

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN
AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED
***PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR
INTENDED USE CHANGED***

OPERATIONS PERMIT

PERMIT # WRP-035906-2020

APPLICATION DATE: 04/03/2020

BLDG. PERMIT#:

PIN: 0689066261

RECORDED: Yes

TOWNSHIP: 18 - Swift Creek

JURISDICTION: Fuquay Varina

ZONING: RA

APPLICANT: Robin Caparell
1901 N Harrison Ave 200

BUSINESS PHONE: (919) 659-1500

HOME PHONE:

MOBILE PHONE: (919) 272-6072

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 4316 MOSAIC CT

SUBDIVISION: Stonewood Manor PH 2

LOT: 9

ACRES: 0.69

DIRECTIONS: Intersection of Optimist Farm Road and Johnson Pond (Stonewood Manor)

Systems defined as either type III-b, III-g with a pump, IV, V or VI, in accordance with the North Carolina administrative code 15A NCAC 18a .1961, table V as adopted by reference in the "Regulations Governing Wastewater Treatment Dispersal Systems in Wake County", requires Wake County Environmental Services to conduct periodic inspections of the system type pursuant to 15A NCAC 18a. 1961 (j). Fees for these inspections will be charged as per the approved Fee Schedule. In addition, all systems are to be operated and maintained as specified in 15A NCAC 18A .1961. This permit is based in part on information provided by the homeowner and/or his/her representative in the application submitted for this permit. The Environmental Health Specialist is not responsible for false or misleading information contained in the application. The environmental health specialist is also not responsible for concealed conditions on the property or for statements in this report that may have resulted from false or misleading statements provided to him/her in the application. Neither Wake County nor the Environmental Health Specialist warrants that the septic tank system will continue to function satisfactorily in the future or that the water supply will remain potable.

OPERATION PERMIT VALID FOR: No Expiration

INSTALLED BY: BRANTLEY, CORY - 1036 - IV

PROPRIETARY SYSTEM: EZ1203HG - EZFlow EZ 1203H Geo **PRETREATMENT SYSTEM:**

SYSTEM TYPE INSTALLED: III B

OPERATION PERMIT: STATUS: Issued

ISSUED BY: Adrienne Holloway

ISSUED DATE: 09/01/2020

SEPTIC TANK: David Brantley & Sons - STB-323 - 1250 gallons **DATE OF MANUFACTURE:** 06/04/2020 **FILTER:** GAG SIM/TECH - STF-110

GREASE TRAP:

DATE OF MANUFACTURE:

FILTER:

DOSING PUMP TANK: Brantley - PT-2124 - 1312

DATE OF MANUFACTURE: 06/09/2020

FILTER:

gal - 21.5 gal/in

CC1: 999,821

ETM1: 0

CC2:

ETM2:

RECIRCULATION TANK:

DATE OF MANUFACTURE:

CC1:

ETM1:

CC2:

ETM2:

SEPTIC TANK ELEVATION: 9.33

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 9.50

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 5

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
26	12	100	8.08
26	12	100	8.33
26	12	100	8.585
26	12	100	8.91

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 26

ACTUAL DOSE VOLUME: 247

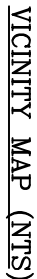
SPECIFIC OPERATION REQUIREMENTS:

480 gallons per day/ 4 bedroom SFD

ISSUED BY:

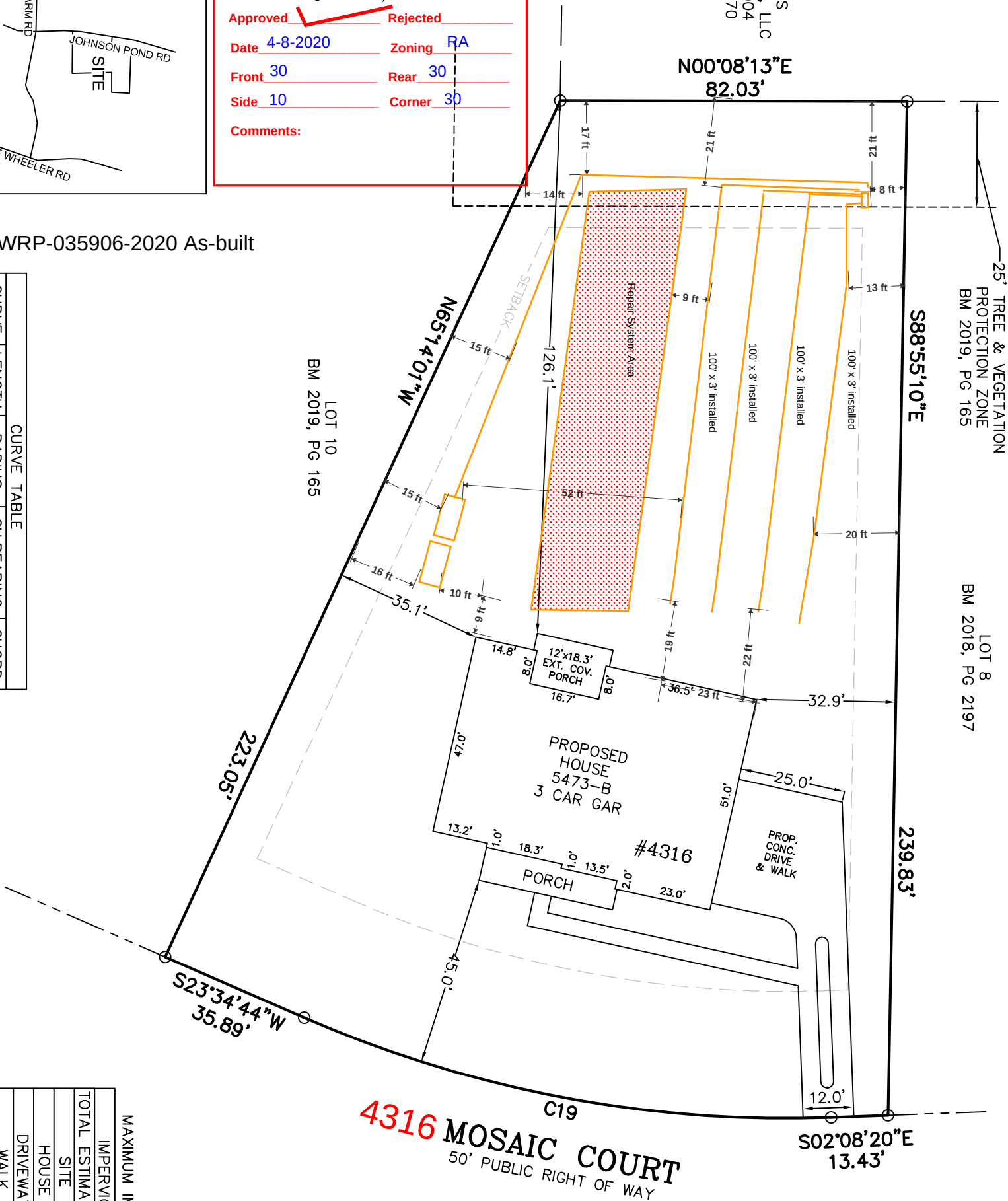


DATE: 09/01/2020



WRP-035906-2020 As-built

CURVE TABLE			
CURVE	LENGTH	RADIUS	CH. BEARING CHORD
C19	127.93'	285.00'	S10°43'12"W 126.85'



- LEGEND**
- MATHEMATICAL POINT
 - ⦿ FIRE HYDRANT
 - ⊞ WATER METER
 - ⦿ CLEAN OUT
 - MIA MAXIMUM IMPERVIOUS AREA

SEE NOTES

NOTES:
-REFERENCE WAKE COUNTY BM 2018, PG 2196-2200
FOR BOUNDARY INFORMATION, NORTH INDEX & TIE
LINES TO SUBDIVISION CONTROL CORNERS.
-ZONING: RESIDENTIAL R-30
-THIS PROPERTY IS NOT LOCATED WITHIN A SPECIAL
FLOOD HAZARD AREA AS SCALED FROM NFIP FIRM
#3720068900J (EFFECTIVE DATE: 5/2/2006).
-SETBACKS:
FRONT-30', REAR-30', SIDE-10', CORNER-30'.

I HEREBY CERTIFY THAT THE BUILDING WILL LIE WHOLLY ON THE LOT. THIS PLAT IS OF AN EXISTING PARCEL OF LAND AND IS NOT A SURVEY AND NOT FOR RECORDATION PURPOSES.

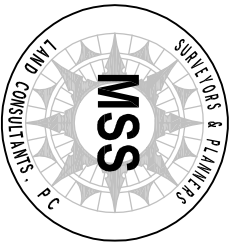
PRELIMINARY PLAN

WADE A. GOWERS, PLS L-46399

PERMIT PLAN LOT 9

STONWOOD MANOR PHASE 2
CREEK TOWNSHIP, WAKE COUNTY, NC
SWIFT

DAVID WEEKLEY HOMES
1901 N. HARRISON AVENUE, SUITE 2000
CARY, NC 27513



MSS LAND CONSULTANTS, PC
"Committed to Total Quality Service"

Firm License: C-2070
E S T. 1 9 9 8

6118 St. Giles St
(Suite E)
Raleigh, NC 27612
Phone (919) 510-4464
Fax (919) 510-9102
Email: gowersw@msstand.com

DATE: 03/13/2020	SCALE: 1"=30'	DRAWN:BP	CHECK:	FILE: DWH-18-01
REV: 03/16/2020 CHANGED REFERENCE				

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CONSTRUCTION AUTHORIZATION PERMIT**PERMIT # WRP-035906-2020****APPLICATION DATE:** 04/03/2020**BLDG. PERMIT#:****PIN:** 0689066261**RECORDED:** Yes**TOWNSHIP:** 18 - Swift Creek**JURISDICTION:** Fuquay Varina**ZONING:** RA

APPLICANT: Tracy Crosby
1901 N Harrison Ave 200
Cary, NC 27513

BUSINESS PHONE: (919) 659-1500**HOME PHONE:****MOBILE PHONE:** (408) 603-7417**HD USE:** 101A CONVENTIONAL ONE-FAMILY HOUSE**EXISTING USE:****SITE ADDRESS:** 4316 MOSAIC CT**SUBDIVISION:** Stonewood Manor PH 2**LOT:** 9**ACRES:** 0.69**DIRECTIONS:** Intersection of Optimist Farm Road and Johnson Pond (Stonewood Manor)

Contractors shall install system on contour. See attached SITE PLAN for wastewater system design and well location. No underground utilities, water lines or sprinklers systems may be located in the original system, or permit areas. A septic tank filter with two risers for access is required. The wastewater system shall not be covered or placed into use until inspected by the Wake County Department of Environmental Services and Operations Permit issued. An Accepted Status System may be used in place of conventional system, if it can be placed in the permitted/authorized trench footprint (except reduction in line length and/or number as allowed for in approval) and the installation in accordance with the accepted system approval, without unauthorized product alteration. If permit required use of an Accepted Status System, substitution with another accepted status system may be made, as long as no changes are necessary in the location of each nitrifications line (including any increase in line length), trench depth or effluent distribution method. If changes are necessary, prior approval by this office is required before system installation. Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

CONSTRUCTION AUTHORIZATION PERMIT VALID FOR: Five Years**CONSTRUCTION AUTHORIZATION PERMIT: CA STATUS:** Issued**BY:** Laura Allen**DATE:** 04/30/2020**CA VALID FOR:** Five Years**DESIGN FLOW:** 480 GALLONS**BASEMENT:** No**BASEMENT FIXTURES:** No**SEPTIC TANK:** 1200 GALLONS**SEPTIC TANK FILTER:** Yes**DOSING PUMP TANK:** 1200 GALLONS**DOSING PUMP TANK FILTER:****GREASE TRAP:****GREASE TRAP FILTER:****RECIRCULATION PUMP TANK:****RECIRCULATION PUMP TANK FILTER:****PROPOSED SYSTEM:** 0.25 - 25% Reduction (Innovative or Accepted)**EXISTING SYSTEM:****DRAINFIELD SQ. FT:** 1,200**AGGREGATE DEPTH:** 12**MAX. TRENCH DEPTH:** 26 INCHES**DISTRIBUTION DEVICE:** PM - Pressure Manifold**TRENCH #:** 4**TRENCH LENGTH:** 100 FEET**TRENCH WIDTH:** 36 INCHES**TOTAL TRENCH LENGTH:** 400 FEET**CENTER SPACING:** 9 FEET**MINIMUM SOIL COVER:** 6 INCHES**PRETREATMENT:****APPROVAL #:**

SUBFIELDS #:

PUMP TDH:

PUMP DESIGN FLOW:

ZONE VALVE:

ASDMS REQUIRED:

P.E. SIGN OFF/ASBUILT REQUIRED:

LINE OF CREDIT REQUIRED:

TRIPARTY AGREEMENT REQUIRED:

OPERATOR REQUIRED:

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

- System designed for a 4 bedroom home, having 480 gals per day.
- Future Repair is a III B type system. With a Max Trench depth of 26" and a 0.3 LTAR.
- Site serviced by community well water.
- Any deviation from accepted design must be approved by the CCSC Wake County ES prior to system installation.
- House has a partial foundation drain.
- Maintain all required setbacks.
- All property lines must be fully marked at time of install or reinspection required.
- Please contact Laura Allen, (919) 810-5718, with any questions prior or during install.

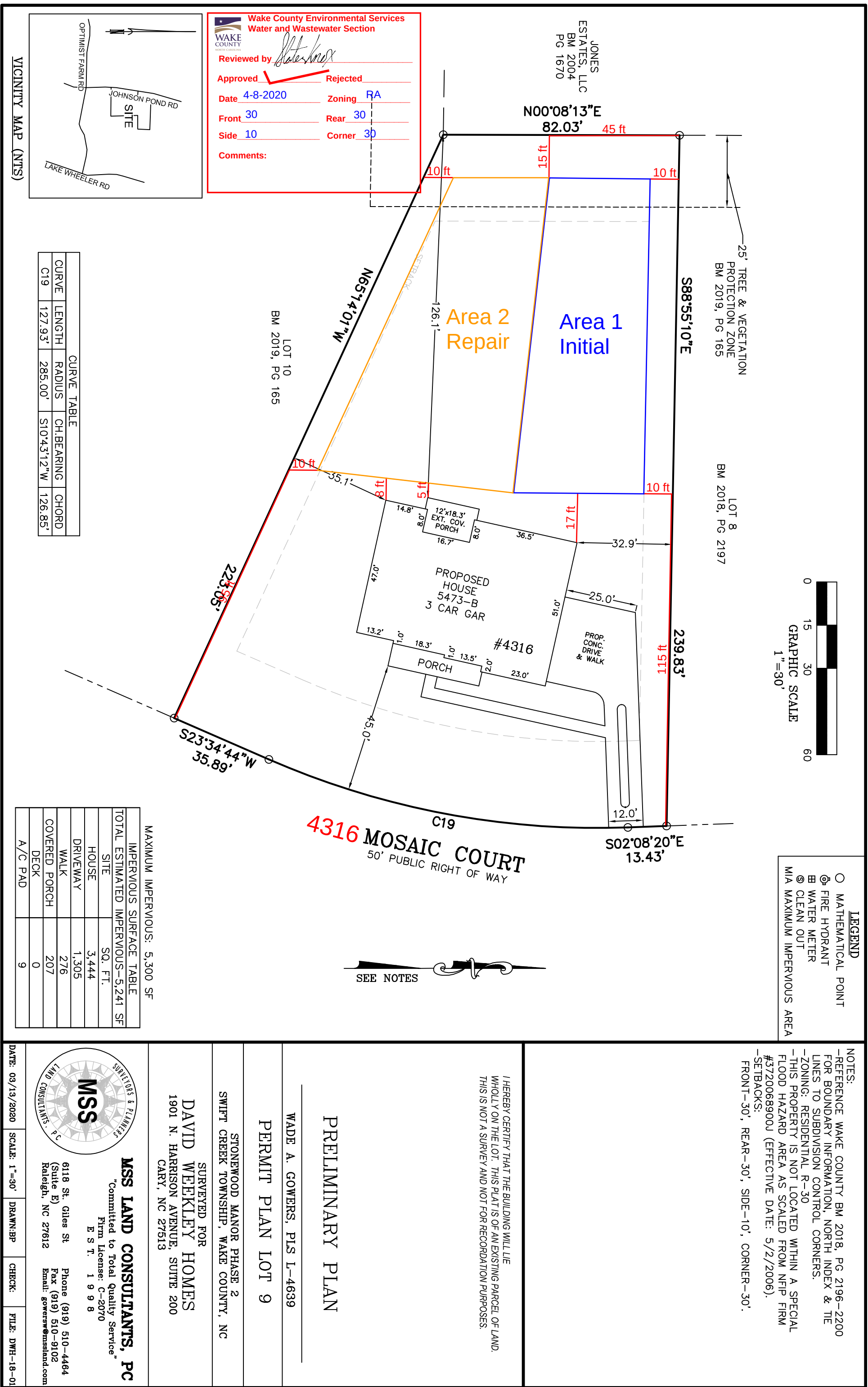
Issued By:



Date: 04/30/2020

Construction Authorization includes CA Part A-E

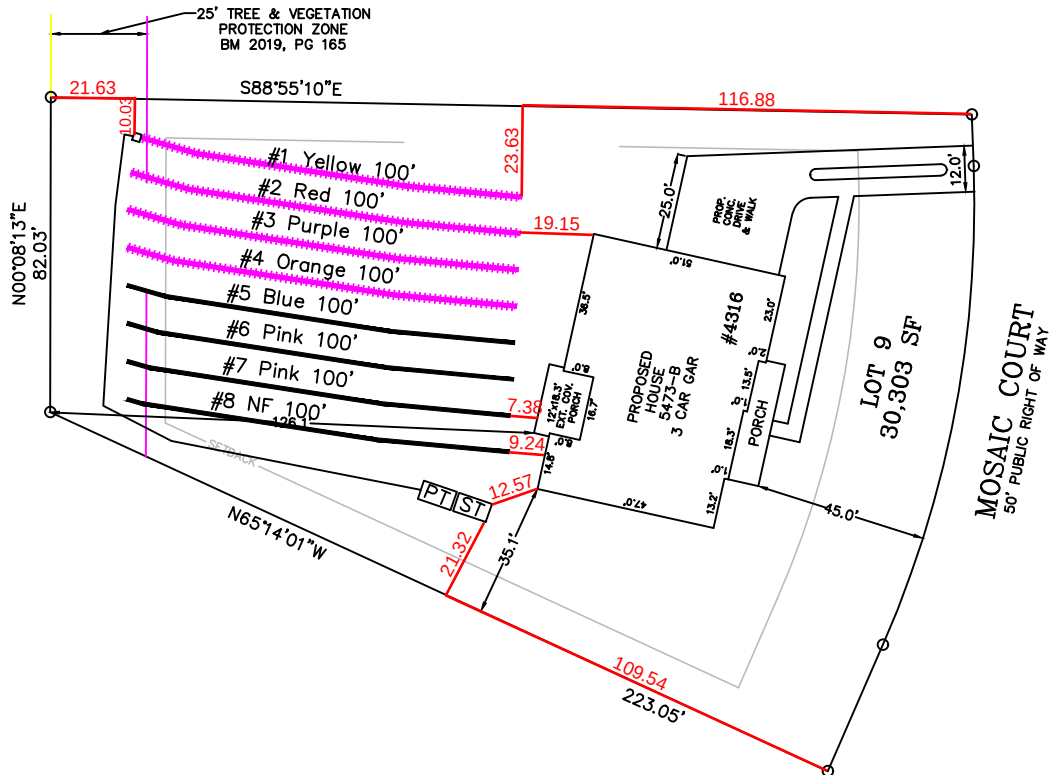
WRP-035906-2020 CA Part A



WRP-035906-2020 CA Part B



System: 
Repair: 



- *Keep Tanks and Drain lines 10' from property lines.
- *Not a Survey
- *Not a guarantee of a septic permit.
- *Keep supply lines >5' from property lines.
- *Some lines are flagged longer in the field than lengths indicated above.
- *No cutting within septic area.

GRAPHIC SCALE
1" = 50'



System: Pressure Mani-Tee
Lines: 1-4 (400')
Accepted Status System
0.3 Soil LTAR

Repair: Pressure Mani-Tee
Lines: 5-8, (400')
Accepted Status System
0.3 Soil LTAR



Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

4-Bedroom Septic Layout
Lot 9, Stonewood Manor Subdivision
Wake County, North Carolina

Job# : 2060
Drawn By : AH
Date : 03/25/2020
Revision:

WRP-035906-2020 CA Part C

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES 4 TAP PRESSURE MANI-TEE DESIGN

Name: David Weekly Homes P.I.N. #: 0689066261 D#: WRP-035906-2020

Address: 4316 Mosaic Ct Subdiv: Stonewood Manor PH 2 Lot#: 9

of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.30 gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1200 Stone Depth: 12

Number of Taps: 4 Length of Trenches: 400 ft(See Tap Chart for Details)

Depth of Trenches: 26 in Manifold Length: 42 in

Manifold Diameter: 2in sch 40pvc Mani-Tee Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 160 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 4.35 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft Elevation Head: 6 ft

Total Head: 12.35 ft Pump to Deliver: 28.44 gals/min at 12.35 ft head

Dosing Volume: 172 gals,

Drawdown: 172 gals divided by 20 gals/in = 8.6 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

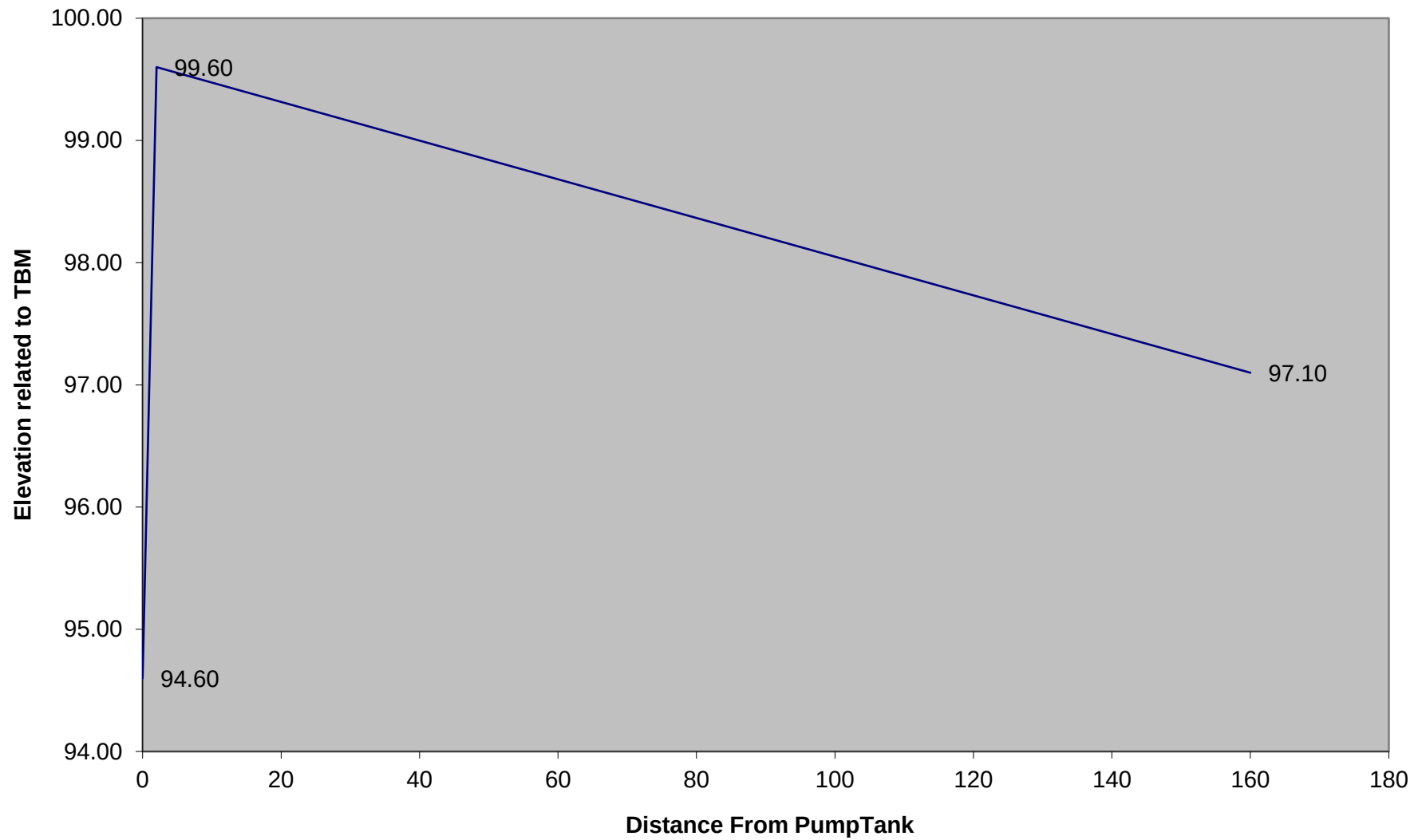
Bench Mark	<u>is = 100.00</u>	set at	<u></u>	Design Head:	<u>2</u>				
Pump tank elev.	<u>0.4</u>	99.60	Pump elev.	94.60	Manifold elev.	97.10			
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Yellow	3.9	96.10	100	1/2in SCH 40	7.11	120.00	300	0.400
2	Red	4.4	95.60	100	1/2in SCH 40	7.11	120.00	300	0.400
3	Purple	4.8	95.20	100	1/2in SCH 40	7.11	120.00	300	0.400
4	Orange	5.1	94.90	100	1/2in SCH 40	7.11	120.00	300	0.400
		total	feet =	400	gal/min =	28.44		<u>LTAR =</u>	<u>0.30</u>
% of Dose Vol.	<u>66</u>			<u>Des. Flow</u>	480			(Itar + 5%)	0.32
Dose Volume	172			Pump Run=	16.88			(Itar W/ INOV)	0.40
Dose Pump Time	6.03			Tank Gal/IN	20			(Itar + 5%)	0.42
Drawdown in Inches	8.6			Elev. Head	6				
Supply Line Length	160								

Comments:

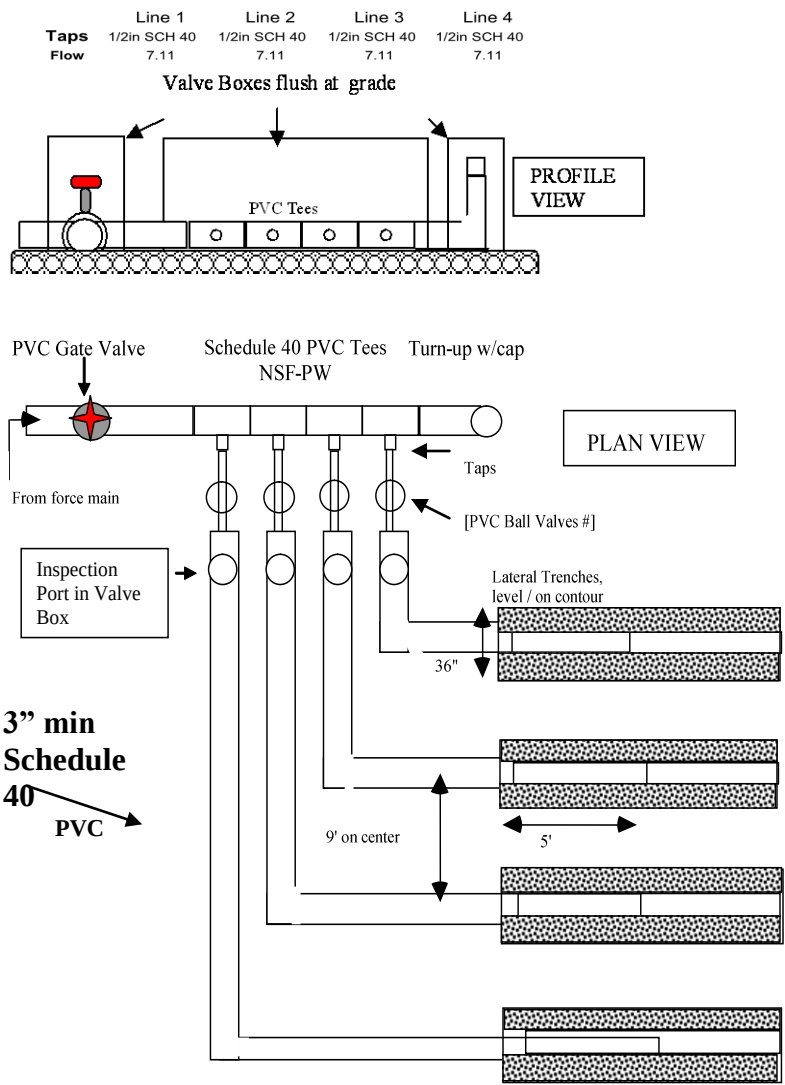
Hydraulic Profile

Manifold Elevation	97.10	160
Pump tank elev.	99.60	2
Pump elev.	94.60	0

Hydraulic Profile

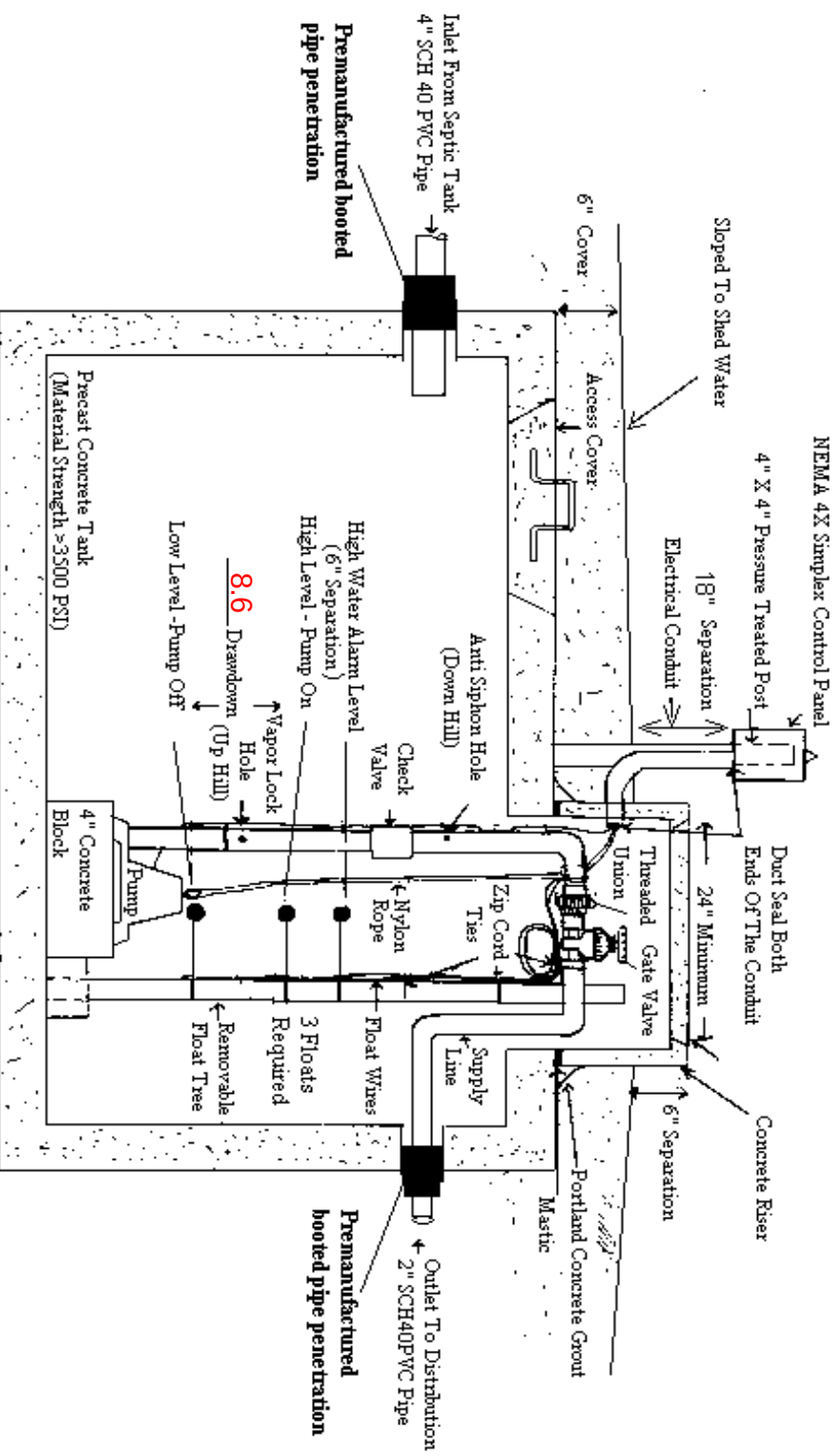


Wake County Mani-Tee Design



Manifold sizing may need to be altered after installer layout. The installer must layout the system prior to the pre-construction conference

Wake County Department Of Environmental Services



_____ GALLON PUMP TANK

1200 Gals Pump Tank

Minimum Panel Requirements

The following items will be considered the minimum for all pump systems:

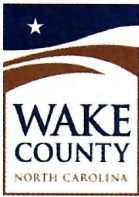
1. It must be a NEMA 4X Box.
2. It must use a HOA (Hand, Off, Auto) switch to control the pump. No more use of piggyback plugs!
3. It must have a motor contactor to prevent high voltage electricity in the water at all times.
4. It must have an audible and visual alarm.
5. **All Pressure Manifold and LPP Systems must have an elapsed time meter and cycle counter installed in the panel.**
6. It must have 2 separate power supplies, wired from the fuse panel at the house.
7. All panels must have 2 circuit breakers installed in the panel to allow for disconnecting of power, so that the pump or switches maybe serviced.
8. Panels and pumps are to be wired at the time of our inspection. Power must be supplied by use of generators or from the house temporary meter, if the builder applied for it and has had all required inspections and the temporary meter has been set. **We will no longer inspect any system that has been hot wired from the temporary power pole or jumped through the house wiring without a meter being set.**

Pressure Manifolds

1. A float tree or hanging floats must be used.
2. A Simplex Control Panel with a Hand - Off - Auto switch and alarm in a NEMA - 4X box is required. See the plans or CA comments for further details on the panel.
3. 2 separate power supplies are needed. Try to look and make sure they have not used a 120V only panel with a 240V pump.
4. The taps and pipes for the taps must be of the same material! If it is a sch80 tap (usually gray plastic) then the tap, pipe and valve (the valve can be sch40pvc if there is an adequate amount of sch80 pipe used) must be constructed of sch80pvc. The same goes for sch40 taps, you cannot use sch80 pieces with the sch40.
5. The taps must go directly to the 3" pipe; no elbows can be used in the tap connections.
6. All of the tap must be the same size or larger. 3/4" pipe cannot have a 1/2" valve, but a 1/2" pipe could have a 3/4" valve, if at there is at least 6" total 1/2" pipe used.
7. Should the wrong size or material be used in the tap itself, the flow to the line can be corrected by using an adequate amount of the proper pipe material and size. The amount of pipe needed to control the flow is dependent on the size pipe/tap. If 1/2" pipe is needed, then at least 6" of total pipe is needed. A 3/4" size requires at least 9" of pipe to be used. A 1" size needs 12" of total pipe length to control the flow.

Stonewood Manor S/D Lot 9 Repair TAP CHART

Bench Mark		is = 100.00 Location of BM				Elevation Head		1.00		
Pump tank elev.		100.00		Pump elev.		94.60		Manifold elev.		95.60
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	
5	Blue	5.40	94.60	100	3/4in SCH 80	10.1	120.00	300	0.4000	
6	Pink	5.50	94.50	100	3/4in SCH 80	10.1	120.00	300	0.4000	
7	Yellow	5.60	94.40	100	3/4in SCH 80	10.1	120.00	300	0.4000	
8	NF	6.00	94.00	100	3/4in SCH 80	10.1	120.00	300	0.4000	
		total	feet =	400	gal/min =	40.4	LTAR =		0.3000	
							LTAR + %5		0.3150	
% of Dose Vol.		75	Des. Flow		480	(ltar W/ INOV)		0.4000		
Dose Volume		195.00	Pump Run=		11.88	(ltar W/ INOV + 5%		0.4200		
Dose Pump Time		4.83	Tank Gal/IN		19.65					
Drawdown in Inches		9.92								

**Environmental
Services**Water Quality Division
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602
www.wakegov.com/water/**Foundation Drain Request Form**Wastewater Permit: 35906 Building Permit: _____

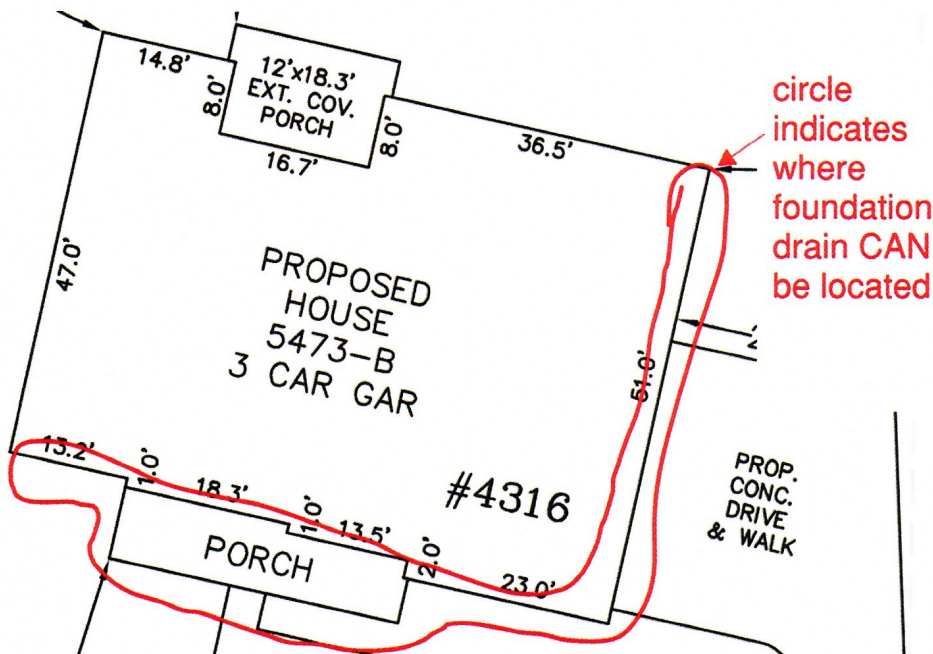
Parcel PIN: _____

Project (Site) Address: 4316 MOSAIC CT, APEX.**PLEASE CIRCLE:**

Foundation Drain? YES NO

PARTIAL (demonstrate below)

If PARTIAL FOUNDATION DRAIN is circled, please demonstrate ~~where the foundations drain will be located~~ on the diagram below, (add decks, patios, etc. as needed)

Applicant Signature: Andrew Simmons for DWB Date: 4/30/20

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IMPROVEMENT PERMIT

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LOT: 9

ACRES: 0.69

DIRECTIONS: Intersection of Optimist Farm Road and Johnson Pond (Stonewood Manor)

Permit is subject to revocation if the Site Plan or Plat changes or the intended use changes.

*Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

IP VALID FOR: Five Years AS PER GS 130A-335 (f)

DESIGNED BY: CCSC

SYSTEM LAYOUT: Private Sector

SITE CLASSIFICATION: Provisionally Suitable

IP STATUS: Issued

BY: Laura Allen

DATE: 04/30/2020

NUMBER OF BEDROOMS: 4

OR TOTAL NUMBER OF OCCUPANTS: 8

PERMITTED DESIGN FLOW: 480 GPD

BASEMENT: No

BASEMENT PLUMBING: No

WASTEWATER STRENGTH: Domestic

SYSTEM TYPE: III B

LTAR: 0.300

EXISTING SYSTEM UTILIZED:

PRETREATMENT STRENGTH REQUIRED:

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL:

MAXIMUM TRENCH DEPTH: 26 INCHES

PUMP REQUIRED: Yes

SPECIFIC SYSTEM REQUIREMENTS: -System designed for a 4 bedroom home, having 480 gals per day.

-Future Repair is a III B type system. With a Max Trench depth of 26" and a 0.3 LTAR.

-Site serviced by community well water.

-No cutting, grading, alterations, or utilities in septic area.

-Maintain all required setbacks.

ISSUED BY:

Laura Allen

DATE: 04/30/2020

WRP-035906-2020 IP Site Plan

