

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-020067-2019 **APPLICATION DATE:** 06/10/2019 **BLDG. PERMIT#:** RBPR-019609-2019
PIN: 0780033885 **RECORDED:** Yes
TOWNSHIP: 18 - Swift Creek **JURISDICTION:** Wake County **ZONING:** R-40W
APPLICANT: Fuller Land & Development, LLC
Jackie Elek
8801 Fast Park Dr. 301 **BUSINESS PHONE:** (704) 578-3463
HOME PHONE:
MOBILE PHONE:
HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE **EXISTING USE:**
SITE ADDRESS: 3520 HUNDLEBY DR
SUBDIVISION: LENA ESTATES **LOT:** 5 **ACRES:** 0.92
DIRECTIONS: n/a

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:

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

SYSTEM TYPE INSTALLED: III B

OPERATION PERMIT: **STATUS:** Issued

ISSUED BY: John Kase

ISSUED DATE: 03/18/2020

SEPTIC TANK:

DATE OF MANUFACTURE: 07/07/2019

FILTER: Polylok - PL-68

GREASE TRAP:

DATE OF MANUFACTURE:

FILTER:

DOSING PUMP TANK:

DATE OF MANUFACTURE: 09/03/2019

FILTER:

CC1: 999,809

ETM1: 16

CC2:

ETM2:

RECIRCULATION TANK:

DATE OF MANUFACTURE:

CC1:

ETM1:

CC2:

ETM2:

SEPTIC TANK ELEVATION: 8.00

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 6.91

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 5

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
24	12	135	4.91
24	12	135	5.16
24	12	135	5.54

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 0

ACTUAL DOSE VOLUME: 0

SPECIFIC OPERATION REQUIREMENTS:

Septic tank installed is Highpoint Concrete-HPCP-1250; STB 775; manufacture date-7/7/19

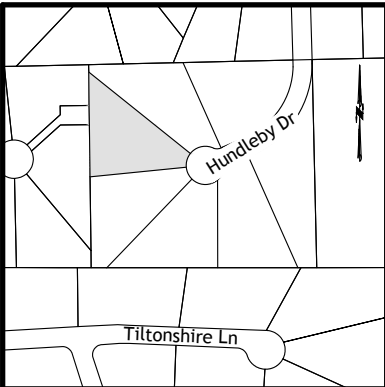
Pump tank installed is Shoaf-1275; PT-306

manufacture date-9/3/19

ISSUED BY:



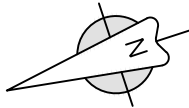
DATE: 03/18/2020



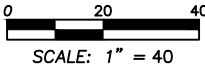
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AS Built



BM 2018, Pages 1962-1963



Vicinity Map
(No Scale)

STORMWATER AND FLOODPLAIN
MANAGEMENT

APPROVED

STORMWATER MGMT. ☐ S-
FLOOD STUDY ☐ S-
DATE



ENVIRONMENTAL CONSULTANT SIGNATURE

IMPERVIOUS SURFACE AREA:
House: 3,177 S.F.
Driveway &
Sidewalk: 2,195 S.F.
Total: 5,372 S.F.
Lot Area: 40,044 S.F.
% Impervious Area: 13.4%
MISA= 6,000 s.f.

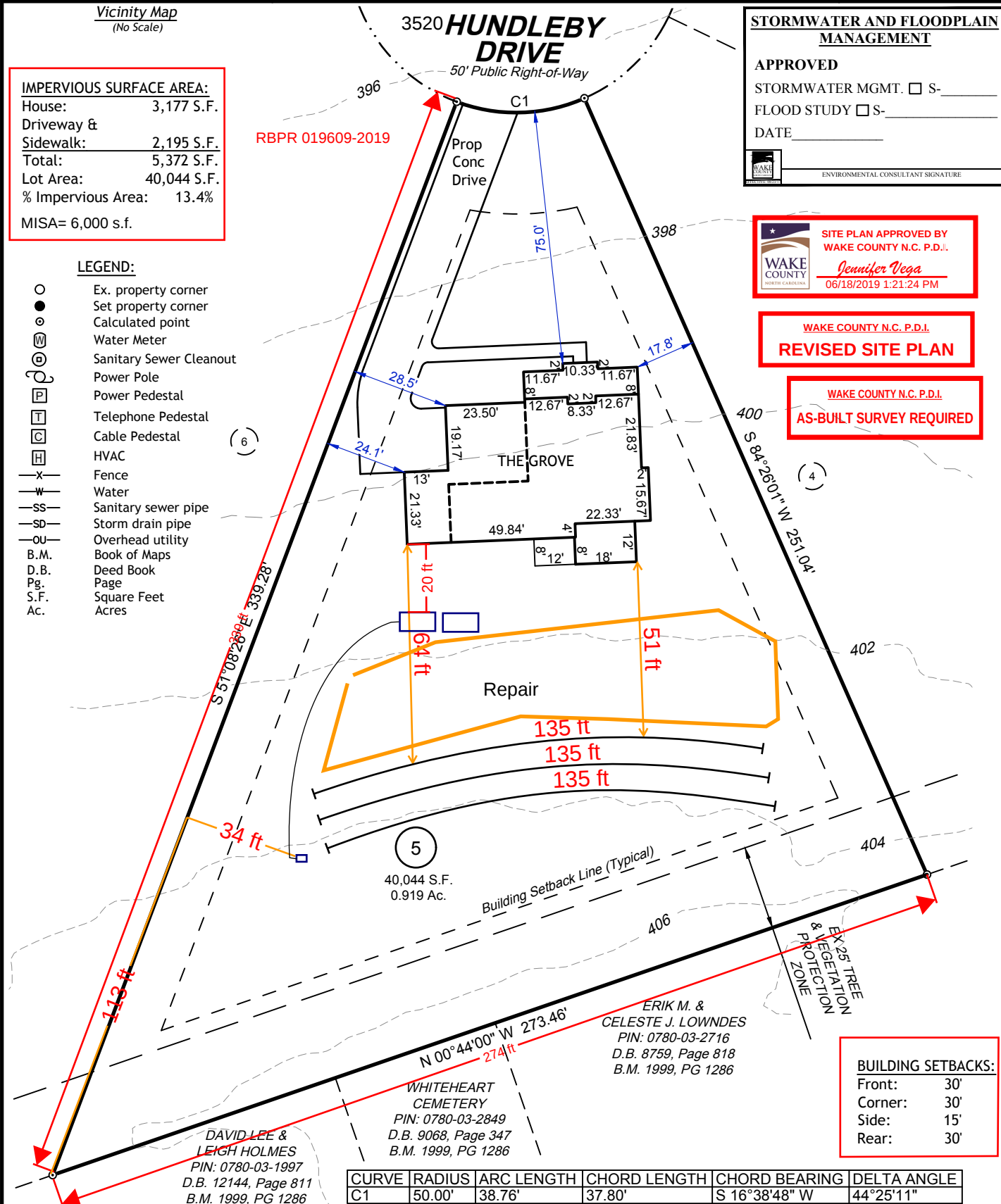
LEGEND:

- Ex. property corner
- Set property corner
- Calculated point
- ⊙ Water Meter
- ⊙ Sanitary Sewer Cleanout
- ⊙ Power Pole
- ⊙ Power Pedestal
- ⊙ Telephone Pedestal
- ⊙ Cable Pedestal
- ⊙ HVAC
- X— Fence
- W— Water
- SS— Sanitary sewer pipe
- SD— Storm drain pipe
- OU— Overhead utility
- B.M. Book of Maps
- D.B. Deed Book
- Pg. Page
- S.F. Square Feet
- Ac. Acres

SITE PLAN APPROVED BY
WAKE COUNTY N.C. P.D.I.
Jennifer Vega
06/18/2019 1:21:24 PM

WAKE COUNTY N.C. P.D.I.
REVISED SITE PLAN

WAKE COUNTY N.C. P.D.I.
AS-BUILT SURVEY REQUIRED



BUILDING SETBACKS:
Front: 30'
Corner: 30'
Side: 15'
Rear: 30'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	50.00'	38.76'	37.80'	S 16°38'48" W	44°25'11"

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TAYLOR
LAND CONSULTANTS, PLLC
License No P-0829
1600 Olive Chapel Road, #140
Apex, NC 27502
(919) 801-1104

PRELIMINARY
FOR BUILDING PERMIT
PURPOSES ONLY

PLOT PLAN

3520 Hundleby Drive
PIN: 0780-03-3885
Lena Estates Subdivision
B.M. 2018, Pages 1962-1963, Lot #05
Swift Creek Township, Wake County, NC
May 29, 2019
Job #: 19877

MIRROR HOUSE, RIGHT LOAD	SB	6/18/19
MOVE HOUSE BACK	SB	6/4/19
REVISION	BY	DATE

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INTENDED USE CHANGED***

IMPROVEMENT PERMIT

PERMIT #: WRP-020067-2019

APPLICATION DATE: 06/10/2019

BLDG. PERMIT #: RBPR-019609-2019

PIN: 0780033885

RECORDED: Yes

TOWNSHIP: 18 - Swift Creek

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: Fuller Land & Development, LLC
8801 Fast Park Dr. 301

BUSINESS PHONE: (704) 578-3463

HOME PHONE:

MOBILE PHONE:

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 3520 HUNDLEBY DR

SUBDIVISION: LENA ESTATES

LOT: 5

ACRES: 0.92

DIRECTIONS: n/a

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:

SYSTEM LAYOUT: Staff

SITE CLASSIFICATION: Provisionally Suitable

IP STATUS: Issued

BY: Caroline Suggs

DATE: 06/13/2019

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: No

PRETREATMENT STRENGTH REQUIRED: None

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL: No

MAXIMUM TRENCH DEPTH: 24 INCHES

PUMP REQUIRED: Yes

SPECIFIC SYSTEM REQUIREMENTS: -4 BEDROOM. 480 GPD.

-NO CUTTING, GRADING, ALTERING, OR UTILITIES IN PROPOSED SEPTIC AREAS.

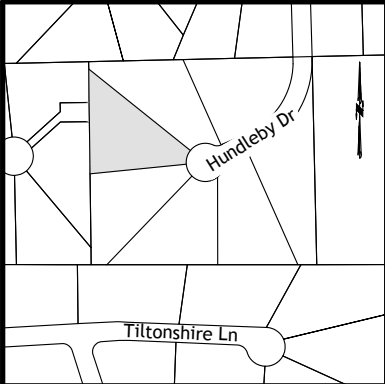
-REPAIR III B-PUMP TO MANI-TEE TO TOTAL OF 405'

-MAINTAIN ALL REQUIRED SETBACKS

ISSUED BY:

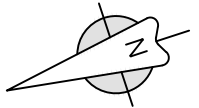
Caroline Suggs RTHS

DATE: 06/13/2019

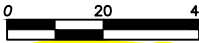


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BM 2018, Pages 1962-1963



SCALE: 1" = 40

Vicinity Map
(No Scale)

RBPR 019609-2019

IMPERVIOUS SURFACE AREA:

House: 3,177 S.F.
Driveway & Sidewalk: 1,951 S.F.
Total: 5,128 S.F.
Lot Area: 40,044 S.F.
% Impervious Area: 12.8%
MISA = 6,000 S.F.

LEGEND:

- Ex. property corner
- Set property corner
- Calculated point
- ⊙ Water Meter
- ⊙ Sanitary Sewer Cleanout
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STORMWATER AND FLOODPLAIN
MANAGEMENT

APPROVED

STORMWATER MGMT. ☐ S-
FLOOD STUDY ☐ S-
DATE

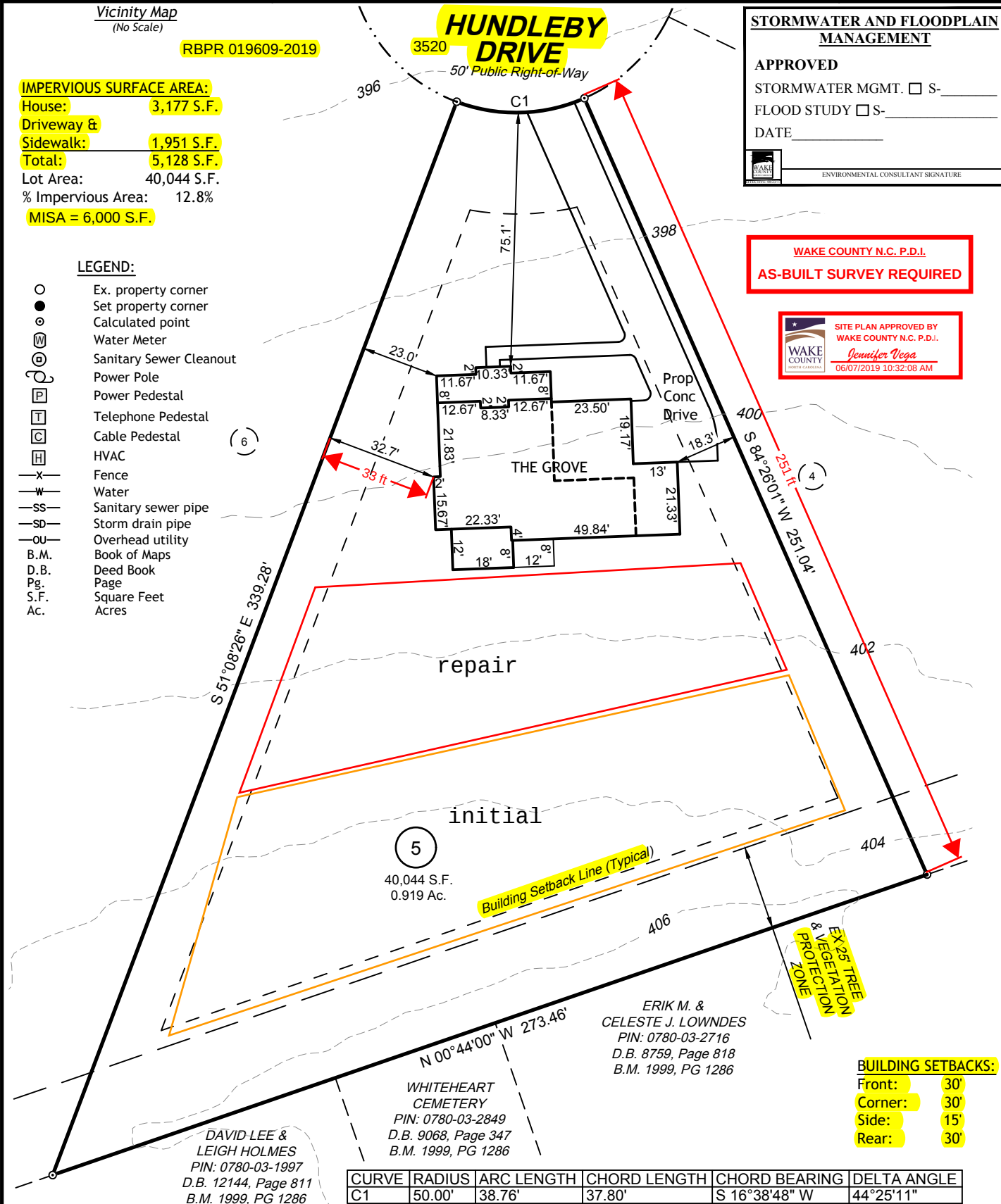


ENVIRONMENTAL CONSULTANT SIGNATURE

WAKE COUNTY N.C. P.D.I.
AS-BUILT SURVEY REQUIRED



SITE PLAN APPROVED BY
WAKE COUNTY N.C. P.D.I.
Jennifer Vega
06/07/2019 10:32:08 AM



BUILDING SETBACKS:

Front: 30'
Corner: 30'
Side: 15'
Rear: 30'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	50.00'	38.76'	37.80'	S 16°38'48" W	44°25'11"

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PRELIMINARY
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PURPOSES ONLY

PLOT PLAN

3520 Hundleby Drive

PIN: 0780-03-3885

Lena Estates Subdivision

B.M. 2018, Pages 1962-1963, Lot #05
Swift Creek Township, Wake County, NC

May 29, 2019

Job #: 19877

MOVE HOUSE BACK
REVISION

SB 6/4/19
BY DATE

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APPLICANT: Fuller Land & Development, LLC
8801 Fast Park Dr. 301
Raleigh, NC 27617

BUSINESS PHONE: (704) 578-3463**HOME PHONE:****MOBILE PHONE:****HD USE:** 101A CONVENTIONAL ONE-FAMILY HOUSE**EXISTING USE:****SITE ADDRESS:** 3520 HUNDLEBY DR**SUBDIVISION:** LENA ESTATES**LOT:** 5**ACRES:** 0.92**DIRECTIONS:** n/a

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:** Caroline Suggs**DATE:** 06/21/2019**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:** No**GREASE TRAP:****GREASE TRAP FILTER:** No**RECIRCULATION PUMP TANK:****RECIRCULATION PUMP TANK FILTER:** No**PROPOSED SYSTEM:** 0.25 - 25% Reduction (Innovative or Accepted)**EXISTING SYSTEM:** No**DRAINFIELD SQ. FT:** 1,215**AGGREGATE DEPTH:** 12**MAX. TRENCH DEPTH:** 24 INCHES**DISTRIBUTION DEVICE:** PM - Pressure Manifold**TRENCH #:** 3**TRENCH LENGTH:** 135 FEET**TRENCH WIDTH:** 36 INCHES**TOTAL TRENCH LENGTH:** 405 FEET**CENTER SPACING:** 9 FEET**MINIMUM SOIL COVER:** 6 INCHES**PRETREATMENT:****APPROVAL #:**

SUBFIELDS #: 1
PUMP TDH: 15.75 FEET

PUMP DESIGN FLOW: 26.13
ZONE VALVE:

ASDMS REQUIRED:
P.E. SIGN OFF/ASBUILT REQUIRED:

LINE OF CREDIT REQUIRED:
TRIPARTY AGREEMENT REQUIRED:

OPERATOR REQUIRED:

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

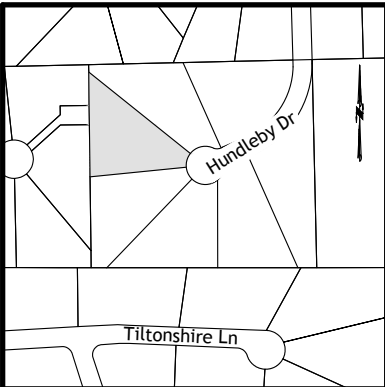
- 4 BEDROOM. 480 GPD.
- REPAIR III B-PUMP TO MANI-TEE TO TOTAL OF 405' (3 X 135')
- ANY DEVIATION FROM APPROVED DESIGN MUST BE APPROVED BY WAKE COUNTY ES STAFF PRIOR TO SYSTEM INSTALLATION.
- MAINTAIN ALL REQUIRED SETBACKS
- CONTACT EHS, CAROLINE SUGGS AT 919-796-9637 WITH ANY ISSUES, QUESTIONS, OR CONCERNS.

Issued By:



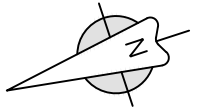
Date: 06/21/2019

CA contains part A-C

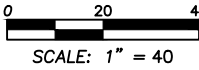


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BM 2018, Pages 1962-1963



PART A

Vicinity Map
(No Scale)

STORMWATER AND FLOODPLAIN
MANAGEMENT

APPROVED

STORMWATER MGMT. ☐ S-
FLOOD STUDY ☐ S-
DATE



ENVIRONMENTAL CONSULTANT SIGNATURE



SITE PLAN APPROVED BY
WAKE COUNTY N.C. P.D.I.
Jennifer Vega
06/18/2019 1:21:24 PM

WAKE COUNTY N.C. P.D.I.

REVISED SITE PLAN

WAKE COUNTY N.C. P.D.I.

AS-BUILT SURVEY REQUIRED

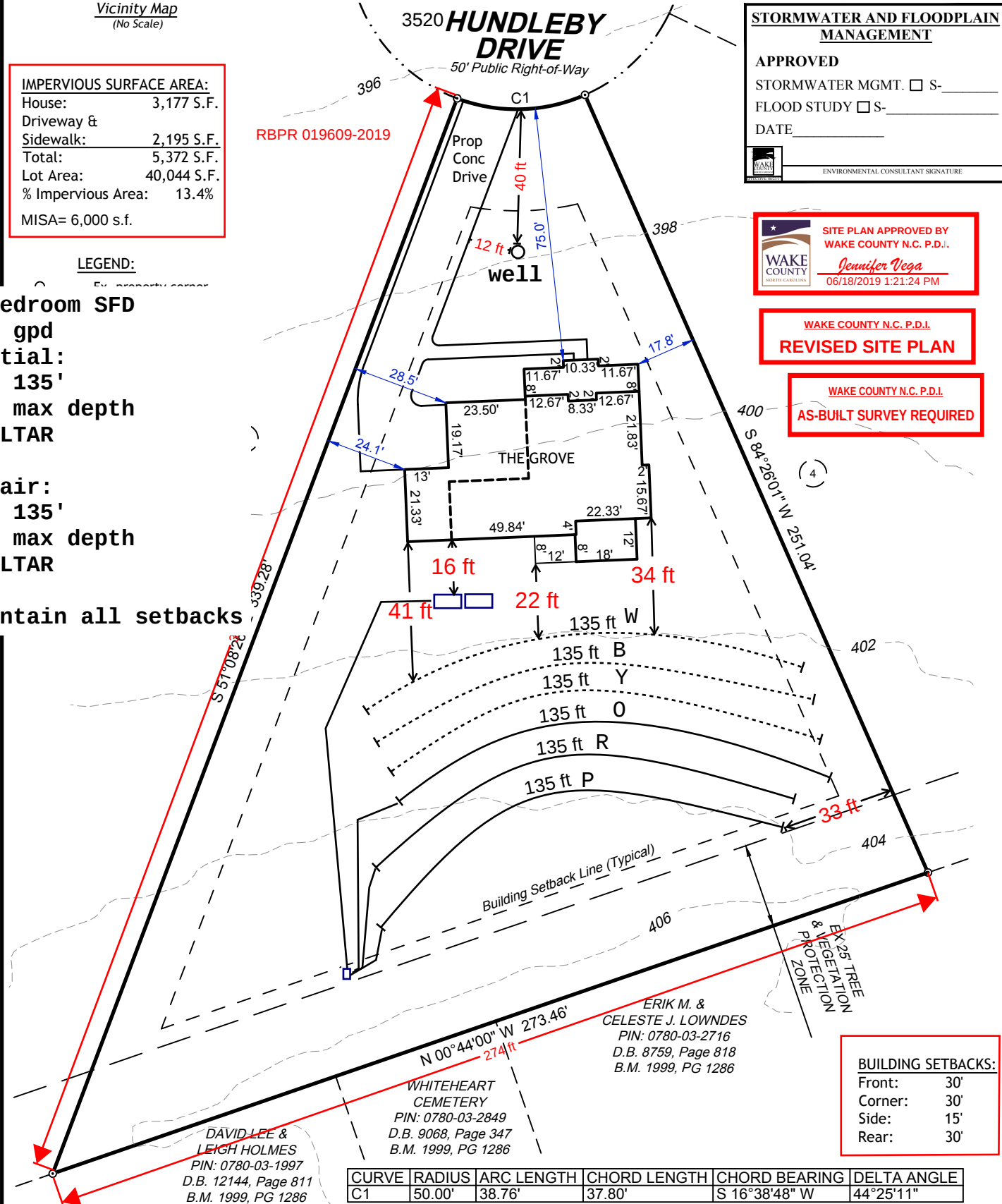
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Sidewalk: 2,195 S.F.
Total: 5,372 S.F.
Lot Area: 40,044 S.F.
% Impervious Area: 13.4%
MISA= 6,000 s.f.

LEGEND:

4 bedroom SFD
480 gpd
Initial:
3 X 135'
24" max depth
.3 LTAR

Repair:
3 X 135'
24" max depth
.3 LTAR

Maintain all setbacks



BUILDING SETBACKS:

Front: 30'
Corner: 30'
Side: 15'
Rear: 30'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
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May 29, 2019
Job #: 19877

MIRROR HOUSE, RIGHT LOAD	SB	6/18/19
MOVE HOUSE BACK	SB	6/4/19
REVISION	BY	DATE

PART B

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES 3 TAP PRESSURE MANI-TEE DESIGN

Name: J. Fuller Homes

P.I.N. #: 0780-03-3885

D#: RP-020067-2019

Address: 3520 Hundleby Dr Apex, NC

Subdiv: Lena Estates

Lot#: 5

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: 1215 Stone Depth: 12

Number of Taps: 3 Length of Trenches: 405 ft(See Tap Chart for Details)

Depth of Trenches: 24 in Manifold Length: 36 in

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

Supply Line: length: 100 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 2.75 ft(supply line length + 70' for fittings in pump tank)

Design Head: 3 ft Elevation Head: 10.00 ft

Total Head: 15.75 ft Pump to Deliver: 26.13 gals/min at 15.75 ft head

Dosing Volume: 197 gals,

Drawdown: 197 gals divided by 20 gals/in = 9.9 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, see permit details for specifics.

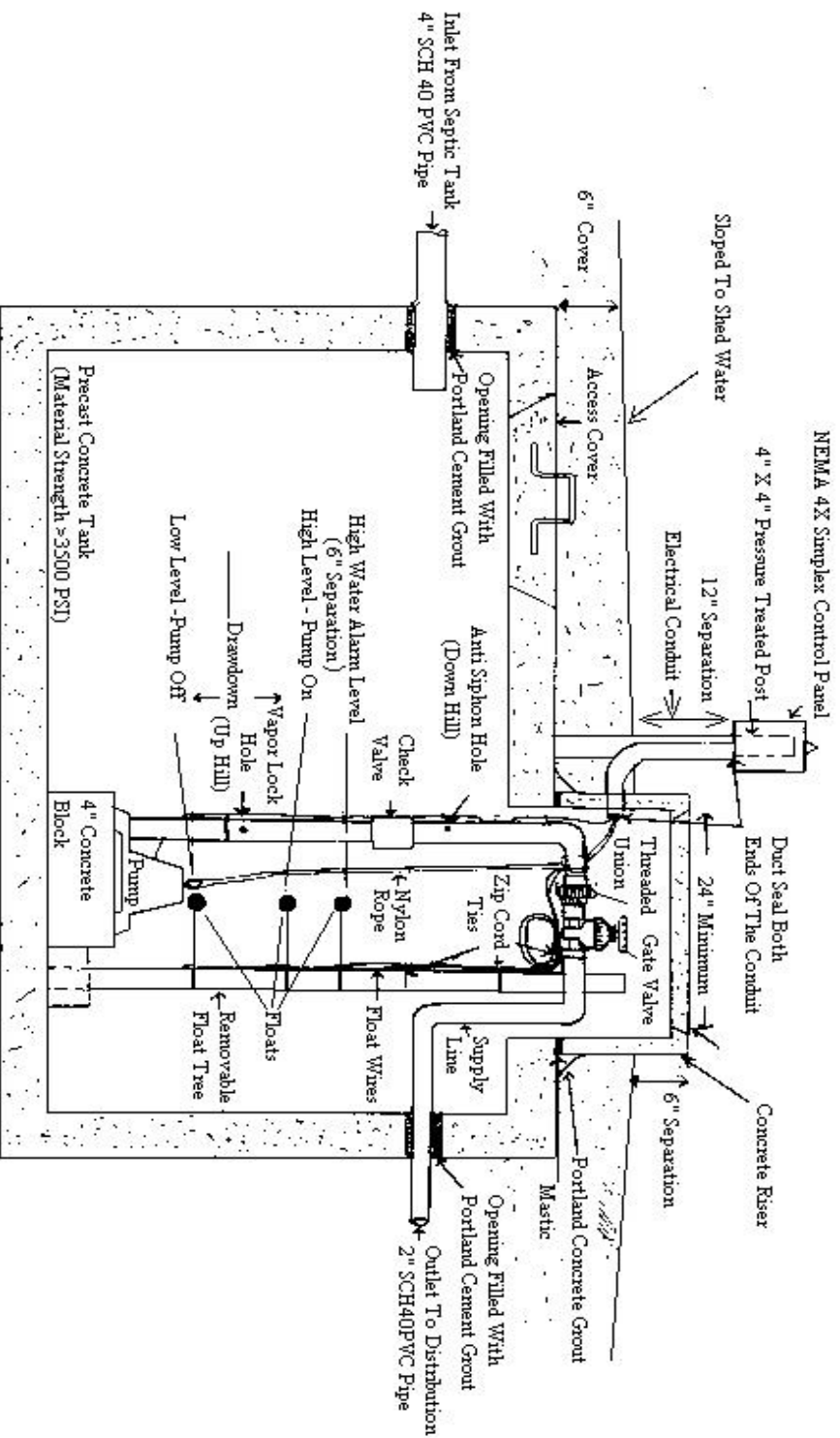
TAP CHART

Bench Mark	<u>6</u>	is = 100.00	set at	<u>pump tank</u>			Design Head:	<u>3</u>	
Pump tank elev.	<u>6</u>	100.00		Pump elev.	<u>95.00</u>		Manifold elev.	<u>105.00</u>	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	purple	2.0	104.00	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395
2	red	2.3	103.75	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395
3	orange	2.6	103.42	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395
		total	feet =	<u>405</u>	gal/min =	<u>26.13</u>		<u>LTAR =</u>	<u>0.30</u>
% of Dose Vol.	<u>75</u>			<u>Des. Flow</u>	<u>480</u>			(ltar + 5%)	0.32
Dose Volume	<u>197</u>			Pump Run=	<u>18.37</u>			(ltar W/ INOV)	0.40
Dose Pump Time	<u>7.56</u>			Tank Gal/IN	<u>20</u>			(ltar + 5%)	0.42
Drawdown in Inches	<u>9.9</u>			Elev. Head	<u>10.00</u>				
Supply Line Length	<u>100</u>								
Comments:									

Hydraulic Profile

Manifold Elevation	105.00	100
Pump tank elev.	100.00	2
Pump elev.	95.00	0

Wake County Department Of Environmental Services



Line 1

Line 2

Line 3

PM Draw

Taps

1/2in SCH 40

1/2in SCH 40

1/2in SCH 40

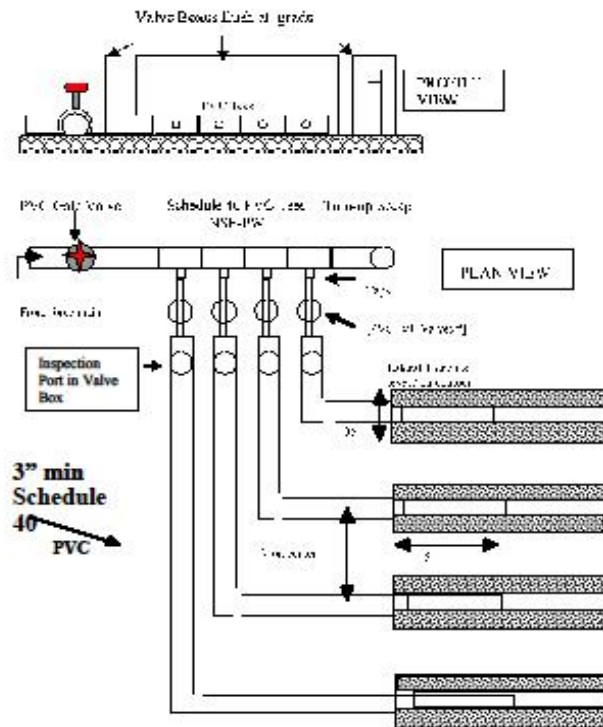
Flow

8.71

8.71

8.71

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

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.

PART C



Environmental Services

TEL 919 856 7400
FAX 919 856 7407

Water Quality Division
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602
www.wakegov.com/water/

Foundation Drain Request Form

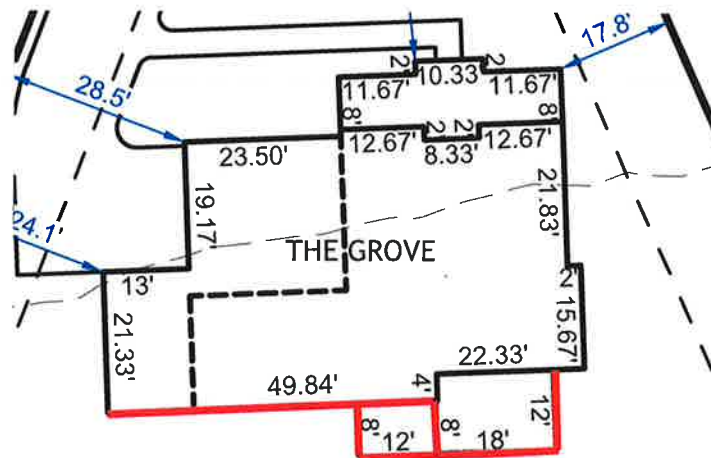
Wastewater Permit: WRP-020067-2019 Building Permit: RBPR-019609-2019
Parcel PIN: 0780033885
Project (Site) Address: 3520 Hundley Dr., Apex, NC 27539

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)

Front



No foundation drain
in red lined area

Rear

Applicant Signature: Jaclyn Clark Date: 6/20/19

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

3 TAP PRESSURE MANI-TEE DESIGN

Name: J. Fuller HomesP.I.N. #: 0780-03-3885D#: RP-020067-2019Address: 3520 Hundleby Dr Apex, NCSubdiv: Lena EstatesLot#: 5# of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.30 gal/day/sq.ftSeptic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1215 Stone Depth: 12Number of Taps: 3 Length of Trenches: 405 ft(See Tap Chart for Details)Depth of Trenches: 24 in Manifold Length: 36 inManifold Diameter: 2in sch 40pvc Mani-Tee Tap Configuration: 6 in spacing 1 side(s) of manifoldSupply Line: length: 100 ft Diameter: 2 in sch 40pvcFriction Loss + Fitting Loss: 2.75 ft(supply line length + 70' for fittings in pump tank)Design Head: 3 ft Elevation Head: 8.92 ftTotal Head: 14.67 ft Pump to Deliver: 26.13 gals/min at 14.67 ft headDosing Volume: 197 gals,Drawdown: 197 gals divided by 20 gals/in = 9.9 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, see permit details for specifics.

TAP CHART

Bench Mark	<u>6</u>	is = 100.00	set at	<u>pump tank</u>				Design Head:	<u>3</u>	
Pump tank elev.	<u>6</u>	100.00		Pump elev.	<u>95.00</u>			Manifold elev.	<u>103.92</u>	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	
1	yellow	3.1	102.92	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395	
2	blue	3.4	102.59	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395	
3	white	4.0	102.00	<u>135</u>	1/2in SCH 40	8.71	160.00	405	0.395	
		total	feet =	<u>405</u>	gal/min =	<u>26.13</u>		<u>LTAR =</u>	<u>0.30</u>	
% of Dose Vol.	<u>75</u>			<u>Des. Flow</u>	<u>480</u>			(ltar + 5%)	0.32	
Dose Volume	<u>197</u>			Pump Run=	<u>18.37</u>			(ltar W/ INOV)	0.40	
Dose Pump Time	<u>7.56</u>			Tank Gal/IN	<u>20</u>			(ltar + 5%)	0.42	
Drawdown in Inches	<u>9.9</u>			Elev. Head	<u>8.92</u>					
Supply Line Length	<u>100</u>									
Comments:										

Hydraulic Profile

Manifold Elevation	103.92	100
Pump tank elev.	100.00	2
Pump elev.	95.00	0