PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner: Corinthian Builders

Address:

Phone:
County: Iredell
Location: Wheatfield Lot 3
Source of Wastewater Flow: 3 bedroom home
Estimated Daily Wastewater Production: 360 gpd
System Flow: 33.24

Design Specifications

Drainfield Size: 346
Design Loading Rate: 0.267
Depth of Gravel in Trench: NA
Gravel Size: N/A
Trench Depth: 18
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: 1000
Estimated Supply Line Length: 211
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 36.71
Dosing Volume: 176.18
Supply Manifold: *4* in. SCH 80 PVC
Supply Manifold Length: 3.5Ft.
Supply Manifold Volume: 2.08

Recommended Float Controls: SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel: SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head: 2 ft.
Friction Head: 5.00
Estimated elevation Head: 10.80
Total Dynamic Head: 20.47
Threaded Union: In Tank
Gate Valves: 1 in Tank
1 at Pressure Manifold
Check Valves: In Tank
Anti-Siphon Hole: no
Recommended Pump: Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~21 ft.of Head at ~34 gpm Total Flow

Wheatfield
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	360
SOIL APPLICATION RATE:	0.275
TOTAL AREA TRENCH BOTTOM:	1038
TOTAL LATERAL LENGTH:	337
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	327
SUPPLY LINE LENGTH:	211
TOTAL DYNAMIC HEAD:	20.47
MANIFOLD SIZE:	*4* in.SCH 80 PVC
DOSING VOLUME:	176.18
PUMP TANK DRAW DOWN*:	8.3
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000
RECOMMENDED PUMP:	Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~21 ft.of Head at ~34 gpm Total Flow

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

Wheatfield Lot 3

Project No. 5-1862

LAYOUT FOR 3 BEDROOM HOME

March-08

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		4.6			100.00		
INSTR. 1			104.60				
			Repair				
1	Blue			2.20	102.40	64	63
2	Yellow			3.00	101.60	81	80
3	Orange			4.40	100.20	73	65
4	Red			5.50	99.10	71	65
5	Pink			6.00	98.60	65	65
			System				**338**
6	Blue			6.70	97.90	73	60
7	Yellow			7.40	97.20	54	52
8	Red			8.80	95.80	81	80
9	Orange			9.60	95.00	85	85
10	Blue			10.70	93.90	65	60
					Total		**337**

	LINE LENGTH	Design LTAR	SYSTEM TYPE	Innovative Type	DISTRIBUTION	Trench Depth	Soil LTAR
SYSTEM	337	0.267	Innovative	25%	Pressure Manifold	18	0.275
REPAIR	338	0.267	Innovative	25%	Pressure Manifold	18	0.275

Notes:

**TBM is assumed to be 100'; Front right CNR stake

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings

**Design LTAR based on line length

Wheatfield Lot 3

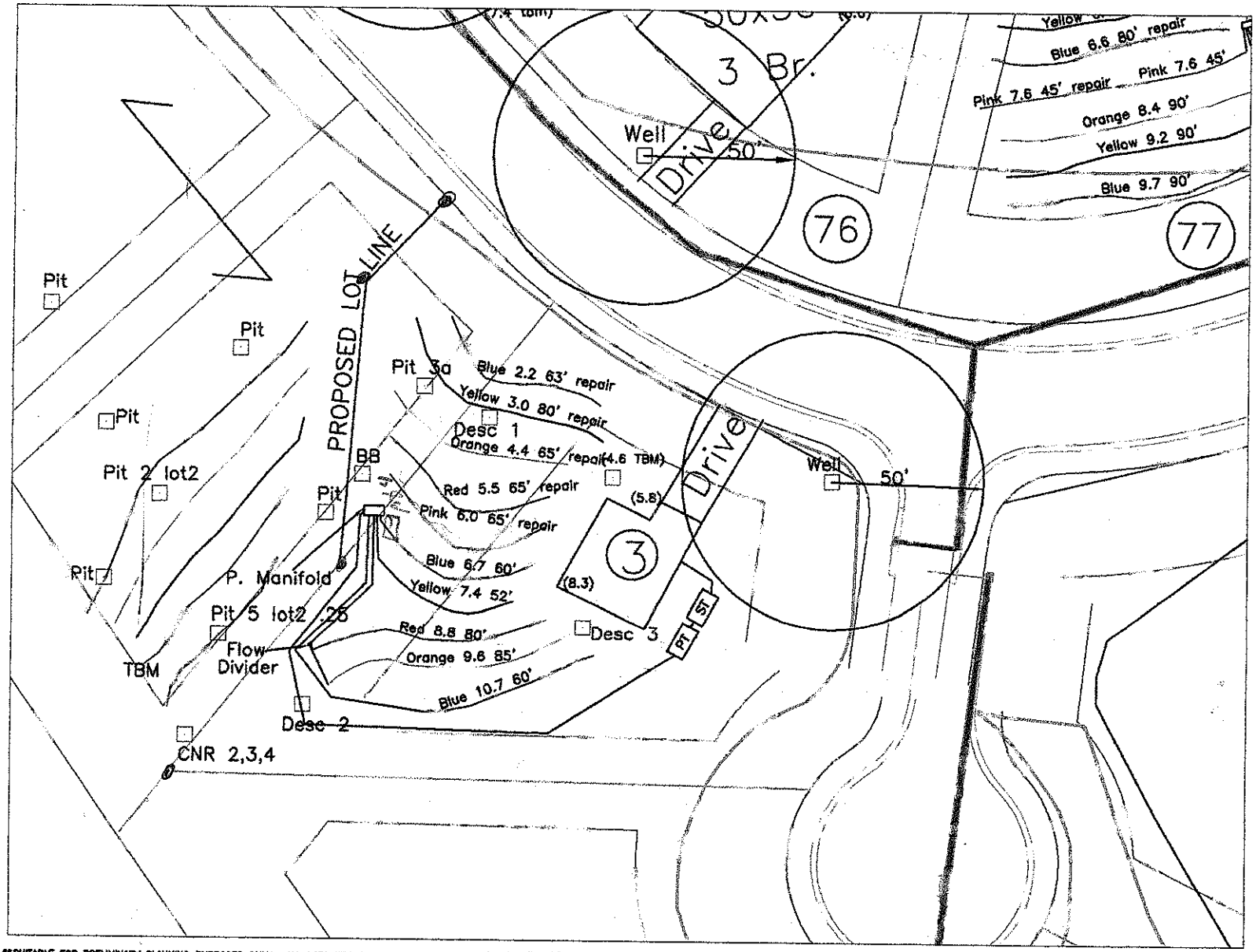
System

Line #	Color	Elev	Length	Hole Size	Flow/Tap	gpd *	Trench Area	Flow/Foot
6	Blue	97.9	60	SCH 80 1/2	5.48	59.35	180	0.33
7	Yellow	97.2	52	SCH 80 1/2	5.48	59.35	156	0.38
8	Red	95.8	80	1/2 of sch 80 1 "	8.4	90.97	240	0.38
9	Orange	95.0	85	1/2 of sch 80 1 "	8.4	90.97	255	0.36
10	Blue	93.9	60	SCH 80 1/2	5.48	59.35	180	0.33
	total	**feet =**	**337**	**gal/min =**	**33.24**			
			Des. Flow	**360**				
			Pump Run=	**10.83**				
			LTAR	**0.275**				
			Innovative	**0.37**				
			Innovative + 5%	**0.385**				

Wheatfield Lot 3

Repair

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
1	Blue	102.4	**63**	SCH 80 1/2	**5.48**	67.96	189	**0.36**
2	Yellow	101.6	**80**	SCH 40 1/2	**7.11**	88.17	240	**0.37**
3	Orange	100.2	**65**	SCH 80 1/2	**5.48**	67.96	195	**0.35**
4	Red	99.1	**65**	SCH 80 1/2	**5.48**	67.96	195	**0.35**
5	Pink	98.6	**65**	SCH 80 1/2	**5.48**	67.96	195	**0.35**
	total	**feet =**	**338**	**gal/min =**	**29.03**			
			Des. Flow	**360**				
			Pump Run=	**12.40**				
			soil LTAR	**0.275**				
			Innovative LTAR	**0.37**				
			Innovative +5%	**0.385**				



**SUITABLE FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND TOPOGRAPHIC IRREGULARITIES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS. SOME OTHER CONSIDERATIONS THAT AFFECT SITE SUITABILITY THAT SHOULD BE CONSIDERED IN DEVELOPMENT DESIGN ARE:

1) 10' SETBACK FROM PROPERTY LINE
2) 100' SETBACK FROM ANY WELL
3) 50' SETBACK FROM STREAMS, PONDS OR LAKES.

See accompanying S&EC report.

NOT A SURVEY

GRAPHIC SCALE
1" = 50'

50 0 50 100

PROJECT NO. #5-1882
PROJECT MGR. BF
DRAWN BY BF
FIELD WORK BF
SCALE 1" =50
FILE Y:\jobs\1882

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S&EC

Wheatfield
Cornelius Stables
- Wheatfield lot 3 -
IREDELL COUNTY, NORTH CAROLINA
Jan 2008

SHEET TITLE: PRELIMINARY SITE PLAN SKETCH MAP

SHEET 1 OF 1