for installation of a Low-Pressure Pipe (LPP) System initial system for the facility. Sufficient area of Provisionally Suitable soils also exists to support a pretreated subsurface drip system.

LOCATION

The lot is located at 7450 NC 210 N, Angier, NC.

PLANS AND SPECIFICATIONS

A. Septic Tank

1. A septic tank may be needed. If so, the septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 900 gallons in capacity (at minimum).
2. The septic tank shall be fitted with an approved effluent filter.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tanks have had time to properly cure and are free of cracks or other structural deficiencies.

B. Pipes and Fittings

1. All discharge piping, connectors and supply lines should be made of SCH 40 PVC.
2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
3. The supply line will be approximately 320 feet long from the septic tank to the upper septic drainline.
4. Supply line must be installed under driveways must be installed greater than 30 inches under or sleeved in ductile iron, or equivalent.

C. Distribution Method

1. Drainlines will be fed via LPP distribution.

D. Drainfield Installation-Initial

1. The drainfield has been previously laid out on-site utilizing metal stemmed flags. The property owner/builder should mark this area and isolate it as much as possible from construction traffic.
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition.
2. The specified system is a LPP system. Drainlines shall be installed no deeper than 12 inches.
3. The drainfield consists of two (4) LPP lateral trenches to be constructed 18-inches wide by 38 feet in length. Total drainline length is 152 feet.
5. The maximum trench depth for this system shall be 12 inches.
6. The laterals are to be installed keeping the individual trench bottoms level from beginning to end.
7. The trenches should be left open for the final inspection by the HCEH.
8. Laterals will consist of 1 ¼ inch Sch 40 PVC installed in 4 inch perforated pipe sleeve with rows of holes. Holes shall be between ½ and ¾ inch diameter located approximately 120 degrees apart in downward position.
9. Orifice holes of 5/32 inch are to be drilled in 1 ¼ inch lateral lines as listed in the appended LPP Summary sheet. The first and last hole is to be turned downward with remaining holes facing upward.

E. Final Landscaping

1. Final cover over the drainfield shall be at least 6 inches deep. If additional cover is needed, Group II (sandy loam) or Group III (sandy clay loam) soil shall be utilized.
2. The drainfield shall be shaped to shed rainwater and be free from low spots.
3. The drainfield area should be planted with grass as soon as possible to prevent erosion. The soil should be limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

F. Utility Conflicts

1. The builder and property owner must take special care in planning for water, power, gas, telephone and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation. If there are any questions regarding preferred routes, contact the HCEH as soon as possible.
2. Lawn irrigation should not be placed over the drainfield area.

MAINTENANCE

G. In General

1. The owner must maintain the drainfield area through periodic mowing. The drainfield must not be allowed to become overgrown.
2. The septic tank should be pumped every 4 years or when the solids within the septic tank reach an elevation that is equivalent to 25 percent of the volume of the tank. In some situations, the tanks may need to be pumped more frequently. If using a garbage disposal, it is recommended that the homeowner has the septic and pump tanks cleaned out annually.
3. When it becomes necessary to clean the effluent filter, the filter should be removed and the accumulated debris washed back into the septic tank – not onto the lawn.
4. Any damp areas, leakages or malfunctions in the drainfield area should be addressed immediately.

5. Divert gutter downspouts and surface water runoff away from the septic tanks and septic drainfield.

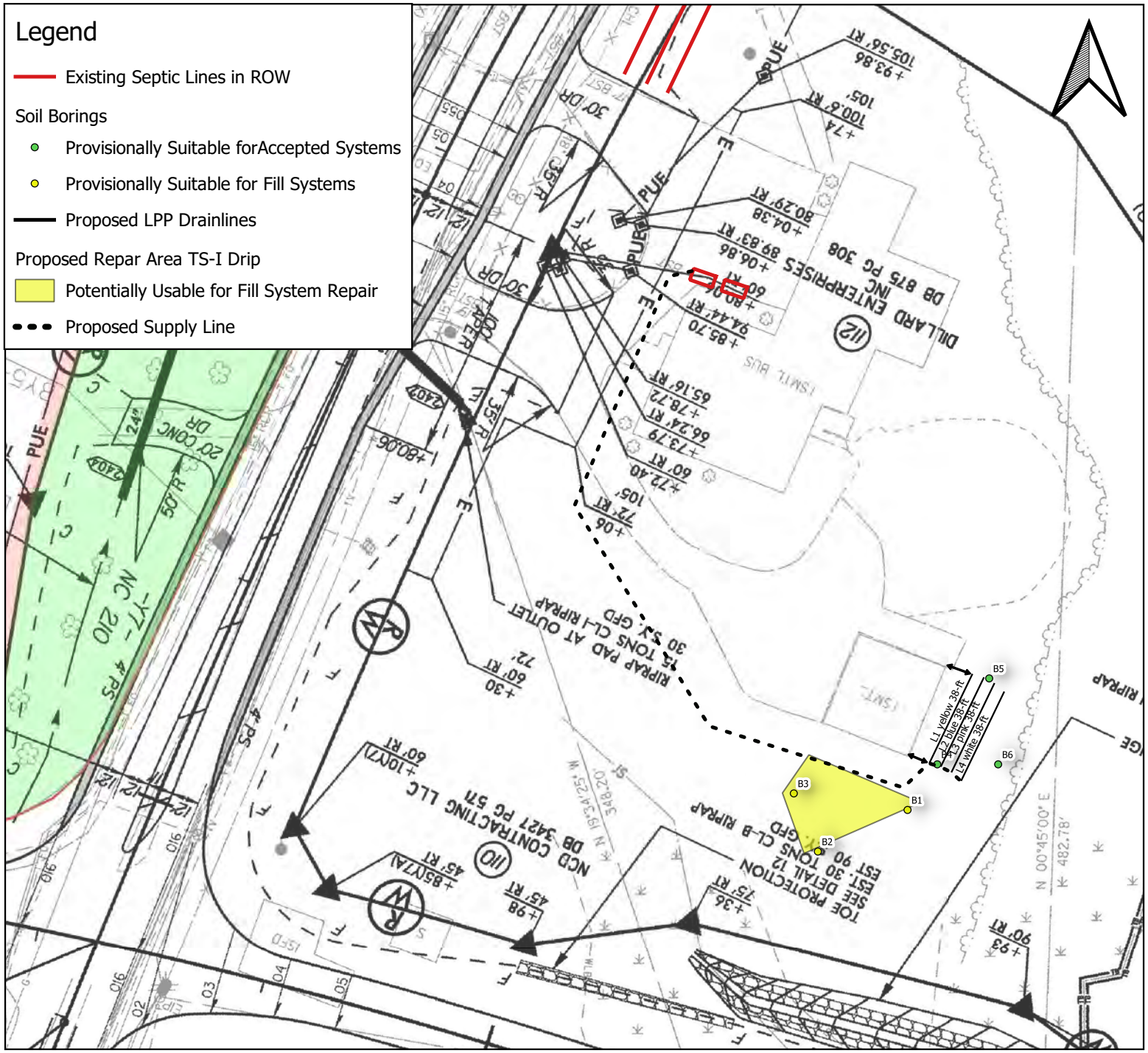
DESIGN SPECIFICS

Initial System

Daily Design Flow:	150 GPD – 6 employees (25 gallon per employee)
Septic Tank Size:	900 Gallons (minimum, if needed)
Effluent Loading Rate:	0.2 GPD per sq. ft.
Drainfield Type:	LPP
Distribution Method:	Distribution Box
Number of Drainlines:	(4) 1.5’ Wide x 38’ Long
Total Trench Length:	152 Linear Feet
Maximum Trench Depth:	12 inches
Final Cover Requirement:	6 Inches

Repair Specifics

Effluent Loading Rate:	0.4 GPD per sq. ft.
Drainfield Type:	TS-I Subsurface Drip
Distribution Method:	Drip disposal
Total Repair Area:	375 sq. ft.
Total Trench Length:	188’
Maximum Trench Depth:	6 Inches
Final Cover Requirement:	6 Inches



Ground Truth Soil Consulting, PLLC

R5705A
Parcel:
112

Soil and Site Evaluation

Harnett County

Scale:
0 30 60 ft

Figure	Date: August 2021
1	GT Job No. 21-147

Low Pressure Pipe Summary Sheet for 7450 NC 210 HWY

Name: Dwight Dilliard **P.I.N.#:** 0673-14-4234.000 **D#:**

Address: 7450 NC 210 N **Subdivision:** **Lot#:**

Number of Employees: 6 **Daily Flow:** 150 **L.T.A.R:** 0.2 gal/d/sqft

Septic Tank: 900 gals **Pump Tank:** 900 gals

Square Footage: 750 sqft **Total Lateral Length:** 150 ft

Number of Laterals: 4 **Width of Trenches:** 18 in

Depth of Trenches: 12 in **Depth of Stone:** 12 in

Lateral Pipe Size: 1 1/4 in **# Of Subfields:** 1

# of Gatevalves: 2 **# of Checkvalves:** 1 (Up Hill Includes ST)

Manifold Diameter: 3 in sch40pvc **Manifold Length:** 12 ft

Supply Line Diameter: 2 in Sch40pvc **Length:** 317 ft

Design Head: 3.00 ft **Elevation Head:** -0.46 ft

Friction Head: 2.54 ft (Supply line length + 70' for fittings in pump tank)

TDH: 5.08 ft (Design head+Elevation Head+Friction Head)

Pump to Deliver: 16.06 gal/min at 5.08 **ft of head**

Pipe Volumes: 12 **ft manifold x** 38.4 **gal/100ft=** 4.608 **gals**

317 **ft supply line x** 17.4 **gal/100ft=** 55.158 **gals**

150 **total lateral lengthx** 7.8 **gal/100ft=** 11.7 **gals**

Lateral Dosing Volume: 11.7 **gal x** 7 **(5 to 10x)=** 81.9 **gals**

Draining Volume: 59.766 **gals + Lateral Dosing Vol. =** 141.666 **gals Dosing Volume**

Drawdown: 141.666 **gals divided by** 20 **gals/in =** 7.0833 **inches**

Pump Run Time: 8.822548 **minutes**

LPP DESIGN

7450 NC 210

Bench Mark is = 100.00 set at **PumpTank elev** 104.75 **Pump** 99.75 **Manifold Elevation** 99.29

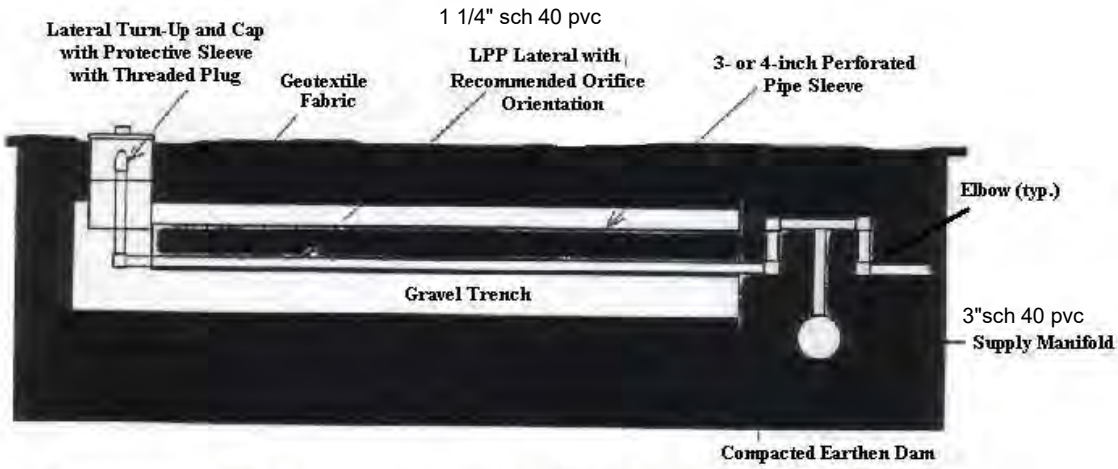
subfield 1

line	color	rod read	elev.	elev. dif.	head	length	hole size	flow/hole	spacing	# holes	1st/last	flow/lat	inst. flow rate
1			98.29	0.00	3.00	38	5/32	0.4986	4.00	9	3.00	4.49	0.1181
2			97.66	-0.63	3.00	38	5/32	0.4986	4.57	8	3.00	3.99	0.1050
3			97.29	-1.00	4.00	38	5/32	0.5757	5.33	7	3.00	4.03	0.1060
4			97.06	-1.23	4.23	38	5/32	0.5920	6.40	6	3.00	3.55	0.0935
				total	**feet =**	**152**					**gal/min =**	**16.06**	

Total Feet = **152** **Total gal/min =** 16.06

Typical LPP Trench and Manifold Details

Figure 1: Manifold, Lateral, and Trench



** Hole orientation should be upward except for a hole 1/3 and 2/3 the distance from the manifold which should face down for drainage of pipe between pump cycles.

Figure 2: Cross Section of Trench

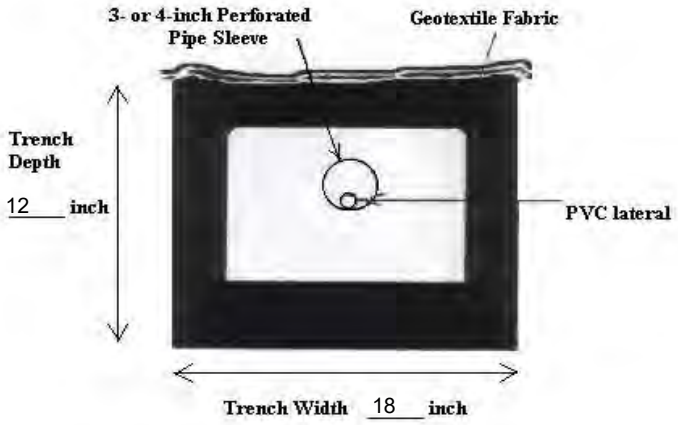
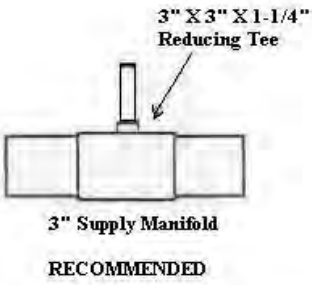
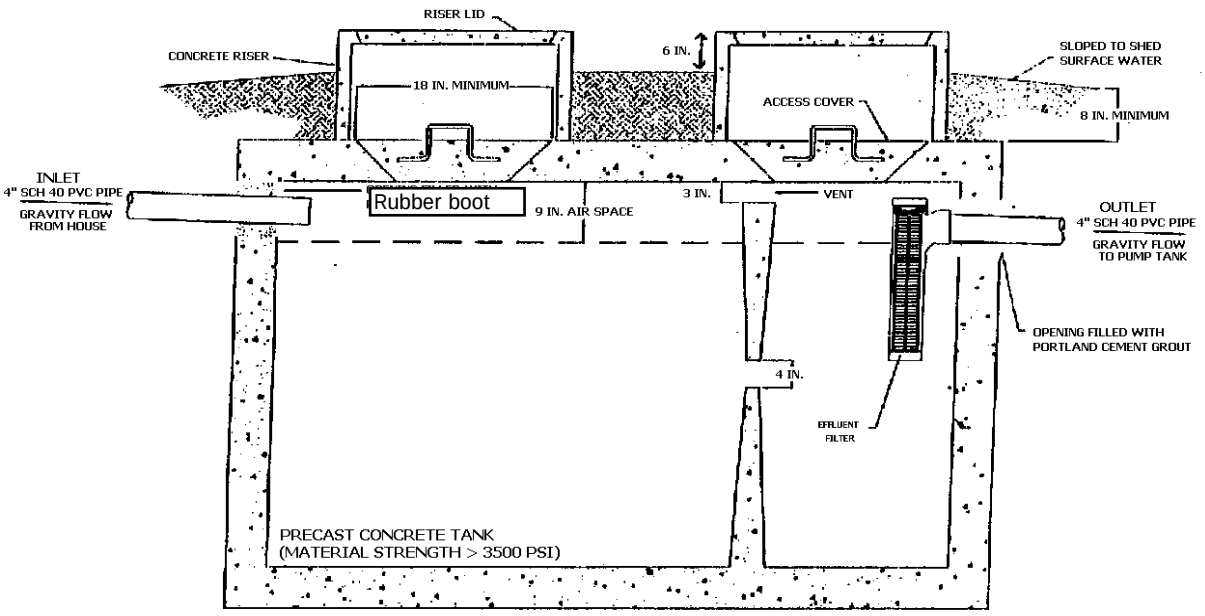
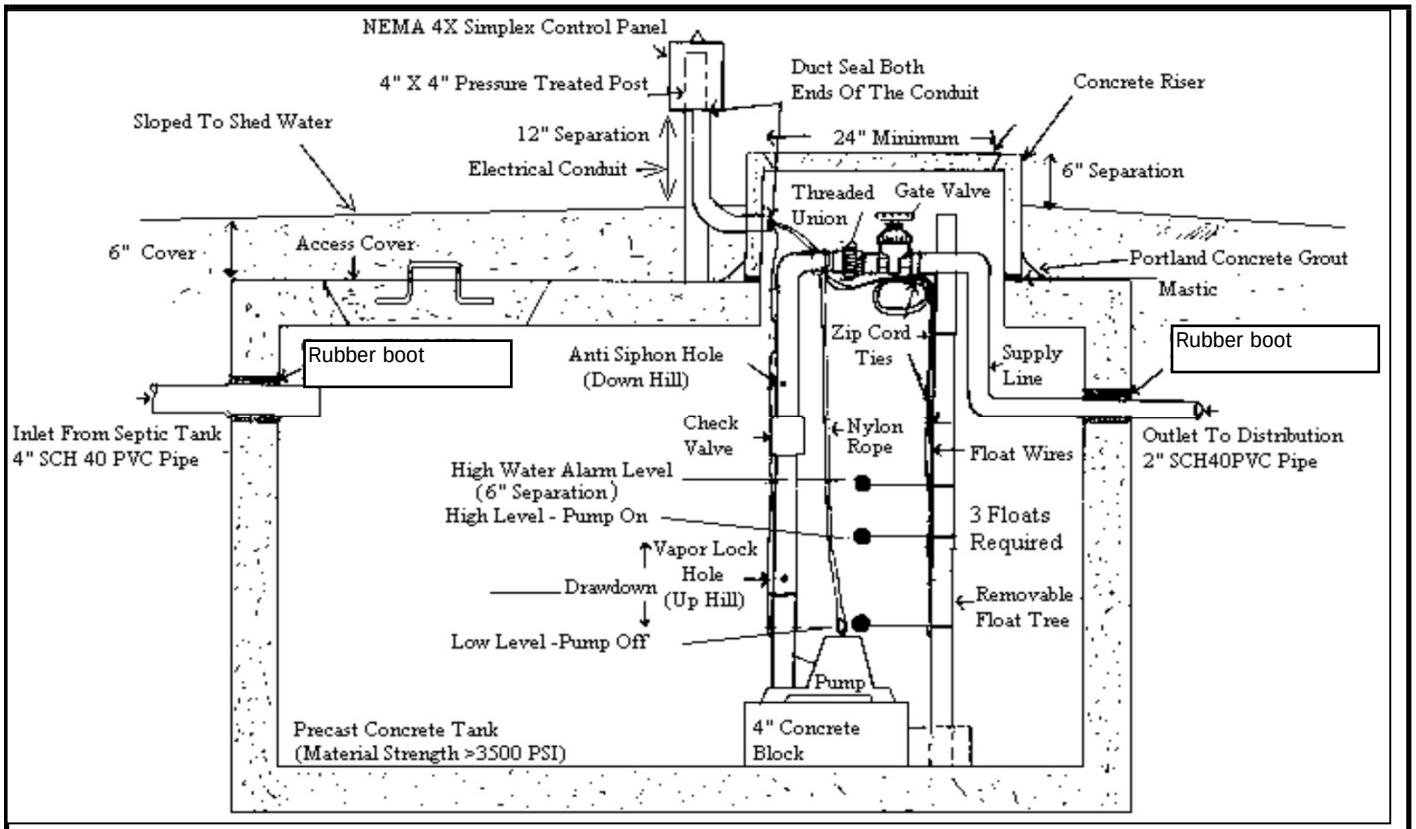


Figure 3: Manifold Side Profile





900 GALLON SEPTIC TANK If Needed

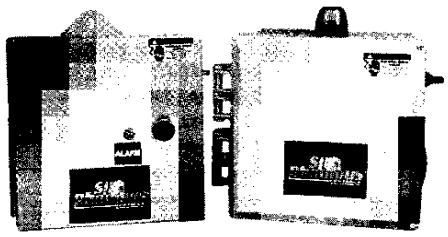


900 GALLON PUMP TANK IF NEEDED

MODEL 112 Control Panel

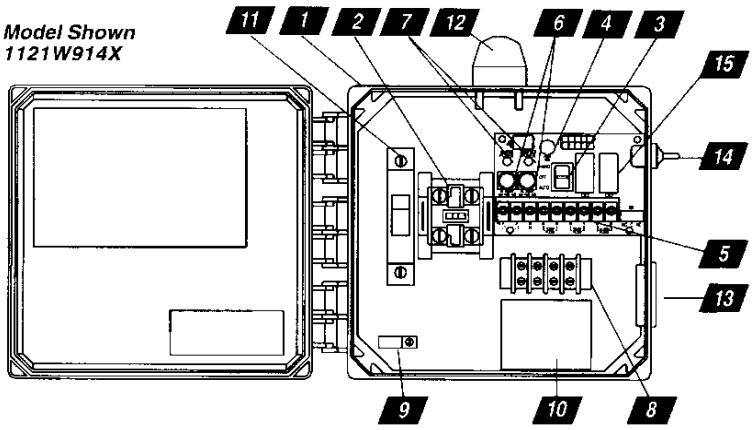
Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single-phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.



indoor *indoor/outdoor*

Model Shown
1121W914X



1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.

2. **Magnetic Motor Contactor** controls pump by switching hot electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (~~optional~~) provides pump disconnect and branch circuit protection. required (2X)

STANDARD ALARM PACKAGE (other options available)

12. **Red Alarm Beacon** provides 360° visual check of alarm condition.
    Note: NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
    Note: NEMA 1 style utilizes an internally mounted buzzer (83 to 85 decibel) in lieu of horn.
14. **Exterior Horn Test/Normal/Silence Switch** allows alarm horn to be silenced and testing of horn and light to ensure proper operation of alarm system.
15. **Horn Silence Relay** automatically resets alarm after alarm condition has been resolved (mounted on circuit board).

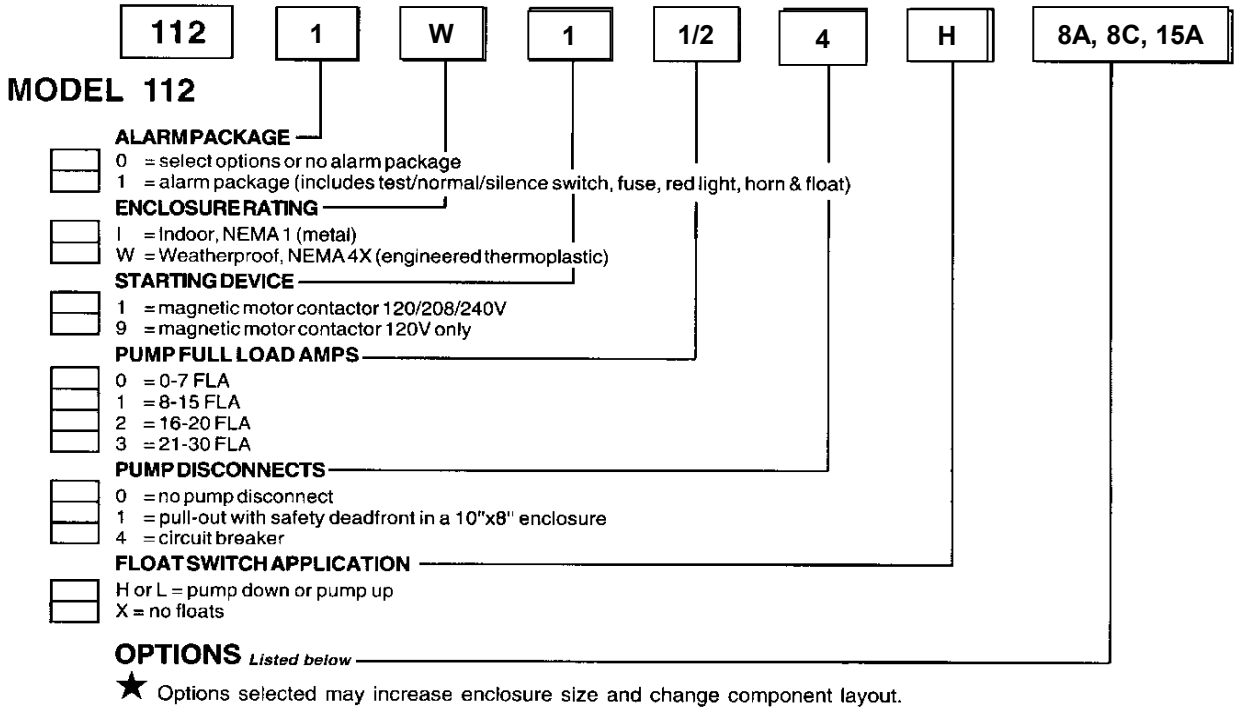
FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us LISTED

SJE-Rhombus CONTROLS
SJ ELECTRO SYSTEMS, INC.

PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com



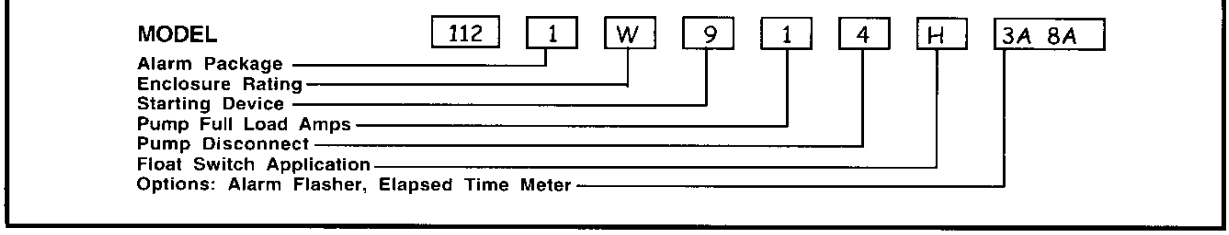
If additional features are required, call the factory for a quote on either a Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION
☐	1A	Red beacon only / no audio *must select 1E if floats included*
☐	1C	Horn only / no visual *must select 1E if floats included*
☐	1E	Alarm float
☐	3A	Alarm flasher
☐ ★	4A	Low level cutout *select option 4D if floats included*
☐ ★	4B	Red low-level indicator & alarm *must select 4A also*
☐	4D	Low-level float
☐	6A	Auxiliary alarm contact, form C type
☐ ★	8A	Elapsed time meter
☐ ★	8C	Event (cycle) counter
☐	10E	Lockable latch - NEMA 4X
☐	10E	Lockable latch - NEMA 1
☐ ★	10F	Lightning arrester
☐ ★	10K	Anti-condensation heater

	CODE	DESCRIPTION
☐	11C	NEMA 1 alarm panel *must select option 6A*
☐	11D	NEMA 4X alarm panel *must select option 6A*
☐	15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
☐	16A	10' cord in lieu of 20'
☐	16B	15' cord in lieu of 20'
☐	16C	30' cord in lieu of 20'
☐	16D	40' cord in lieu of 20'
☐	17A	SJE SignalMaster® / mounting strap ●
☐	17B	SJE SignalMaster® / externally weighted ●
☐	17C	Sensor Float® / internally weighted ▲
☐	17D	Sensor Float® / externally weighted ▲
☐	17E	Sensor Float® Mini / pipe clamp ▲
☐	17F	Sensor Float® Mini / externally weighted ▲
☐	19X	Door mounted pump run indicator
☐	21A	Pumpmaster® in lieu of on/off switches ●
☐	21B	PumpMaster® Plus in lieu of on/off switches ●
☐	21C	Super Single® in lieu of on/off switches ▲
☐	21D	Double Float™ in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

SAMPLE



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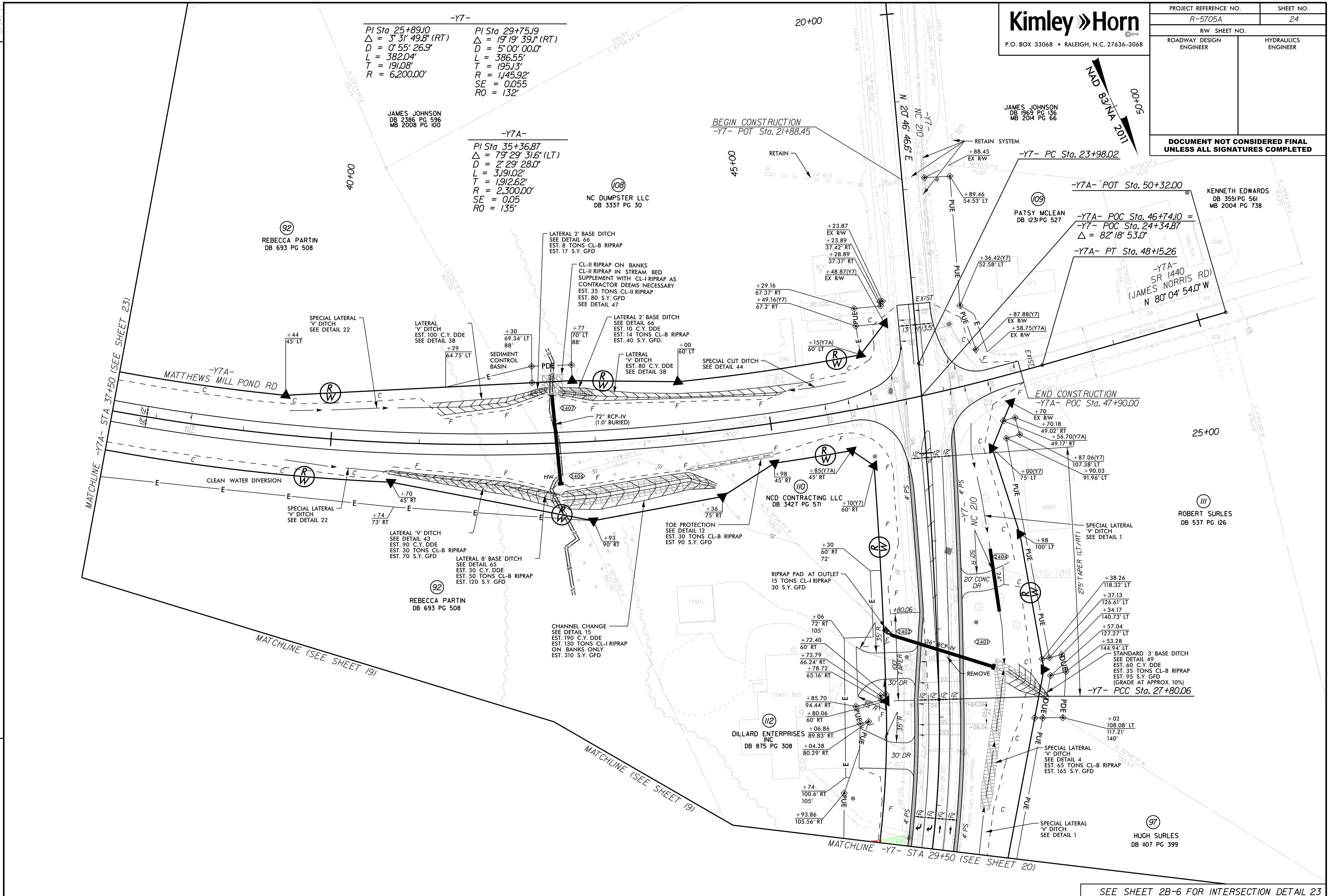

-Y7-
PI Sta 25+89.10
△ = 3° 31' 49.8" (RT)
D = 0° 55' 26.9"
L = 382.04'
T = 191.08'
R = 6,200.00'
PI Sta 29+75.19
△ = 19° 19' 39.1" (RT)
D = 5° 00' 00.0"
L = 386.55'
T = 195.13'
R = 1,145.92'
SE = 0.055
RO = 132'
-Y7A-
PI Sta 35+36.87
△ = 79° 29' 31.6" (LT)
D = 2° 29' 28.0"
L = 3,191.02'
T = 1,912.62'
R = 2,300.00'
SE = 0.05
RO = 135'
JAMES JOHNSON
DB 2386 PG 596
MB 2008 PG 100
108
NC DUMPSTER LLC
DB 3337 PG 30
92
REBECCA PARTIN
DB 693 PG 508
40+00
45+00
20+00
25+00
50+00
NAD 83/NA 2011
BEGIN CONSTRUCTION
-Y7- POT Sta. 21+88.45
RETAIN
RETAIN SYSTEM
N 20° 46' 46.6" E
NC 210
-Y7-
JAMES JOHNSON
DB 1969 PG 136
MB 2014 PG 66
-Y7- PC Sta. 23+98.02
-Y7A- POT Sta. 50+32.00
KENNETH EDWARDS
DB 3551 PG 561
MB 2004 PG 738
109
PATSY MCLEAN
DB 1231 PG 527
-Y7A- POC Sta. 46+74.10 =
-Y7- POC Sta. 24+34.87
△ = 82° 18' 53.0"
-Y7A- PT Sta. 48+15.26
-Y7A-
SR 1440
(JAMES NORRIS RD)
N 80° 04' 54.0" W
END CONSTRUCTION
-Y7A- POC Sta. 47+90.00
LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 8 TONS CL-B RIPRAP
EST. 17 S.Y. GFD
CL-II RIPRAP ON BANKS
CL-II RIPRAP IN STREAM BED
SUPPLEMENT WITH CL-I RIPRAP AS
CONTRACTOR DEEMS NECESSARY
EST. 35 TONS CL-II RIPRAP
EST. 80 S.Y. GFD
SEE DETAIL 47
LATERAL 2' BASE DITCH
SEE DETAIL 66
EST. 10 C.Y. DDE
EST. 14 TONS CL-B RIPRAP
EST. 40 S.Y. GFD.
LATERAL 'V' DITCH
EST. 80 C.Y. DDE
SEE DETAIL 38
SPECIAL CUT DITCH
SEE DETAIL 44
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22
LATERAL 'V' DITCH
EST. 100 C.Y. DDE
SEE DETAIL 38
SEDIMENT CONTROL BASIN
PDE
-Y7A-
MATTHEWS MILL POND RD
MATCHLINE -Y7A- STA 37+50 (SEE SHEET 23)
72" RCP-IV
(1.0' BURIED)
CLEAN WATER DIVERSION
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 22
LATERAL 'V' DITCH
SEE DETAIL 43
EST. 90 C.Y. DDE
EST. 30 TONS CL-B RIPRAP
EST. 70 S.Y. GFD
LATERAL 8' BASE DITCH
SEE DETAIL 65
EST. 30 C.Y. DDE
EST. 50 TONS CL-B RIPRAP
EST. 120 S.Y. GFD
110
NCD CONTRACTING LLC
DB 3427 PG 571
TOE PROTECTION
SEE DETAIL 12
EST. 30 TONS CL-B RIPRAP
EST 90 S.Y. GFD
CHANNEL CHANGE
SEE DETAIL 15
EST. 190 C.Y. DDE
EST. 130 TONS CL-I RIPRAP
ON BANKS ONLY
EST. 310 S.Y. GFD
RIPRAP PAD AT OUTLET
15 TONS CL-I RIPRAP
30 S.Y. GFD
36" RCP-IV
REMOVE
111
ROBERT SURLES
DB 537 PG 126
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1
275' TAPER (LT/RT)
STANDARD 3' BASE DITCH
SEE DETAIL 49
EST. 60 C.Y. DDE
EST. 35 TONS CL-B RIPRAP
EST. 95 S.Y. GFD
(GRADE AT APPROX. 10%)
-Y7- PCC Sta. 27+80.06
112
DILLARD ENTERPRISES INC
DB 875 PG 308
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 4
EST. 65 TONS CL-B RIPRAP
EST. 165 S.Y. GFD
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1
97
HUGH SURLES
DB 1107 PG 399
MATCHLINE (SEE SHEET 19)
MATCHLINE (SEE SHEET 19)
MATCHLINE -Y7- STA 29+50 (SEE SHEET 20)
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-5705A	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Kimley»Horn
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SHEET 2B-6 FOR INTERSECTION DETAIL 23
SEE SHEETS 2D-1 TO 2D-4 FOR DRAINAGE DETAILS
SEE SHEET 35 FOR -Y7- PROFILE
SEE SHEET 37 FOR -Y7A- PROFILE

5/14/99
3/5/2021