Pressure Manifold
Septic System Design

for

Bells Crossing S/D Lot 15
Mooresville, North Carolina

Designed by:

Matt Burdette
Bateman Civil Survey Company
Holly Springs, North Carolina
BCSC Project #: 120342

Revised
February 2016

APPROVED FEB 22 2016

Bells Crossing S/D Lot 15

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Septic and Pumptank Details	Figure	1
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Bells Crossing S/D Lot 15
Contact Information

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Designer: Bateman Civil Survey Company, PC
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Bells Crossing S/D Lot 15

Layout/Design Specifications

Facility Type:	Single Family Home	
# of Bedrooms:	4	
Daily Flow:	480	**gal/day**
L.T.A.R.:	3.00	**gal/day/sq.ft**
Trench Depth:	36	**in**
Trench Width:	36	**in**
Stone Depth:	chamber	**in**
Manifold Length:	48	**in**
Manifold Diameter:	4	**in sch 80pvc**
Supply Line Length:	274	**ft**
Supply Line Diameter:	2	**in sch 40pvc**
Supply Line Volume:	47.68	**gallons**
Friction Loss + Fitting Loss:	9.77	**ft(supply line length + 70' for fittings in pump tank)**
Design Head:	2	**ft**
Elevation Head:	13.30	**ft**
Total Head:	25.07	**ft**
Dose Volume:	208.26	**gals**
% of Pipe Vol.	.80	
Drawdown:	10.33	**in @ 20.16 gal/in**
Pump Run Time:	5.40	**minutes**
Control Panel:	SJE Rhombus Model112 control panel (or approved equivalent)	
Pump:	Zoeller M153 Flow-Mate (or approved equivalent)	
Septic Tank Effluent Filter:	Zoeller 170-0144 residential effluent filter (or approved equivalent)	
Septic Tank:	1000	**gallon**
Pump Tank:	1000	**gallon**

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LINE SCHEDULE

LINE NUMBER	COLOR	FIELD SHOT	FIELD LENGTH (FT)	DESIGN LENGTH (FT)
1	YELLOW	1.5	100	
2	BLUE	2.6	155	150
3	WHITE	3.2	75	~~75~~ 74
4A	ORANGE	3.8	100	102 100
4B	ORANGE	3.8	130	
5	PINK	4.7	84	75
6	RED	5.1	210	
7A	YELLOW	5.7	59	
7B	YELLOW	5.7	83	
8A	BLUE	6.5	27	
8B	BLUE	6.5	70	
	PUMP TANK	9.5		

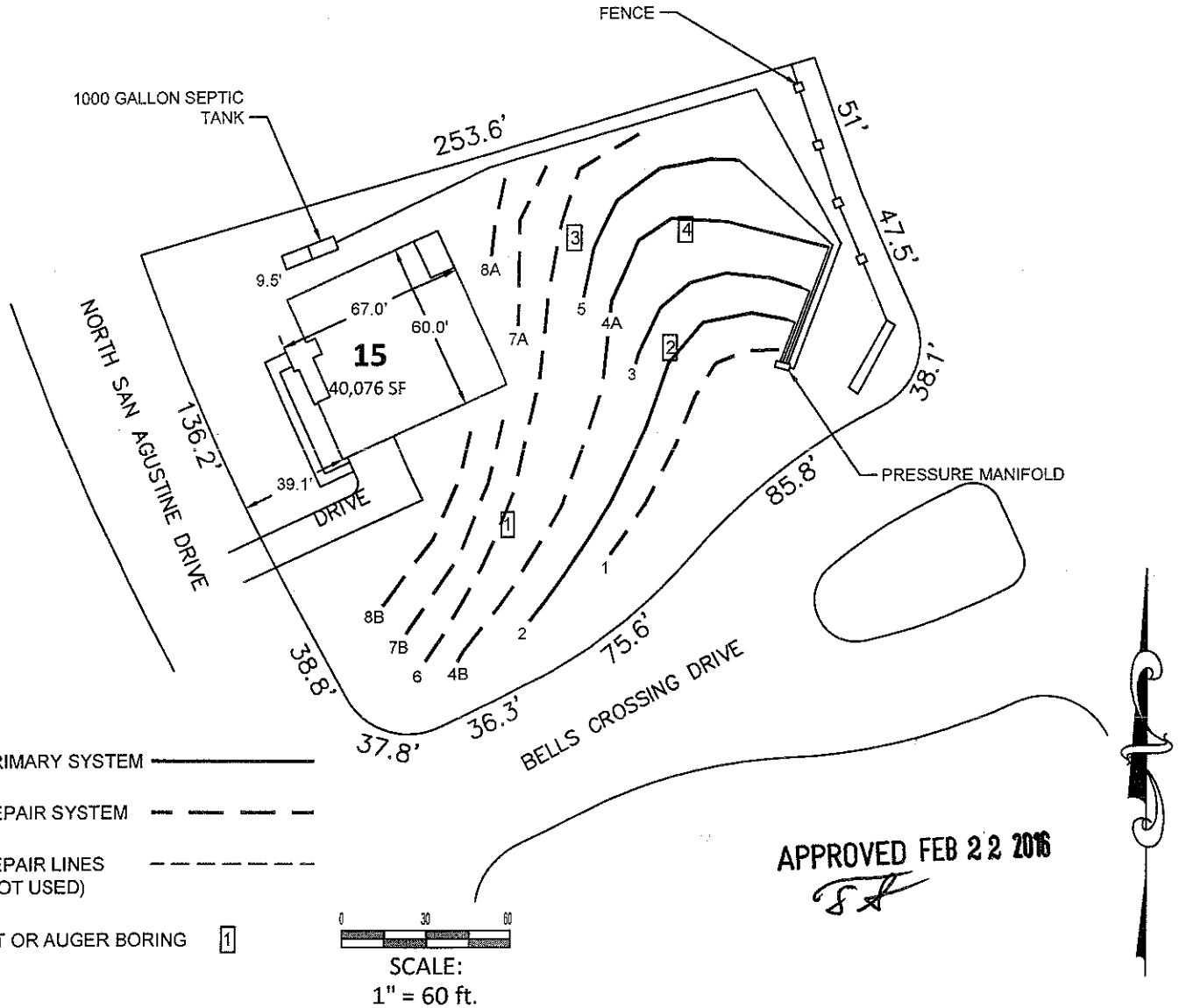
LOT 15 BELLS CROSSING SUBDIVISION

4-BEDROOM PRESSURE MANIFOLD SYSTEM
LINES 2-4A & 5 TOTAL 400 LINEAR FEET
EZFLOW OR CHAMBER
LTAR 0.3
25% REDUCTION
36" TRENCH DEPTH

4-BEDROOM PRESSURE MANIFOLD REPAIR
LINES 1, 4B & 6-8B 679 TOTAL LINEAR FEET
LTAR 0.3
25% REDUCTION
36" TRENCH DEPTH

FOR GENERAL USE NOT A SURVEY
PRELIMINARY NOT FOR CONSTRUCTION

SOIL PROFILES AND ANALYSIS PROVIDED BY
CENTRAL CAROLINA SOIL CONSULTING PLLC



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MeritageHomes

LOT 15
BELLS CROSSING SUBDIVISION
MOORESVILLE, NC
IREDELL COUNTY
REVISED 02/18/16
DATE: 3/12/15 DRAWN BY MDB CHECKED BY: TMB

Bells Crossing S/D Lot 15
SYSTEM TAP CHART

	Bench Mark:	0	= 100.00	**Manifold elev:**	98.40				
	Pump tank elevation:	90.50		**Pump elev:**	85.10				
line	**color**	**rod read**	**elevation**	**length**	**hole size**	**flow/tap**	**gal/day**	**trench area**	**LINE LTAR**
2	Blue	2.60	97.40	150	2-1/2in SCH 40	14.22	177.10	450	0.394
3	White	3.20	96.80	75	1/2in SCH 40	7.11	88.55	225	0.394
4a	Orange	3.80	96.20	100	3/4in SCH 80	10.1	125.79	300	0.419
5	Pink	4.70	95.30	75	1/2in SCH 40	7.11	88.55	225	0.394
	P-TANK	9.50	90.50						
		total	**feet =**	**400**	**gal/min =**	**38.54**		**LTAR =**	**0.300**
				Des. Flow	480			**(ltar + 5%)**	0.32
				24 Hour Pump Run=	12.45			**(ltar W/ INO**	0.40
								(ltar + 5%)	0.42

Comments: line 2 will receive effluent from 2 taps of 1/2" sch 40

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