

Central Carolina Soil Consulting, PLLC

4024 Barrett Drive, Suite 201
Raleigh, NC 27609
919-784-9449

February 13, 2007
May 28, 2009 revision
Job # 326

Real Properties of Cary, LLC.
Attention: Brantley Powell
PO Box 5365
Cary, NC 27512

RE: Preliminary soil/site evaluation on ~105-acres (3 separate parcels) in Chatham County, NC known as Legend Oaks Phase III.

Dear Mr. Powell:

Central Carolina Soil Consulting, PLLC conducted a preliminary soil evaluation on the parcels listed above to determine the areas of soils that are suitable for subsurface wastewater disposal systems (conventional, LPP & subsurface drip for lot #3). The soil/site evaluation was performed with hand auger borings under moist soil conditions, based on the criteria found in the State Subsurface Rules, 15ANCAC 18A .1900 "Laws and Rules for Sewage Treatment and Disposal Systems". From this evaluation, CCSC sketched the boundary between the suitable soils and unsuitable soils onto an aerial and topographic map of the property. Additional soil evaluations were conducted on 26 lots in April and May of 2009 to complete detailed septic system layouts (see attached list). These lots were chosen for the detailed field evaluations due to the limited suitable soil areas and the potential inaccuracy of the soil line from the 2007 original soils evaluation on the property.

The above referenced parcels are located north of east of Highway 15-501 in northern Chatham County. This area lies in the mixed felsic and mafic geologic unit, where soils have formed from residual parent material such as gneiss, schist and diorites. The soils that have formed on this parcel are similar to the Appling, Wedowee, Durham, Helena and Worsham soil series. The attached soils map indicates the areas of suitable vs. unsuitable soils. The Appling, Wedowee and Durham soil series are generally suitable for subsurface wastewater systems. That is, the morphology of the soils contain suitable characteristics that would support subsurface septic systems such as sandy loam to clay textured subsoils that are not considered expansive, blocky structure and no indicators of restrictive characteristics within 24 inches of the soil surface. The Helena soils contain expansive clays and indicators of a perched water table within 24 inches of the soil surface. The Worsham soil series are located in the drainage ways and floodplain of the property and are unsuitable for subsurface septic systems.

The attached soils map indicates the areas of soils which are suitable for subsurface wastewater systems. The "hatched soil units" on the attached map indicates the areas of soils that have 30+ inches or more of suitable soil material. These areas have potential for conventional and modified conventional septic systems. There will be inclusions of soils that can only support LPP or ultra-shallow conventional septic systems in the areas mapped as conventional. The "cross hatched soil units" on the attached map indicate areas of soils with 24 to 29 inches of suitable soil material and have potential for LPP or ultra-shallow conventional septic systems. Unit "SSD" only noted on lot #3 contains areas of 18"-30" of suitable soil material that is potentially suitable for a subsurface drip wastewater disposal system. Unit "AR" indicates areas of soils that could not be evaluated with hand augers due to the dense amounts of rock in the soil profile. These areas will need backhoe pits to evaluate the soil and/or saprolite. Central Carolina Soil Consulting believes that there may be suitable soil and /or saprolite for septic systems in these soil units. Unit "UN" on the attached map indicates areas of unsuitable soils that are located in unsuitable soils or topography and cannot be used for the systems mentioned above.

Future Subdivision Considerations

Several factors should be considered before a final subdivision plan is created for any property. One consideration is that each proposed lot shall contain an adequate amount of suitable soils, which can support a primary septic system along with a repair septic system. The suitable soil areas cannot be affected by future homes, driveways, patios, excavation or filling activities and if an on-site well is used then a 100' setback is required around the well head. An exact square footage of suitable soils required per lot to obtain a permit cannot be given due to soil variability and topographic characteristics on each lot. The amount of suitable soils required to support a 4-bedroom residence will range between 10,000 ft²-15,000 ft² (could be more or less) per lot. These soil area estimates are based upon soil application rates for a sandy clay loam to a clay textured subsoil with a range of 0.27 gallons per day/square foot and 0.4 gallons per day/square foot for conventional type systems 0.1 to 0.15 gallons per/day/square foot for low pressure pipe or subsurface drip septic systems. The ultimate application rate will be assigned by the Chatham County Health Department based on a detailed evaluation.

Septic system field layouts and additional soil evaluations were completed on approximately 26 lots on the proposed subdivision. During the field layouts CCSC personnel flagged the areas of the primary and repair drainfields to ensure each of these lots contained the minimum suitable soil areas to support a 3-5 bedroom house location (depending on the each lot) and the required initial and repair drainfields. Each of the 26 lots evaluated by CCSC had the property lines staked by the client's surveyor. The detailed site plans for these lots are attached and illustrate the location of the proposed house, daily flow rate along with the septic disposal areas. The remaining lots appear to contain enough suitable soils to support 3 or 4-bedroom houses, but may require a detailed field layout at a later date.

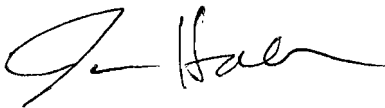
During the road construction process of a subdivision it is important not to impact any suitable soil areas with such activities as excavating or filling. Only the actual roadways

and required drainage ditches and/or sediment basins should be constructed during this process. If the contractor requires a staging area to place fill from the construction process, then areas of unsuitable soils on the property should be utilized as long as they are not state/county buffers, jurisdictional wetlands or other areas protected by local zoning regulations. If this is not possible, then the disturbed areas should be minimized as much as possible. The same precautions should be taken when the individual lots are cleared for home sites. Only the vegetation should be removed in the areas of the proposed drain fields on lots to prevent any disturbance of the naturally occurring soil. A lot with adequate areas of suitable soils can be deemed unsuitable due to poor planning or site disturbance. Central Carolina Soil Consulting recommends that all lot clearing activities are delayed until a permit is issued by the local health department, with the exception of clearing thick vegetation to access the lot.

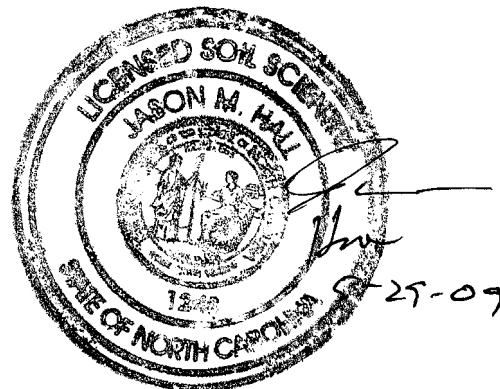
This report discusses the location of suitable soils for subsurface wastewater disposal systems and does not guarantee any permits or approval required by the local health department. Please note that Central Carolina Soil Consulting only completed a preliminary soils evaluation on the parcel per the client's request and a more detailed evaluation may be required to maximize lot yield. Central Carolina Soil Consulting, PLLC is a professional consulting firm specializing in soil delineations and design for on-site wastewater disposal systems. The rules governing on-site wastewater disposal systems are complex and the interpretation of the rules are based upon the opinions of regulators (state and county level). Due to the subjective nature of the permitting process and the variability of naturally occurring soils, CCSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted by the governing agencies. Central Carolina Soil Consulting does not guarantee that the areas shown as potentially suitable for septic systems will be granted septic permits by the local health department. These permitting considerations should be taken into account before a financial commitment is made on a tract of land.

If you have any questions regarding the findings on the attached map or in this report, please feel free contact me at anytime. Thank you allowing Central Carolina Soil Consulting to perform this site evaluation for you.

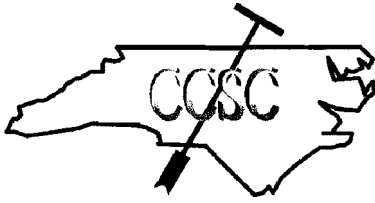
Sincerely,



Jason Hall
NC Licensed Soil Scientist #1248



Encl: Soil Map



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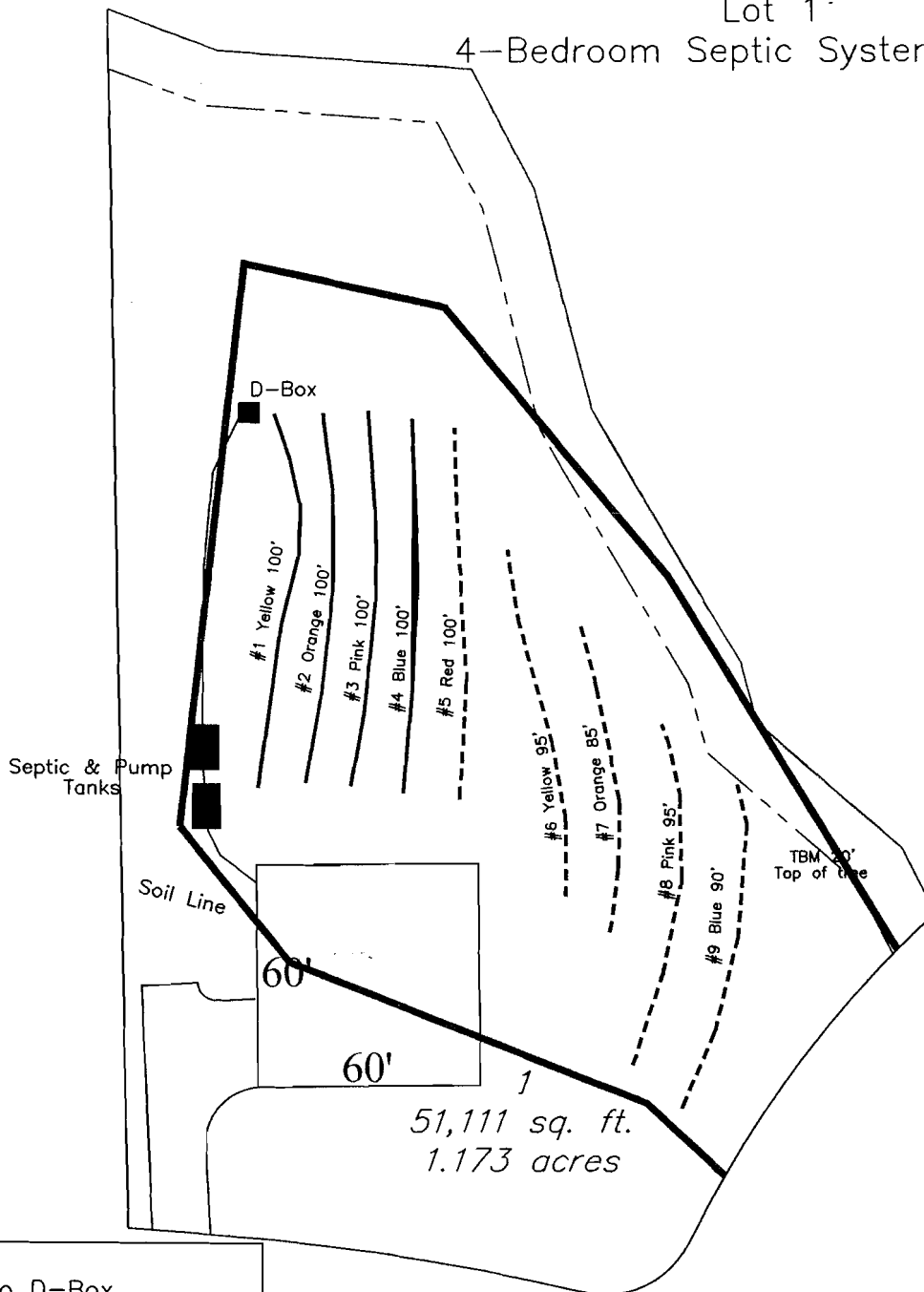
Legend Oaks Subdivision Phase III Ft2 of suitable soils per lot

Lot #	Ft2 of Suitable Soils	Completed Field Layout
1	25,113	Yes
2	30,458	No
3	24,605	Yes
4	17,148	Yes
5	13,438	Yes
6	16,688	Yes
7	12,028	Yes
8	29,862	Yes
9	18,435	Yes
10	32,745	Yes
11	9,491	Yes
12	16,138	Yes
13	11,985	Yes
14	30,990	No
15	26,669	No
16	16,345	Yes
17	47,952	No
18	33,469	No
19	17,271	Yes
20	24,231	No
21	41,265	No
22	40,700	No
23	22,755	Yes
24	15,143	Yes
25	20,822	Yes
26	12,372	Yes
27	40,516	No
28	15,506	Yes
29	50,700	No
30	59,700	No
31	40,351	No
32	40,060	No
33	38,309	No
34	46,638	No
35	46,899	No

36	48,552	No
37	50,512	No
38	40,096	No
39	40,315	No
40	33,392	No
41	24,800	Yes
42	17,934	Yes
43	22,807	Yes
44	17,823	Yes
45	20,954	Yes
46	20,966	No
47	40,235	No
48	40,323	No
49	33,700	No
50	24,626	No
51	36,423	No
52	39,023	No
53	44,706	No
54	33,388	Yes
55	31,923	No
56	264,238	No
New lot/57?	12,805	Yes

Legend Oaks Subdivision
Phase III
Lot 1

4-Bedroom Septic System Layout



System: Pump to D-Box
Lines: 1-4, (400')
Accepted Status System
~~0.4~~ Soil LTAR 0.3
18" Trench Bottom
Repair: Pressure Manifold
Lines: 5-9, (470')
Accepted Status System
18" Trench Bottom
0.3 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

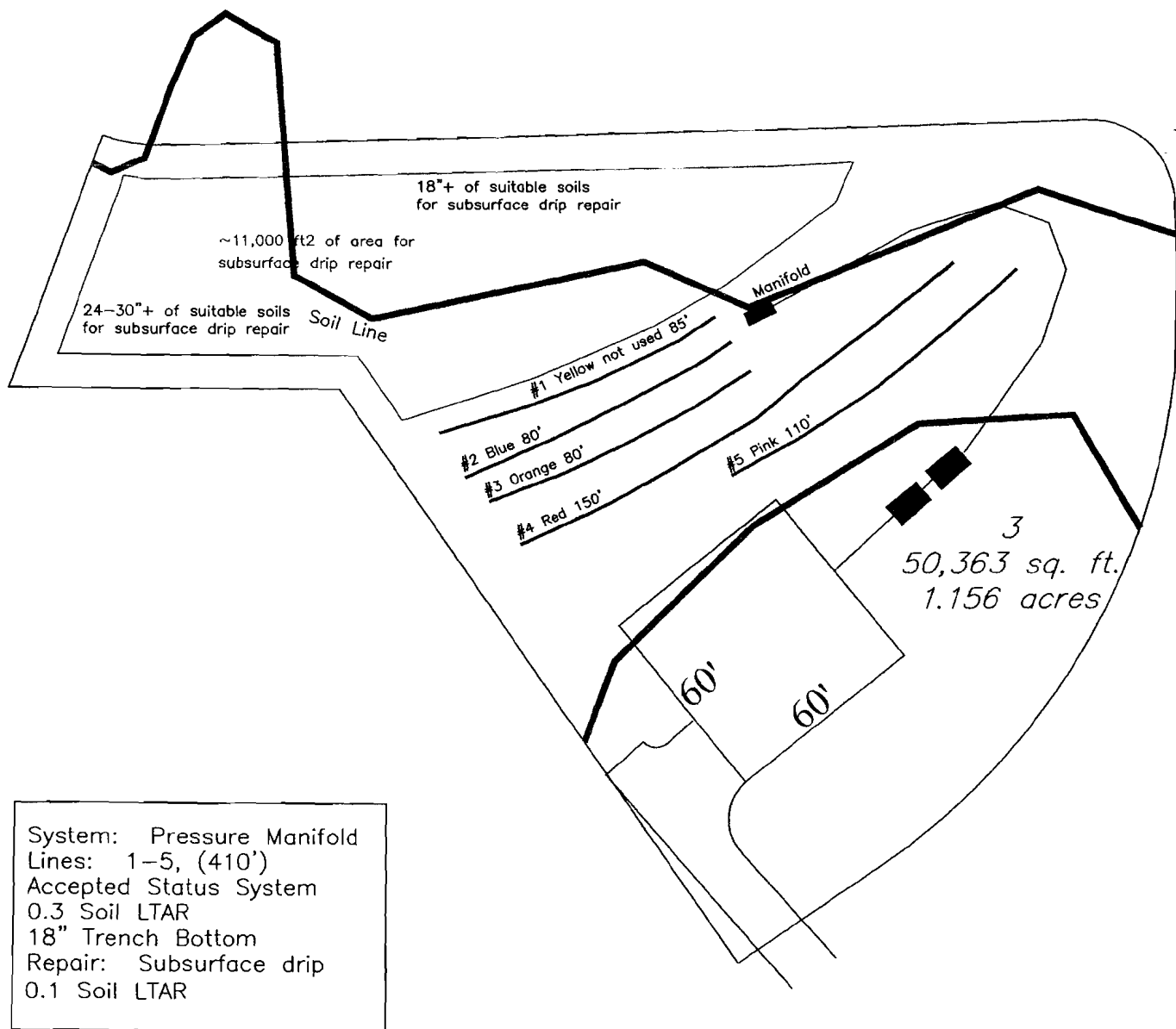
Lot #1

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		20.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			120.0				
1	Yellow			1.9	118.1	100	100
2	Orange			3.5	116.5	100	100
3	Pink			5.6	114.4	100	100
4	Blue			7.7	112.3	100	100
5	Red			10.4	109.6	100	100
6	Yellow			12.5	107.5	95	95
7	Orange			14.6	105.4	85	95
8	Pink			16.6	103.4	97	95
9	Blue			19.4	100.6	90	90
Total						867	875

	<u>System</u>	<u>Repair</u>
	Lines 1-4	Lines 5-9
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.30	0.30
System Installation LTAR	0.30	0.26
Total Line Length	400	470
Square Footage	1200	1410
Proposed Trench Bottom	18"	18"
Distribution Method	Pump to D-Box	Pressure Manifold
Notes:	TBM is top of cut tree	

Legend Oaks Subdivision
Phase III
Lot 3
4-Bedroom Septic System Layout



Legend Oaks, Phase III

Lot #3

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Yellow			2.5	98.2	85	not used
2	Blue			5.4	95.3	85	80
3	Orange			8	92.7	85	100
4	Red			10.5	90.2	150	150
5	Pink			13.9	86.8	110	80
					Total	515	410

System

Repair

Lines 1-5

Subsurface Drip

System Type

Accepted Status System
EZ-FLOW

Suggested Soil LTAR
(gal/day/ft²)

0.30

0.1

System Installation LTAR

0.30

Total Line Length

410

Square Footage

1230

Proposed Trench Bottom

18"

6"

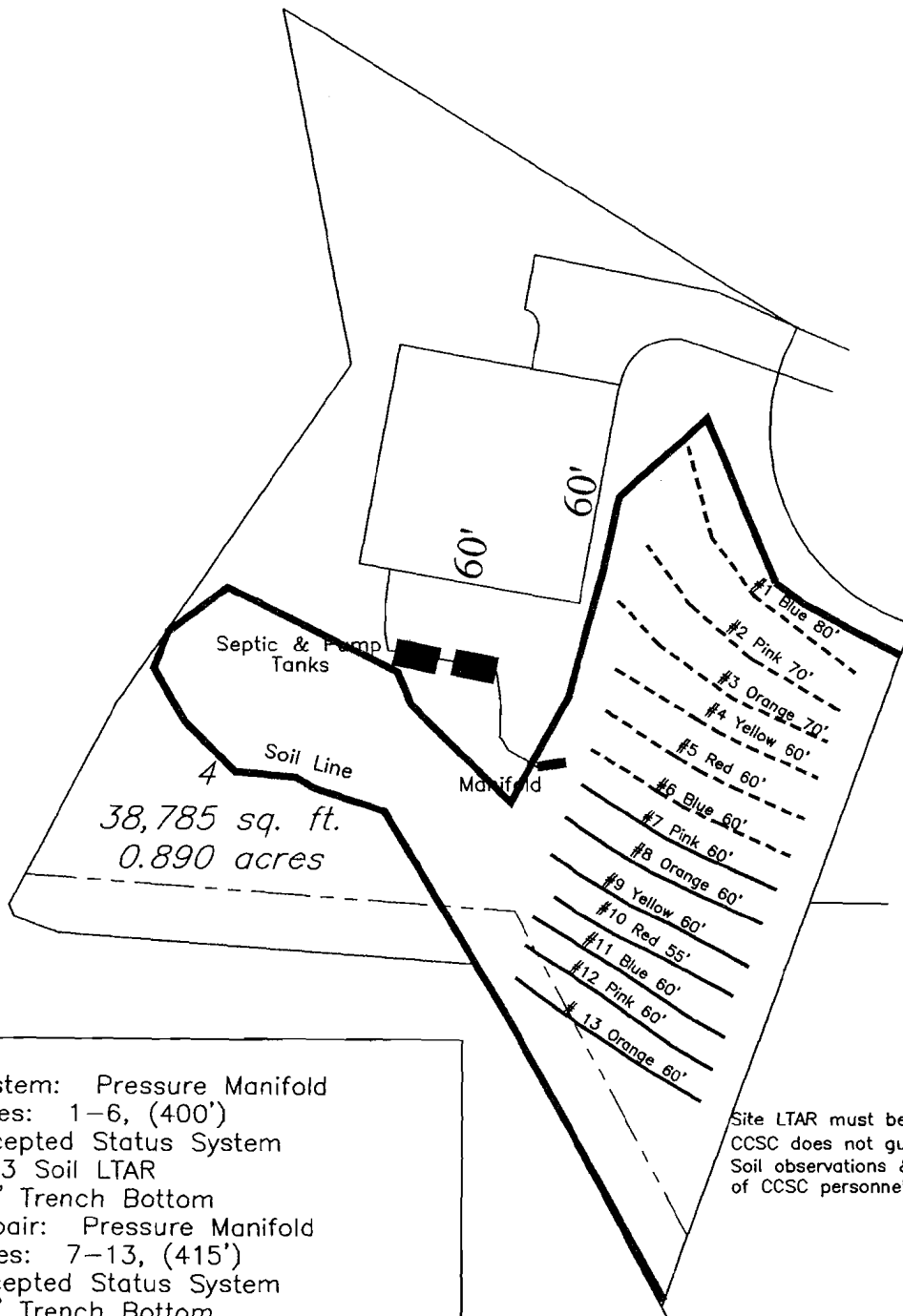
Distribution Method

Pressure Manifold

Subsurface Drip

Notes: TBM is EIP on P-Line

Legend Oaks Subdivision
Phase III
Lot 4
4-Bedroom Septic System Layout



System: Pressure Manifold
Lines: 1-6, (400')
Accepted Status System
0.33 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 7-13, (415')
Accepted Status System
18" Trench Bottom
0.33 Soil LTAR

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Soil observations & septic system layouts based on opinions
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GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #4

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		15.9		100.0		<u>in field</u>	<u>installation</u>
INST. 1			115.9				
1	Blue			2.5	113.4	80	80
2	Pink			3.5	112.4	78	70
3	Orange			4.7	111.2	72	70
4	Yellow			6	109.9	63	60
5	Red			7	108.9	64	60
6	Blue			8.8	107.1	66	60
7	Pink			10.3	105.6	70	60
8	Orange			12.1	103.8	72	60
9	Yellow			13.3	102.6	61	60
10	Red			14.8	101.1	56	55
11	Blue			16.6	99.3	60	60
12	Pink			18.5	97.4	60	60
13	Orange			20.9	95	65	60
					Total	867	815

	<u>System</u>	<u>Repair</u>
	Lines 1-6	Lines 7-13
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.33	0.325
System Installation LTAR	0.30	0.29
Total Line Length	400	415
Square Footage	1200	1245
Proposed Trench Bottom	18"	18"

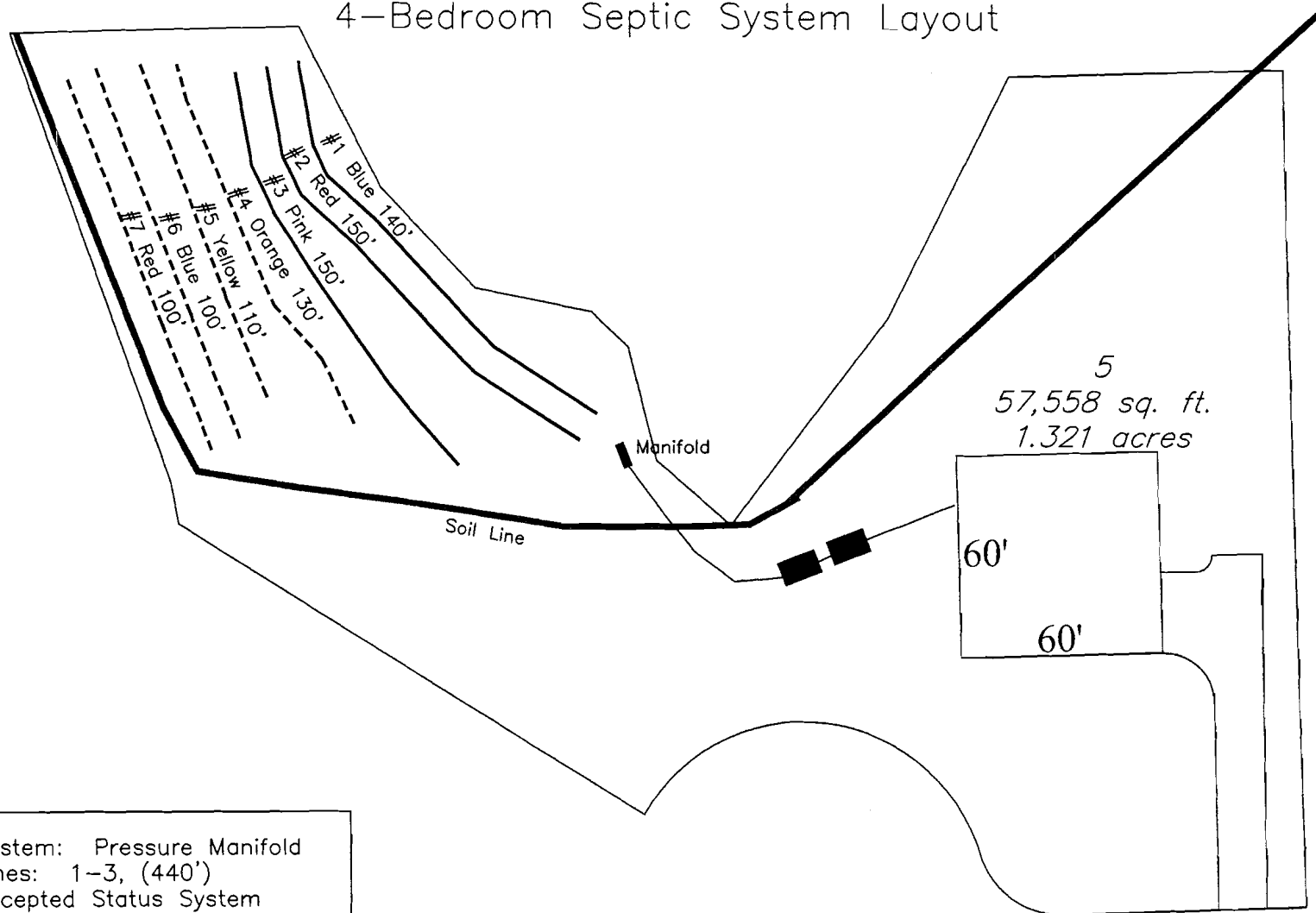
Distribution Method

Pressure Manifold

Pressure Manifold

Notes: TBM is cut tree on P-line

Legend Oaks Subdivision
Phase III
Lot 5
4-Bedroom Septic System Layout



System: Pressure Manifold
Lines: 1-3, (440')
Accepted Status System
0.275 Soil LTAR
12" Trench Bottom
Repair: Pressure Manifold
Lines: 4-7, (440')
Accepted Status System
12" Trench Bottom
0.275 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #5

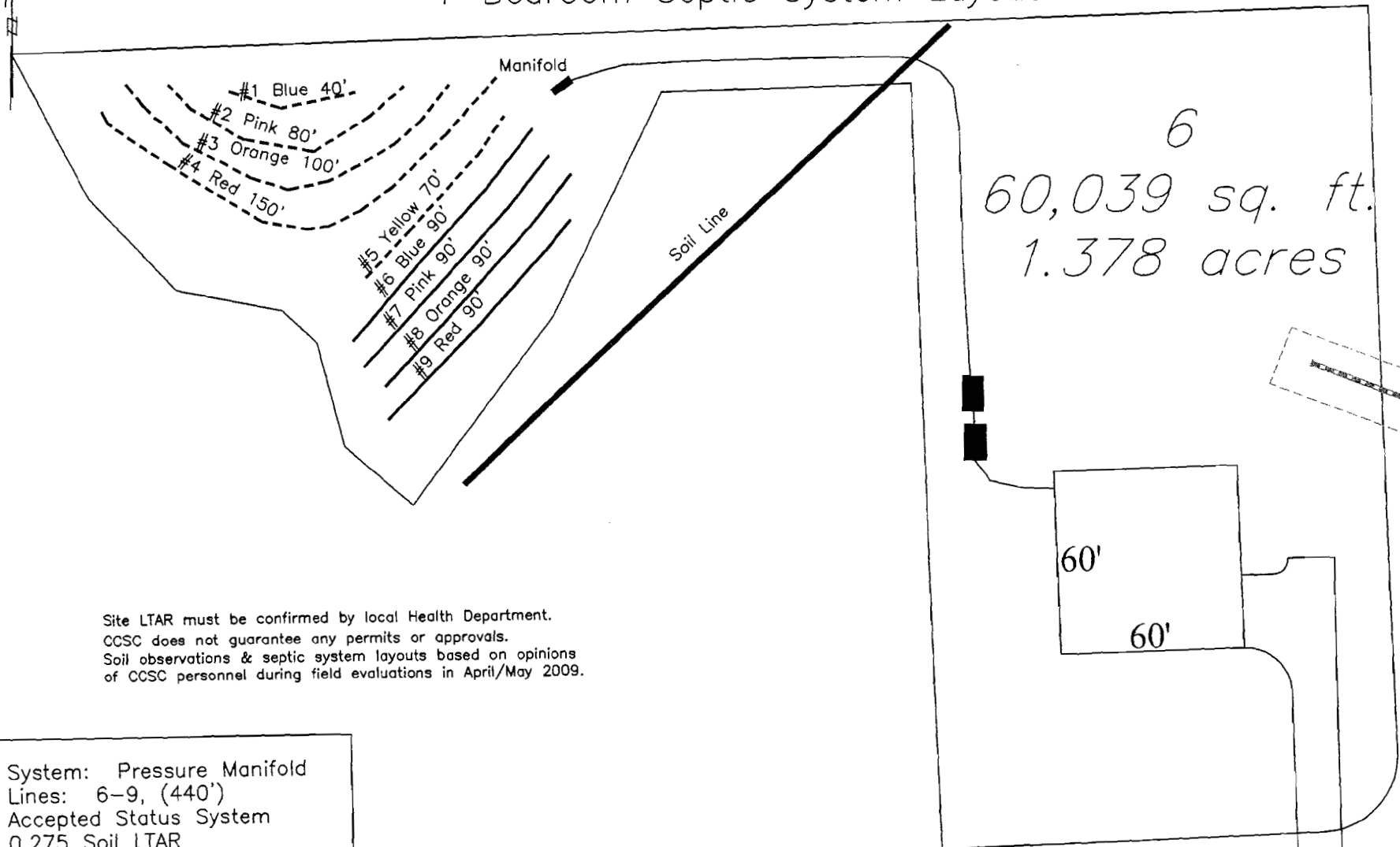
4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		11.5		100.0		<u>in field</u>	<u>installation</u>
INST. 1			111.5				
1	Blue			5.2	106.3	141	140
2	Red			6.6	104.9	150	150
3	Pink			7.8	103.7	155	150
4	Orange			9.3	102.2	161	130
5	Yellow			10.8	100.7	115	110
6	Blue			12.4	99.1	105	100
7	Red			14.0	97.5	100	100
					Total	927	880

	<u>System</u>	<u>Repair</u>
	Lines 1-3	Lines 4-7
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.28	0.275
System Installation LTAR	0.28	0.275
Total Line Length	440	440
Square Footage	1320	1320
Proposed Trench Bottom	12"	12"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is marked stump	

**Change in Property Line

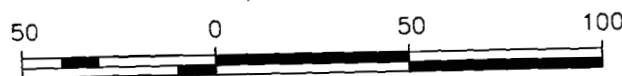
Legend Oaks Subdivision
Phase III
Lot 6
4-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pressure Manifold
Lines: 6-9, (440')
Accepted Status System
0.275 Soil LTAR
18-24" Trench Bottom
Repair: Pressure Manifold
Lines: 1-5, (420')
Accepted Status System
18-24" Trench Bottom
0.3 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #6

4-Bedroom Home (480 gal./day)

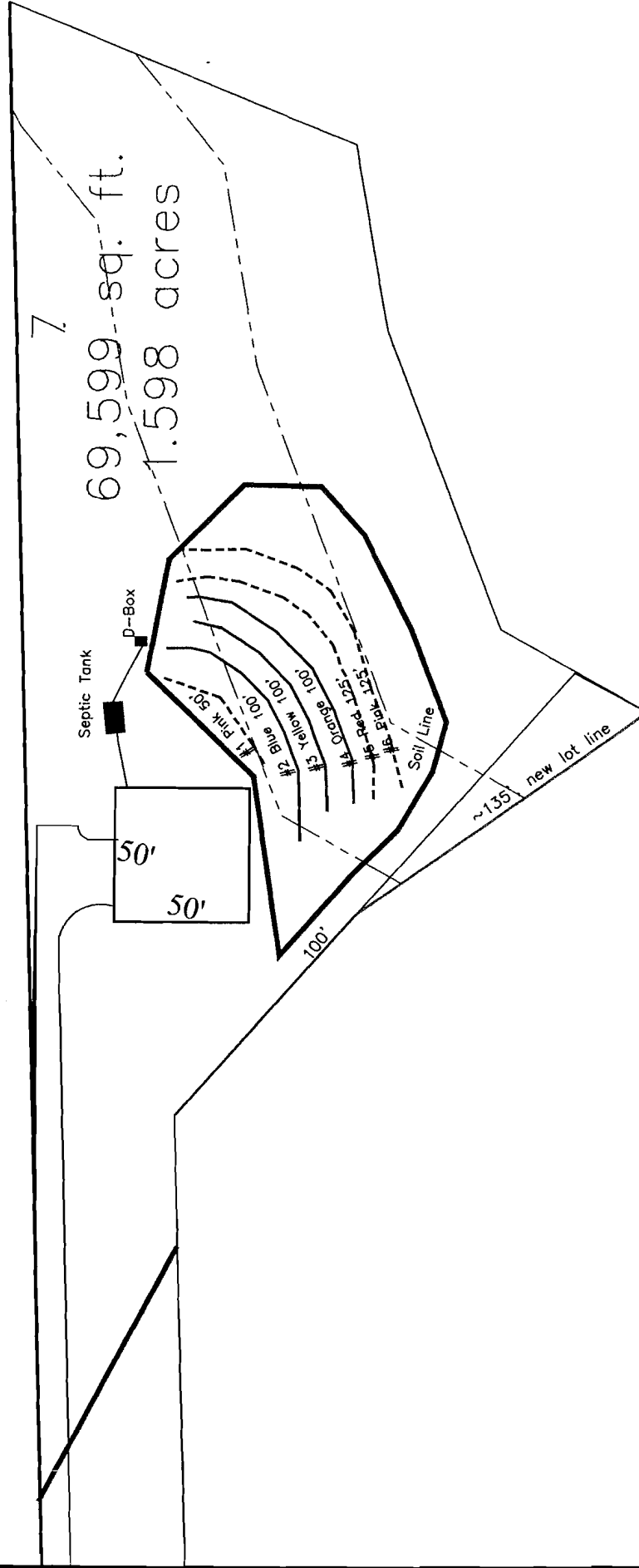
<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Blue			2.2	98.5	40	40
2	Pink			3.3	97.4	83	80
3	Orange			4	96.7	111	100
4	Red			5.1	95.6	153	150
5	Yellow			6.6	94.1	183	70
6	Blue			8.0	92.7	91	90
7	Pink			9.6	91.1	100	90
8	Orange			11.4	89.3	121	120
9	Red			14.2	86.5	130	120
					Total	1012	860

	<u>System</u>	<u>Repair</u>
	Lines 6-9	Lines 1-5
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.28	0.3
System Installation LTAR	0.28	0.28
Total Line Length	440	420
Square Footage	1320	1260
Proposed Trench Bottom	18-24"	18-24"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is EIP on P-Line	

**Change in Property Line

Legend Oaks Subdivision
Phase III
Lot 7

3-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 2-4, (300')
Accepted Status System
0.3 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1, 4-5, (300')
Accepted Status System
18" Trench Bottom
0.3 Soil LTAR

GRAPHIC SCALE
1" = 60'



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Legend Oaks, Phase III

Lot #7

3-Bedroom Home (360 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Pink			2.5	98.2	60	50
2	<i>Blue</i>			<i>4</i>	<i>96.7</i>	<i>105</i>	<i>100</i>
3	<i>Yellow</i>			<i>5.5</i>	<i>95.2</i>	<i>110</i>	<i>100</i>
4	<i>Orange</i>			<i>7</i>	<i>93.7</i>	<i>110</i>	<i>100</i>
5	Red			8.5	92.2	125	125
6	Pink			10	90.7	130	125
Total						640	600

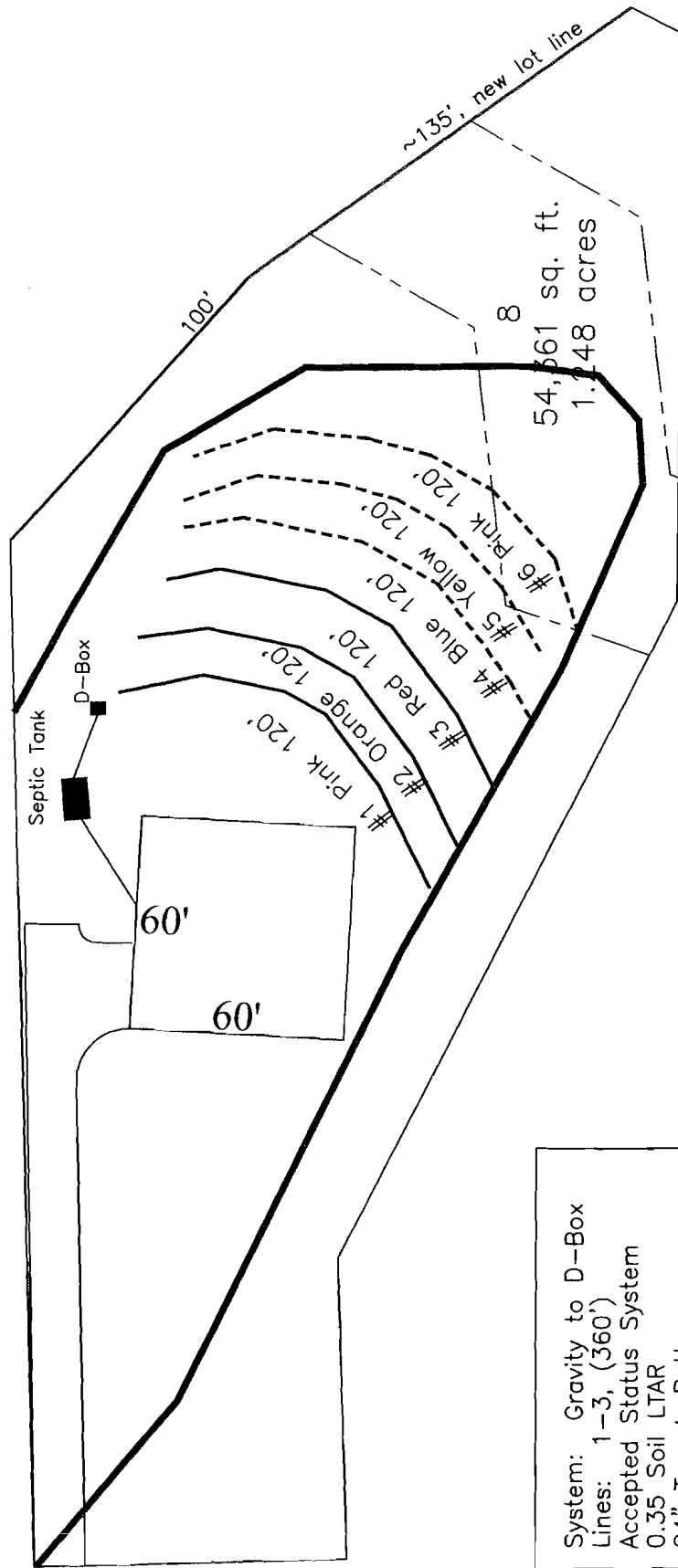
	<u>System</u>	<u>Repair</u>
	Lines 2-4	Lines 1,4,5
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.30	0.30
System Installation LTAR	0.30	0.30
Total Line Length	300	300
Square Footage	900	900
Proposed Trench Bottom	18"	24"

Distribution Method Gravity to D-Box Pressure Manifold

Notes: TBM is EIP on P-Line

**Change in Property Line

Legend Oaks Subdivision Phase III Lot 8 4-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 1-3, (360')
Accepted Status System
0.35 Soil LTAR
24" Trench Bottom
Repair: Gravity to D-Box
Lines: 4-6 (360')
Accepted Status System
24" Trench Bottom
0.35 Soil LTAR

GRAPHIC SCALE

1" = 50'

0 50 100

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Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
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Legend Oaks, Phase III

Lot #8

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Yellow			0.8	98.5	122	120
2	Pink			2.2	96.6	130	120
3	Orange			4.1	95	155	120
4	Red			5.7	93.5	150	120
5	Blue			7.2	91.8	130	120
6	Yellow			8.9	100.7	120	120
Total						807	720

	<u>System</u>	<u>Repair</u>
	Lines 4-6	Lines 1-3
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.35	0.35
System Installation LTAR	0.35	0.35
Total Line Length	360	360
Square Footage	1080	1080
Proposed Trench Bottom	24"	24"

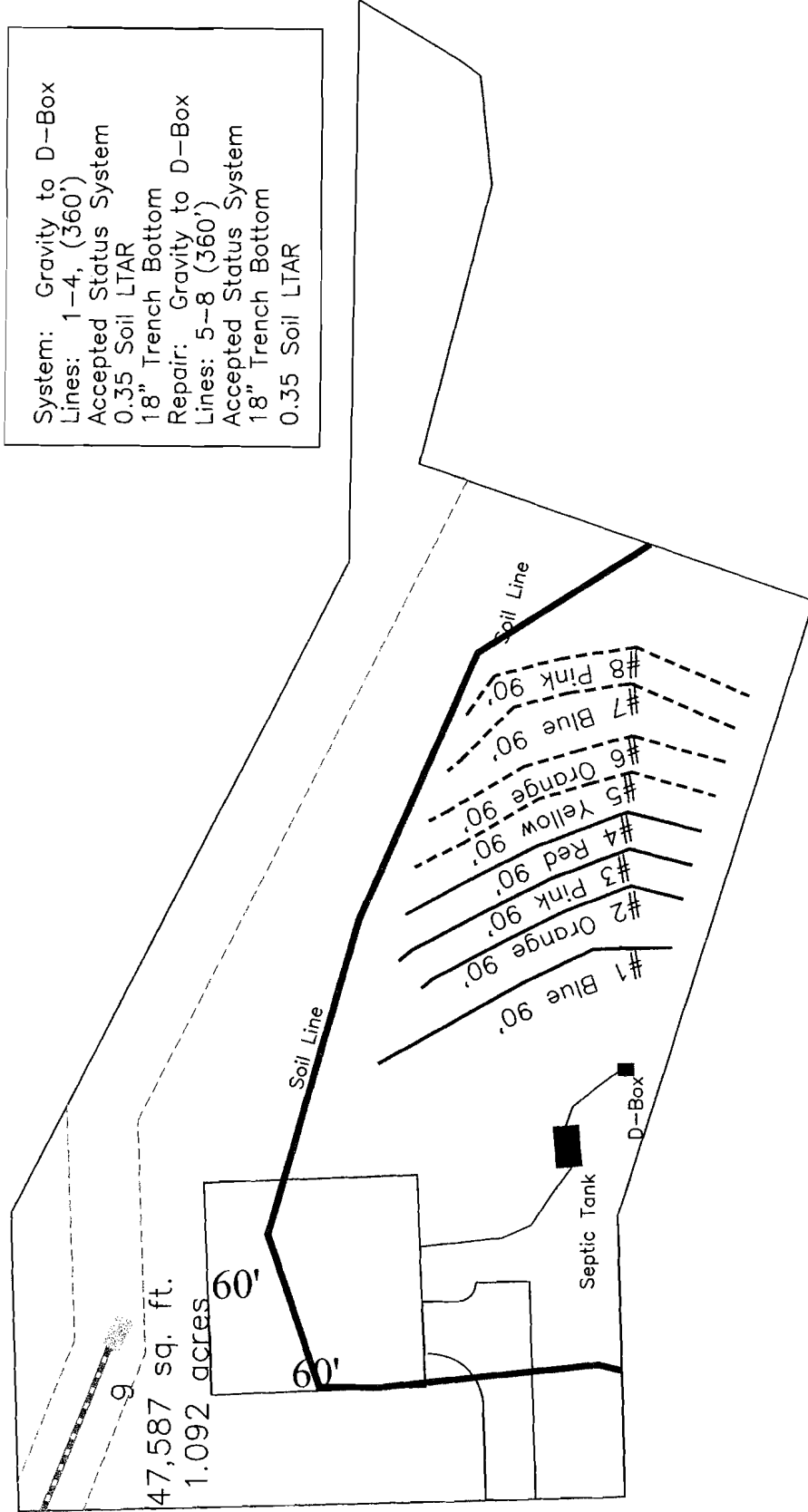
Distribution Method Gravity to D-Box Gravity to D-Box

Notes: TBM is EIP on P-Line

**Has Potential to upgrade to 5-Bedroom

Legend Oaks Subdivision Phase III Lot 9

4-Bedroom Septic System Layout



GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #9

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Blue			1.8	96.2	90	90
2	Orange			4.5	93.7	90	90
3	Pink			7	91.2	90	90
4	Red			9.5	88.7	90	90
5	Yellow			12	86.2	97	90
6	Orange			14.5	100.7	100	90
7	Blue			17.2	100.7	90	90
8	Pink			19.7	100.7	95	90

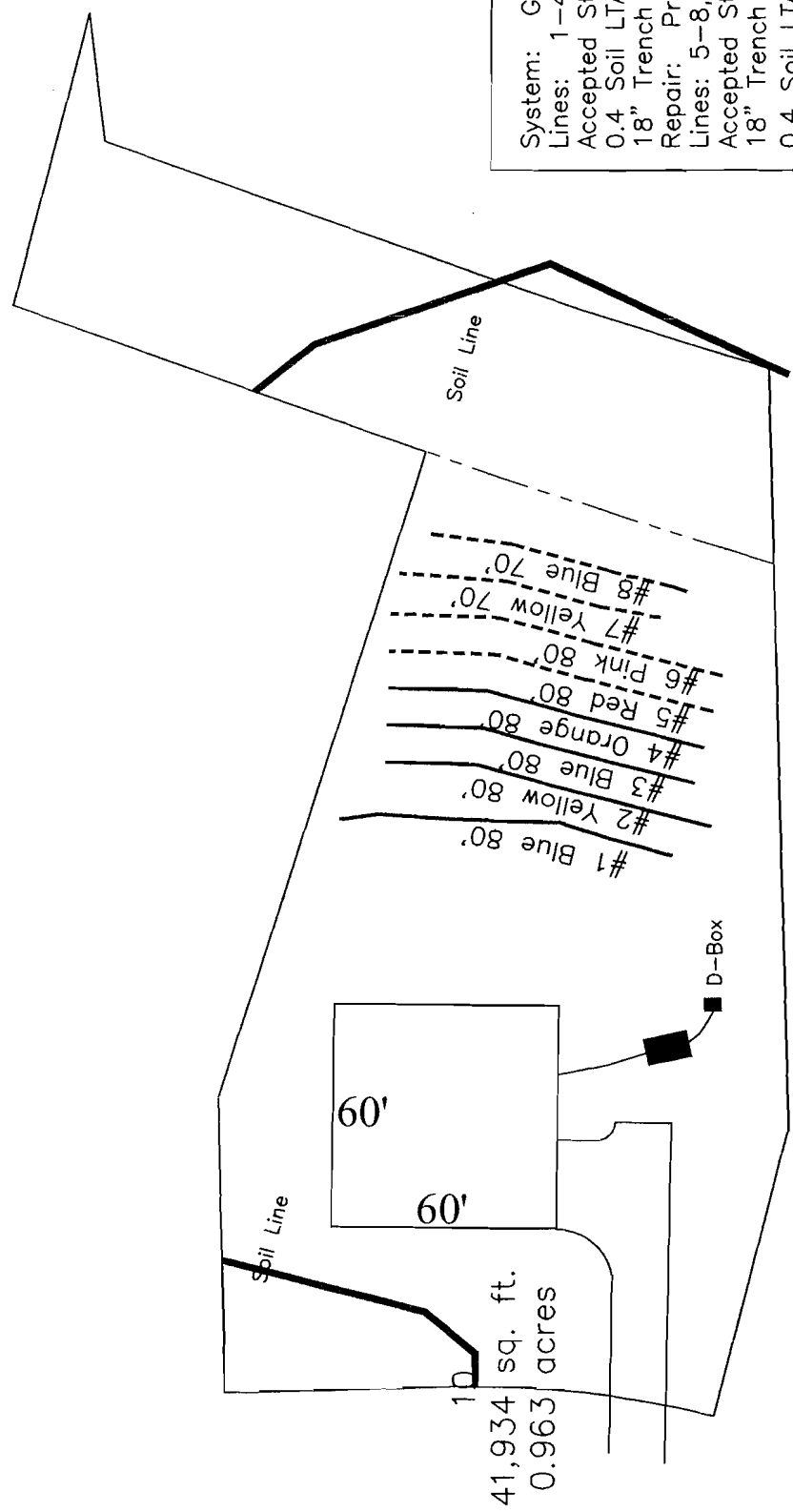
Total **742** **720**

	<u>System</u>	<u>Repair</u>
	Lines 1-4	Lines 5-8
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.35	0.35
System Installation LTAR	0.35	0.35
Total Line Length	360	360
Square Footage	1080	1080
Proposed Trench Bottom	18"	18"

Distribution Method Gravity to D-Box Gravity to D-Box

Notes: TBM is EIP on P-Line

Legend Oaks Subdivision Phase III Lot 10 4-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 1-4, (320')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 5-8, (300')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Project # 326

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

Legend Oaks, Phase III

Lot #10

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Pink			5.3	93.7	80	80
2	Yellow			7	92.5	80	80
3	Blue			8.2	91.1	81	80
4	Orange			9.6	89.9	80	80
5	Red			10.8	88.9	80	80
6	Pink			11.8	100.7	80	80
7	Yellow			13	100.7	73	70
8	Blue			14	100.7	70	70

Total **624** **620**

	<u>System</u>	<u>Repair</u>
	Lines 1-4	Lines 5-8
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.40
System Installation LTAR	0.37	0.40
Total Line Length	320	300
Square Footage	960	900
Proposed Trench Bottom	18"	18"

Distribution Method Gravity to D-Box Pressure Manifold

Notes: TBM is EIP on P-Line

Legend Oaks Subdivision
Phase III
Lot 11
4-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 5-7, (300')
Accepted Status System
0.4 Soil LTAR
14" Trench Bottom
Repair: Pump to D-Box
Lines: 1-4, (320')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #11

4-Bedroom Home (600 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		3.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			103.7				
1	Red			3.8	98.7	80	80
2	Yellow			5	97.4	100	80
3	Blue			6.3	96.1	100	80
4	Pink			7.6	94.5	100	80
5	Orange			9.2	92.9	100	100
6	Red			10.8	91.7	100	100
7	Yellow			12	103.7	100	100
8	Blue			13.2	103.7	65	not used
					Total	745	620

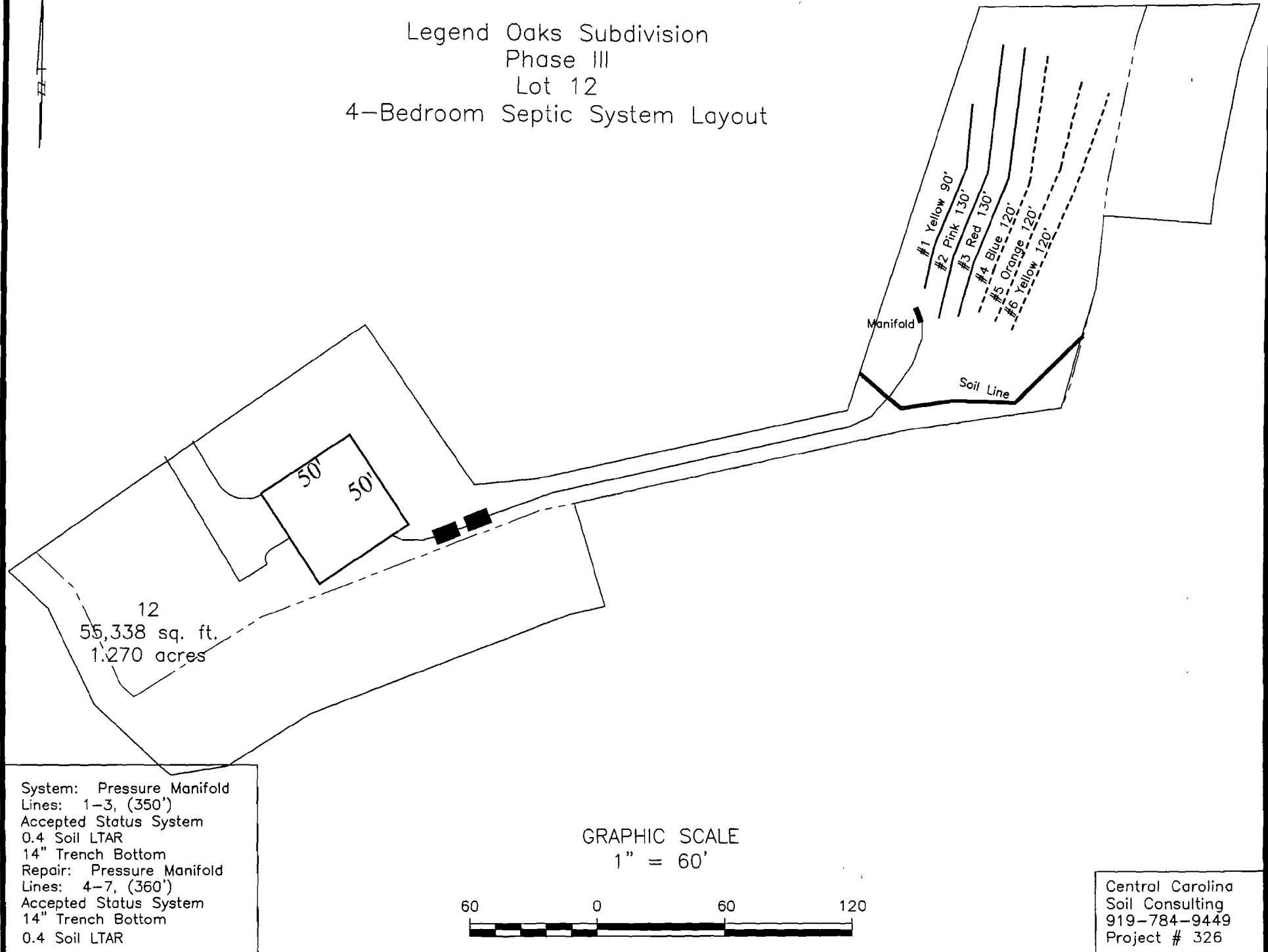
	<u>System</u>	<u>Repair</u>
	Lines 5-7	Lines 1-4
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.40
System Installation LTAR	0.40	0.38
Total Line Length	300	320
Square Footage	900	960
Proposed Trench Bottom	14"	14"

Distribution Method Gravity to D-Box Pressure Manifold

Notes: TBM is EIP on P-Line

**Has Potential to upgrade to 5-Bedroom

Legend Oaks Subdivision
Phase III
Lot 12
4-Bedroom Septic System Layout



Legend Oaks, Phase III

Lot #12

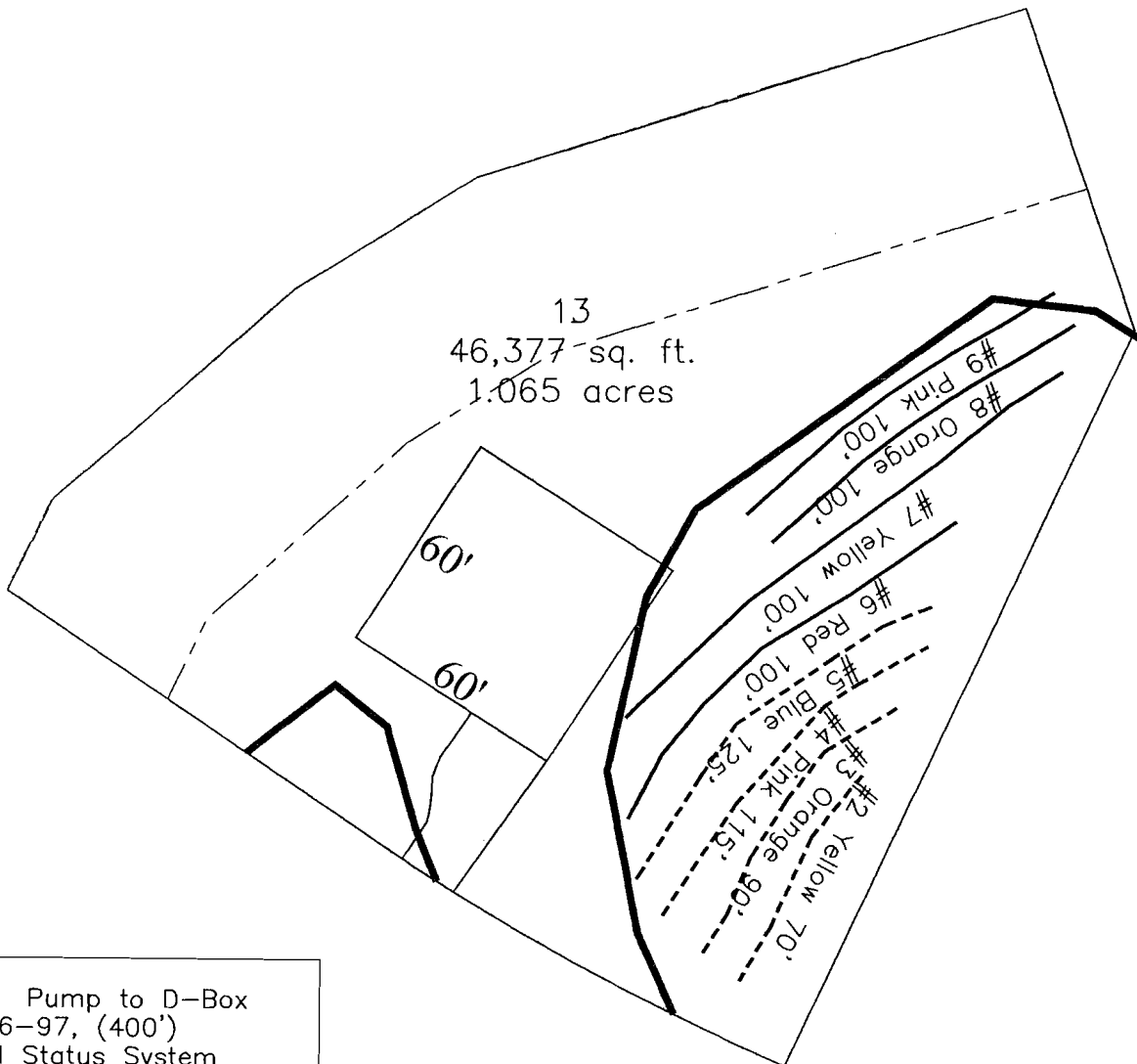
4-Bedroom Home (600 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Yellow			1.9	97.1	92	90
2	Pink			3.6	95.4	130	130
3	Red			5.3	93.9	138	130
4	Blue			6.8	92.2	143	120
5	Orange			8.5	89.8	145	120
6	Yellow			10.9	88.2	150	120
7	Pink			12.5	100.7	91	not used
					Total	889	710

	<u>System</u>	<u>Repair</u>
	Lines 1-3	Lines 4-7
System Type	Accepted Status System	Accepted Status System
	EZ-FLOW	EZ-FLOW
Suggested Soil LTAR	0.40	0.40
(gal/day/ft2)		
System Installation LTAR	0.35	0.35
Total Line Length	350	360
Square Footage	1050	1080
Proposed Trench Bottom	14"	14"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is EIP on P-Line	

**Has Potential to upgrade to 5-Bedroom

Legend Oaks Subdivision
Phase III
Lot 13
4-Bedroom Septic System Layout



System: Pump to D-Box
Lines: 6-97, (400')
Accepted Status System
0.3 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 2-5, (400')
Accepted Status System
18" Trench Bottom
0.3 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

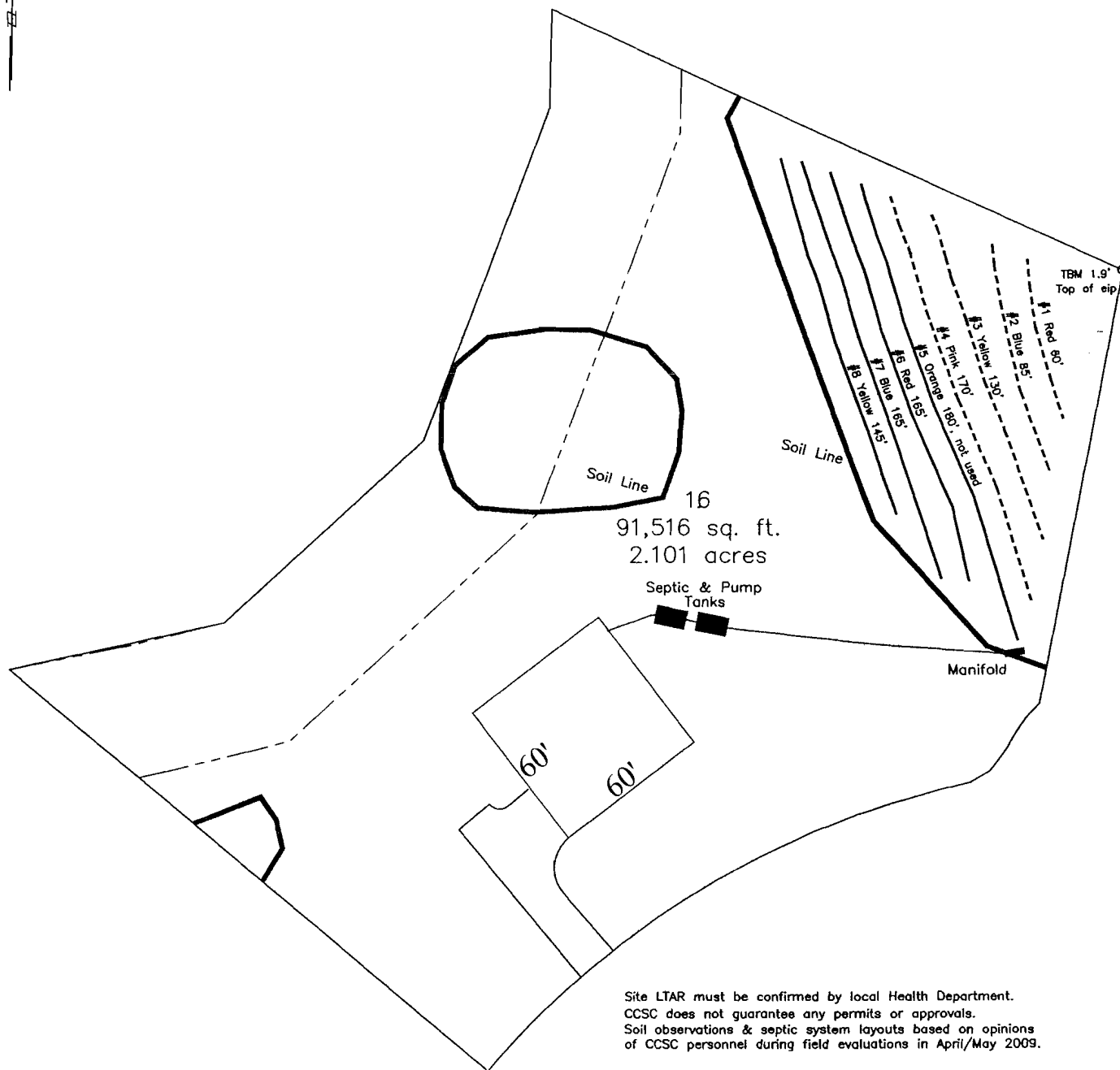
Lot #13

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		15.5		100.0		<u>in field</u>	<u>installation</u>
INST. 1			115.5				
1	Red			3.6	111.9	50	not used
2	Yellow			5.6	109.9	70	70
3	Orange			7.6	107.9	90	90
4	Pink			9.6	105.9	115	115
5	Blue			11.6	103.9	125	125
6	Red			13.6	101.9	135	100
7	Yellow			15.6	99.9	145	100
8	Orange			17.6	97.9	100	100
9	Pink			19.6	95.9	100	100
					Total	930	800

	<u>System</u>	<u>Repair</u>
	Lines 6-9	Lines 2-5
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.30	0.3
System Installation LTAR	0.30	0.3
Total Line Length	400	400
Square Footage	1200	1200
Proposed Trench Bottom	18"	18"
Distribution Method	Pump to D-Box	Pressure Manifold
Notes:	TBM is marked stump below line #7	

Legend Oaks Subdivision
Phase III
Lot 16
5-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pressure Manifold
Lines: 6-8, (475')
Accepted Status System
0.35 Soil LTAR
24" Trench Bottom
Repair: Pressure Manifold
Lines: 1-4, (445')
Accepted Status System
24" Trench Bottom
0.35 Soil LTAR

GRAPHIC SCALE
1" = 60'



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Legend Oaks, Phase III

Lot #16

5-Bedroom Home (600 gal./day)

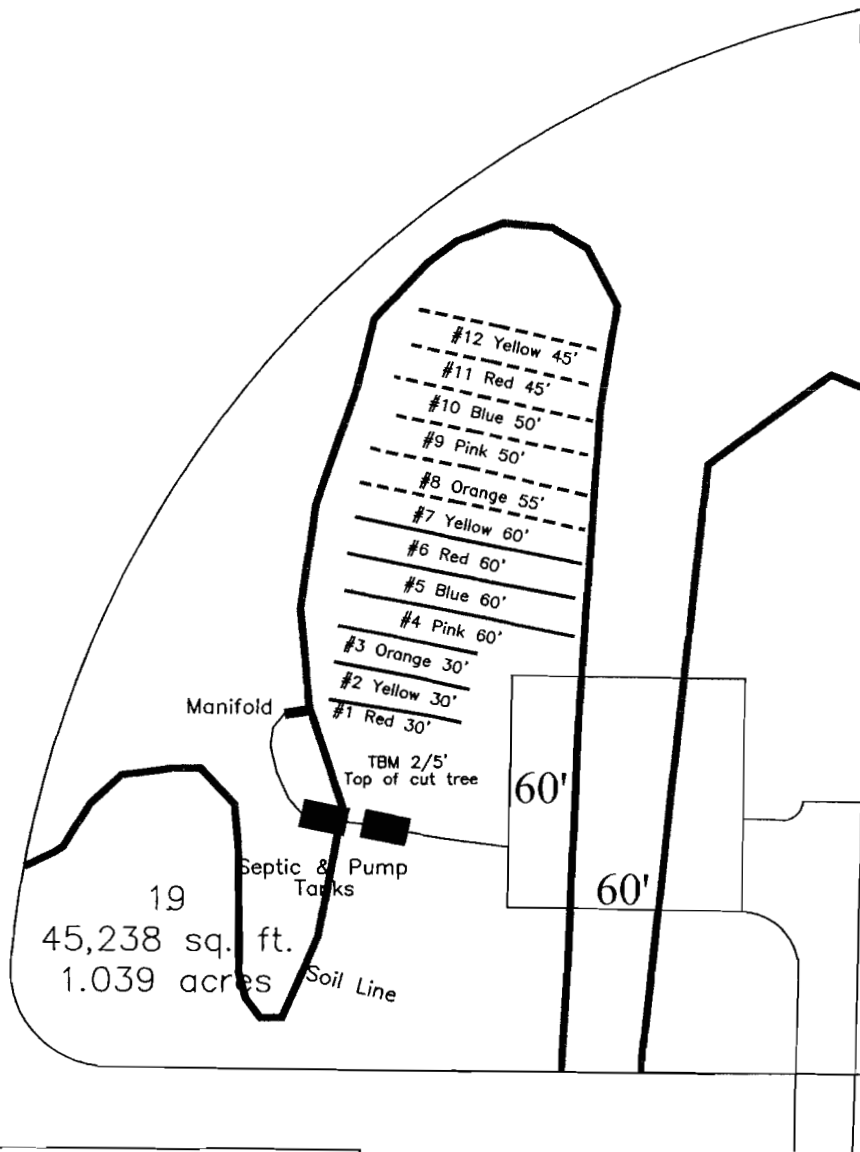
<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		1.9		100.0		<u>in field</u>	<u>installation</u>
INST. 1			101.9				
1	Red			5.3	96.6	61	60
2	Blue			6.8	95.1	87	85
3	Yellow			8.5	93.4	132	130
4	Pink			10.1	91.8	170	170
5	Orange			11.7	90.2	187	0
6	<i>Red</i>			<i>13.1</i>	<i>88.8</i>	<i>165</i>	<i>165</i>
7	<i>Blue</i>			<i>13.5</i>	<i>88.4</i>	<i>167</i>	<i>165</i>
8	<i>Yellow</i>			<i>15.0</i>	<i>86.9</i>	<i>145</i>	<i>145</i>
Total						1114	920

	<u>System</u>	<u>Repair</u>
	Lines 6-8	Lines 1-4
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.35	0.35
System Installation LTAR	0.33	34
Total Line Length	475	445
Square Footage	1425	1335
Proposed Trench Bottom	24"	24"

Distribution Method Pressure Manifold Pressure Manifold

Notes: TBM is corner, eip (see site plan)

Legend Oaks Subdivision
Phase III
Lot 19
4-Bedroom Septic System Layout



System: T & J Panel Block
Lines: 1-7, (320')
50% Maximum Reduction
0.3 Soil LTAR
28" Trench Bottom
Repair: T & J Panel Block
Lines: 8-12, (245')
50% Maximum Reduction
28" Trench Bottom
0.3 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE

1" = 50'



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Legend Oaks, Phase III

Lot #19

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		2.5		100.0		<u>in field</u>	<u>installation</u>
INST. 1			102.5				
1	Red			1.4	101.1	60	30
2	Yellow			2.8	99.7	60	30
3	Orange			3.8	98.7	60	30
4	Pink			4.9	97.6	60	60
5	Blue			6	96.5	64	60
6	Red			7.6	94.9	63	60
7	Yellow			11.4	91.1	62	60
8	Orange			12.9	89.6	56	55
9	Pink			14.6	87.9	53	50
10	Blue			16.3	86.2	50	50
11	Red			17.9	84.6	48	45
12	Yellow			20.0	82.5	45	45
					Total	681	575

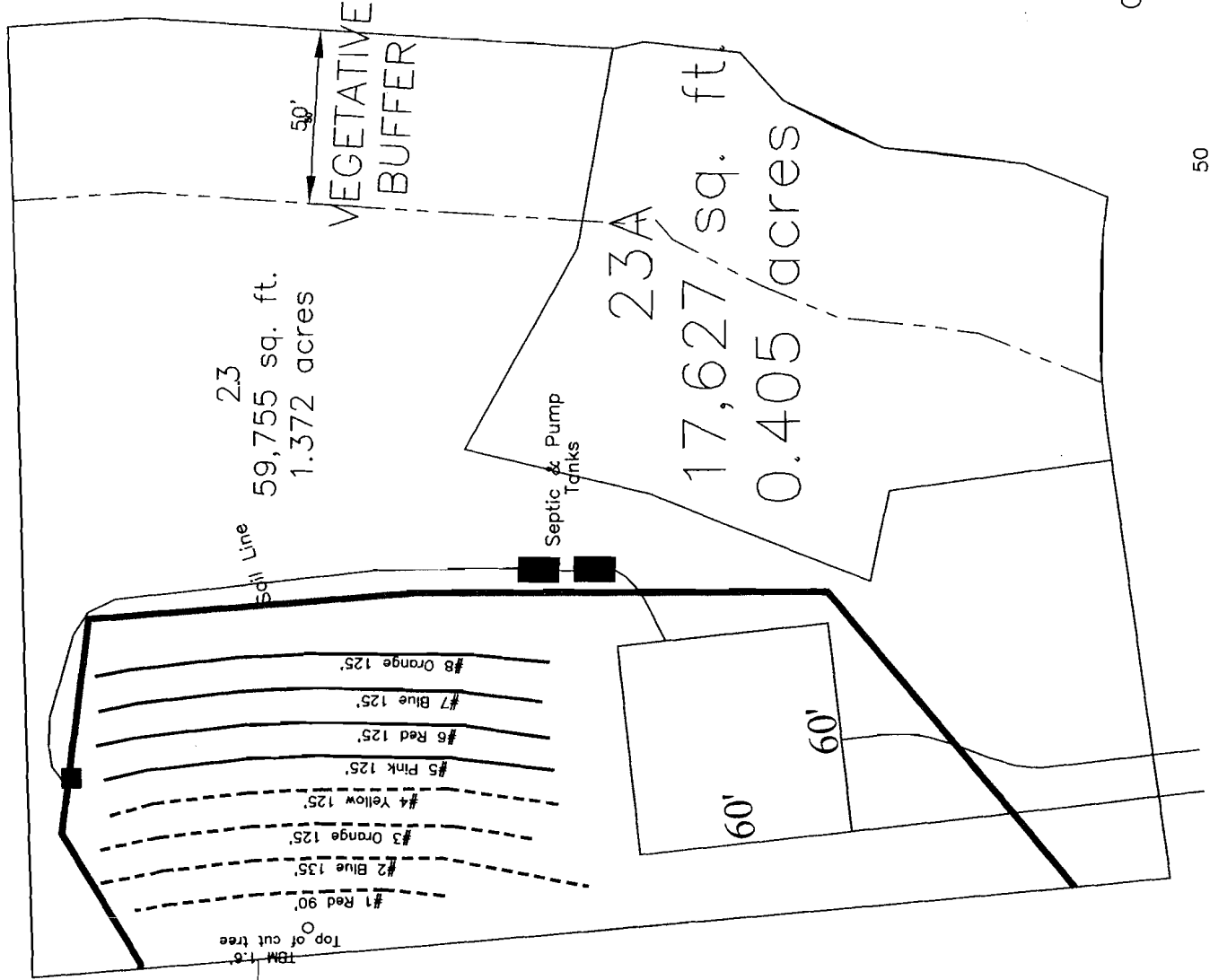
	<u>System</u>	<u>Repair</u>
	Lines 1-7	Lines 8-12
System Type	T & J Panel Block 50% reduction	T & J Panel Block 50% reduction
Suggested Soil LTAR (gal/day/ft2)	0.30	0.35
System Installation LTAR	0.27	0.33
Total Line Length	320	245
Square Footage		
Proposed Trench Bottom	28"	28"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is cut tree above line #1	

Legend Oaks Subdivision.

Phase III

Lot 23

5-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pump to D-Box
Lines: 5-8, (500')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-4, (475')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #23

5-Bedroom Home (600 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		1.6		100.0		<u>in field</u>	<u>installation</u>
INST. 1			101.6				
1	Red			3.6	98	90	90
2	Blue			5.8	95.8	135	135
3	Orange			7.5	94.1	125	125
4	Yellow			9.5	92.1	125	125
5	<i>Pink</i>			<i>10.4</i>	<i>91.2</i>	<i>125</i>	<i>125</i>
6	<i>Red</i>			<i>12.8</i>	<i>88.8</i>	<i>127</i>	<i>125</i>
7	<i>Blue</i>			<i>15.2</i>	<i>86.4</i>	<i>125</i>	<i>125</i>
8	<i>Orange</i>			<i>17.9</i>	<i>83.7</i>	<i>125</i>	<i>125</i>
Total						977	975

	<u>System</u>	<u>Repair</u>
	Lines 5-8	Lines 1-4
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.35	0.35
System Installation LTAR	0.30	0.28
Total Line Length	500	475
Square Footage	1500	1425
Proposed Trench Bottom	18"	18"
Distribution Method	Pump to D-Box	Pressure Manifold
Notes:	TBM is cut tree above #1 red line	

Legend Oaks Subdivision

Phase III

Lot 24

4-Bedroom Septic System Layout

2.4
73,507 sq. ft.
1.687 acres

50'
VEGETATIVE
BUFFER

Septic & Pump
Tanks

NEW 20' DRAIN EASE

TBM 10'
Top of cut tree

NEW
FH

Manifold
#1 Yellow 70'
#2 Pink 105'
#3 Blue 130'
#4 Orange 150'
#5 Red 90'
#6 Yellow 90'

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pressure Manifold
Lines: 1-3, (310')
Accepted Status System
0.4 Soil LTAR
18-24" Trench Bottom
Repair: Pressure Manifold
Lines: 4-6, (330')
Accepted Status System
18-24" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

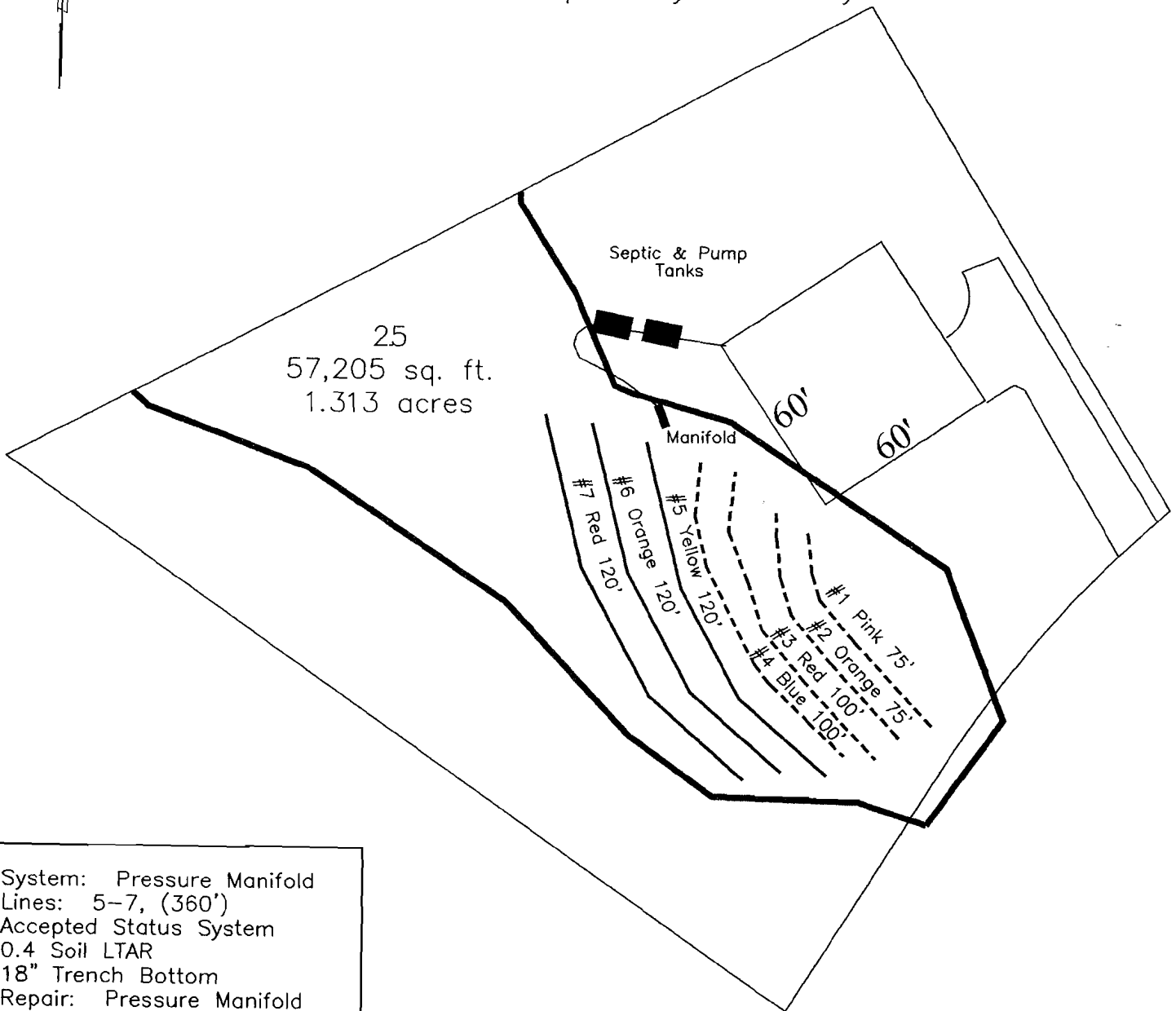
Lot #24

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		10.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			110.0				
1	Yellow			3	105.7	70	70
2	Pink			4.3	104	105	105
3	Blue			6	102.7	131	130
4	Orange			7.3	101.5	150	150
5	Red			8.5	100.1	90	90
6	Yellow			9.9	110	90	90
Total						636	635

	<u>System</u> Lines 1-3	<u>Repair</u> Lines 4-6
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.40	0.40
System Installation LTAR	0.29	0.28
Total Line Length	310	330
Square Footage	930	990
Proposed Trench Bottom	18-24"	18-24"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is top of cut tree	

Legend Oaks Subdivision
Phase III
Lot 25
4-Bedroom Septic System Layout



System: Pressure Manifold
Lines: 5-7, (360')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-4, (350')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Lot # 25

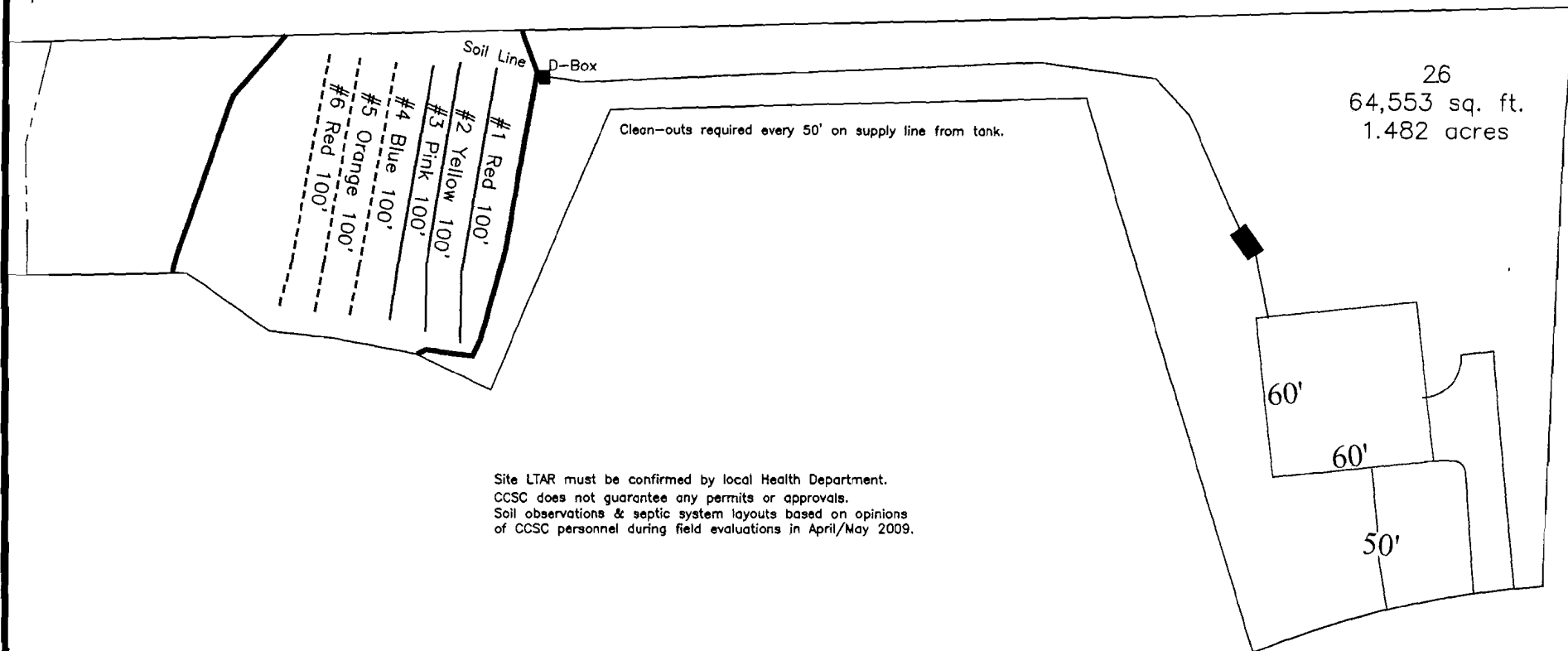
4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		5.3		100.0		<u>in field</u>	<u>installation</u>
INST. 1			105.3				
1	Pink			0.1	105.2	75	75
2	Orange			1.1	104.2	75	75
3	Red			3	102.3	100	100
4	Blue			4.4	100.9	100	100
5	<i>Yellow</i>			7	<i>98.3</i>	<i>120</i>	<i>120</i>
6	<i>Orange</i>			9.7	<i>95.6</i>	<i>130</i>	<i>120</i>
7	<i>Red</i>			12.4	<i>92.9</i>	<i>126</i>	<i>120</i>

Total 726 710

	<u>System</u>	<u>Repair</u>
	Lines 5-7	Lines 1-4
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.4
System Installation LTAR	0.35	0.36
Total Line Length	360	350
Square Footage	1080	1050
Proposed Trench Bottom	18"	18"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:	TBM is top of cut tree	

Legend Oaks Subdivision
Phase III
Lot 26
4-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 1-3, (300')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Gravity to D-Box
Lines: 4-6, (300')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 60'



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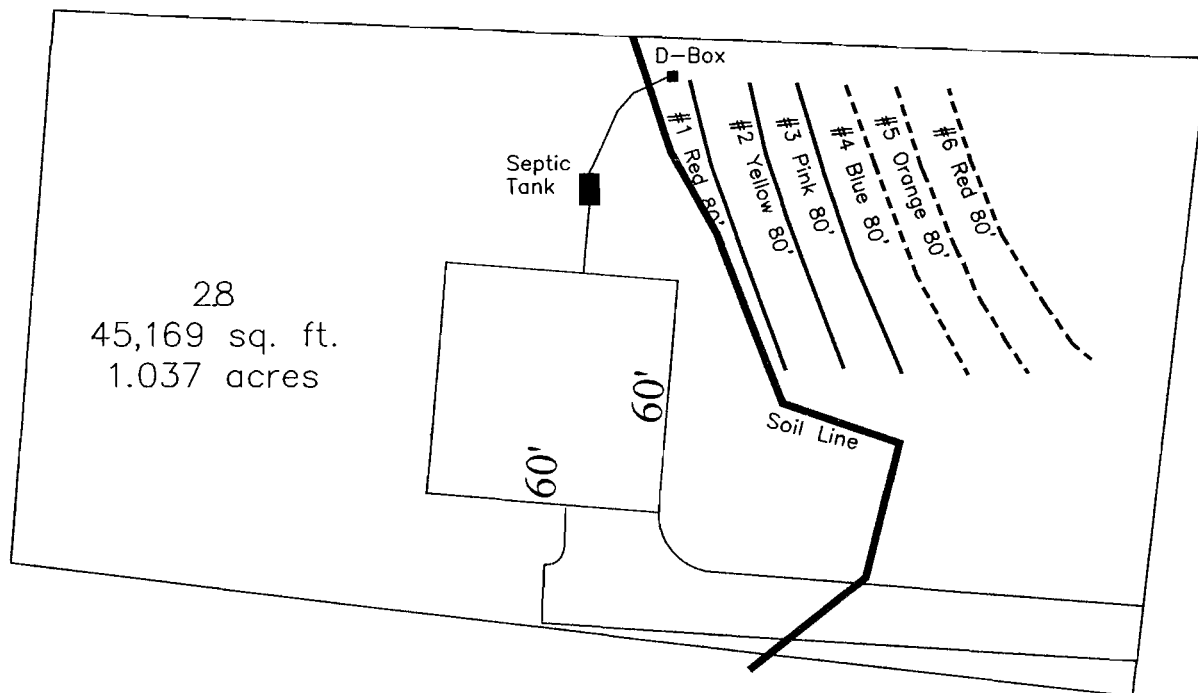
Lot #26

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.0				
1	Red			2.3	97.7	100	100
2	Yellow			4.5	95.5	100	100
3	Pink			6.8	93.2	100	100
4	Blue			9.2	90.8	100	100
5	Orange			11.5	88.5	100	100
6	Red			14.1	85.9	100	100
Total						600	600

	<u>System</u>	<u>Repair</u>
	Lines 1-3	Lines 4-6
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.4
System Installation LTAR	0.40	0.4
Total Line Length	300	300
Square Footage	900	900
Proposed Trench Bottom	18"	18"
Distribution Method	Gravity to D-Box	Gravity to D-Box
Notes:		

Legend Oaks Subdivision Phase III Lot 28 3-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 1-4, (240')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Gravity to D-Box
Lines: 4-6, (240')
Accepted Status System
18" Trench Bottom
0.3 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #28

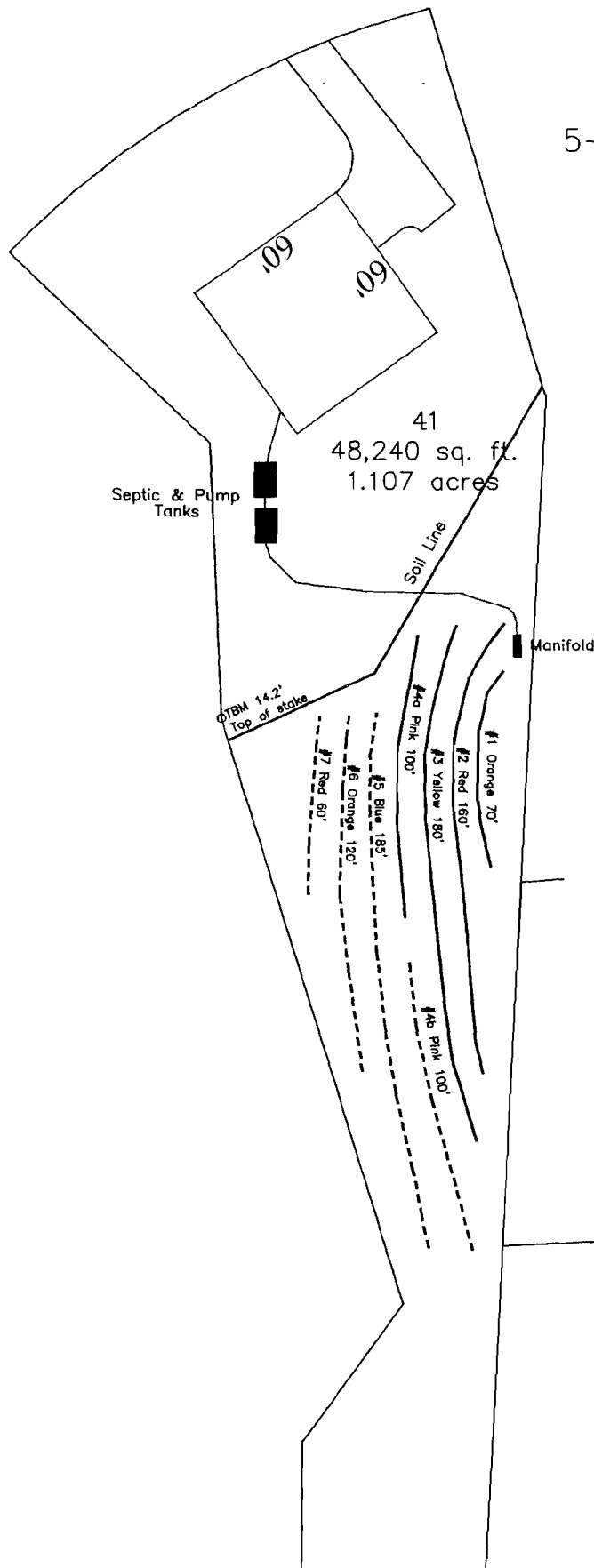
3-Bedroom Home (360 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.0				
1	Red			3.3	96.7	83	80
2	Yellow			5.9	94.1	80	80
3	Pink			8.8	91.2	80	80
4	Blue			11.9	88.1	80	80
5	Orange			14.7	85.3	80	80
6	Red			16.9	83.1	80	80

Total 483 480

	<u>System</u>	<u>Repair</u>
	Lines 1-3	Lines 4-6
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.4
System Installation LTAR	0.39	0.29
Total Line Length	240	240
Square Footage	720	720
Proposed Trench Bottom	18"	18"
Distribution Method	Gravity to D-Box	Gravity to D-Box
Notes:		

Legend Oaks Subdivision
Phase III
Lot 41
5-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pressure Manifold
Lines: 1-4a, (510')
Accepted Status System
0.35 Soil LTAR
20" Trench Bottom
Repair: Pressure Manifold
Lines: 4b-7, (465')
Accepted Status System
20" Trench Bottom
0.35 Soil LTAR

GRAPHIC SCALE
1" = 60'



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Legend Oaks, Phase III

Lot # 41

5-Bedroom Home (600 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		14.2		100.0		<u>in field</u>	<u>installation</u>
INST. 1			114.2				
1	Orange			1.9	112.3	70	70
2	Red			3.3	110.9	166	160
3	Yellow			4.3	109.9	180	180
4a & 4b	Pink			5.8	108.4	215	200
5	Blue			7	107.2	185	185
6	Orange			8.2	106	122	120
7	Red			9.5	104.7	61	60
					Total	999	975

	<u>System</u>	<u>Repair</u>
	Lines 1-4a	Lines 4b-7
System Type	Accepted Status System	Accepted Status System
	EZ-FLOW	EZ-FLOW
Suggested Soil LTAR	0.35	0.35
(gal/day/ft2)		
System Installation LTAR	0.29	0.32
Total Line Length	510	465
Square Footage	1530	1395
Proposed Trench Bottom	20"	20"

Distribution Method

Pressure Manifold

Pressure Manifold

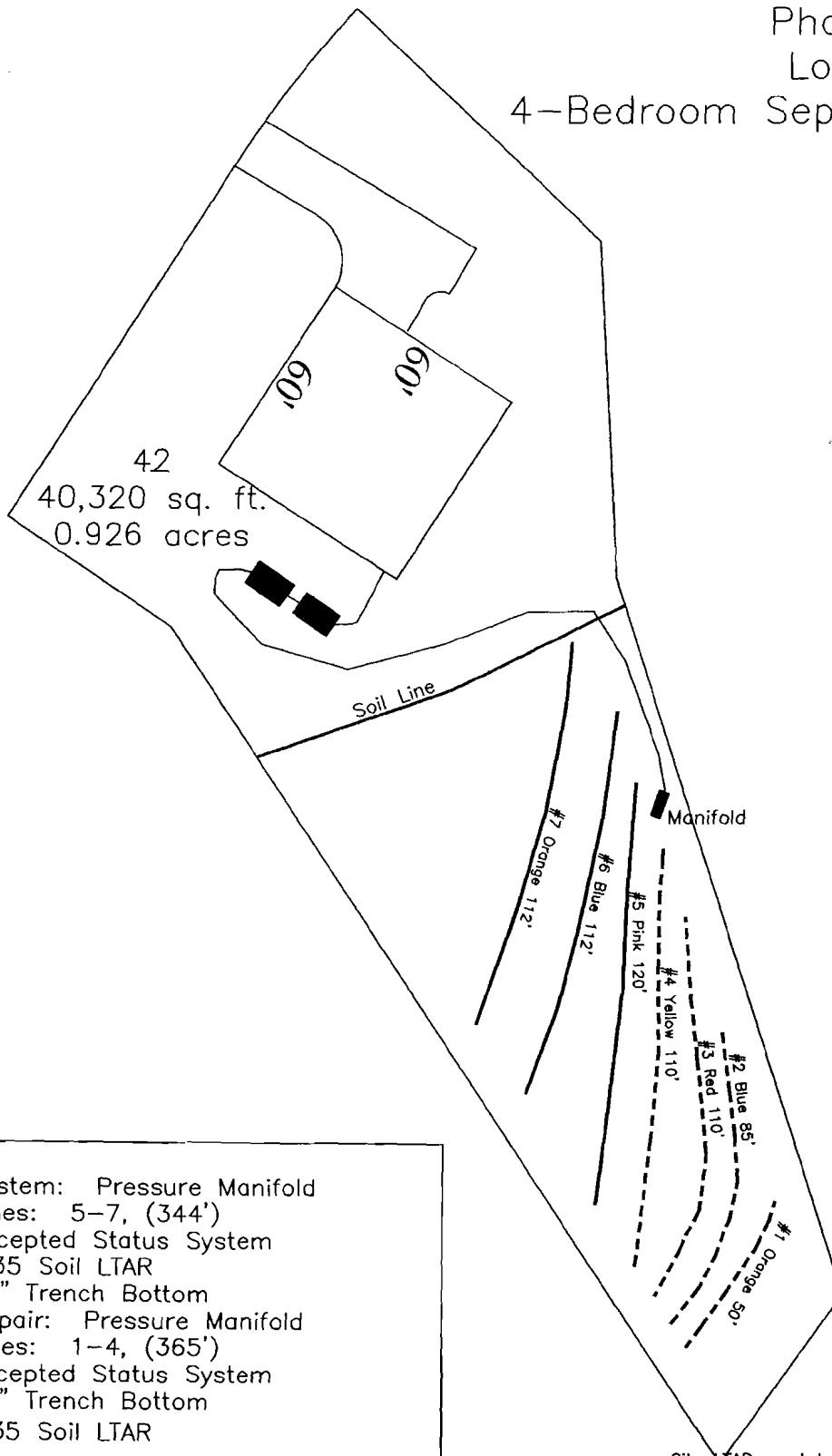
Notes: TBM is top of lot 41/42 corner stake, see site plan

Legend Oaks Subdivision

Phase III

Lot 42.

4-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE

1" = 50'



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Legend Oaks, Phase III

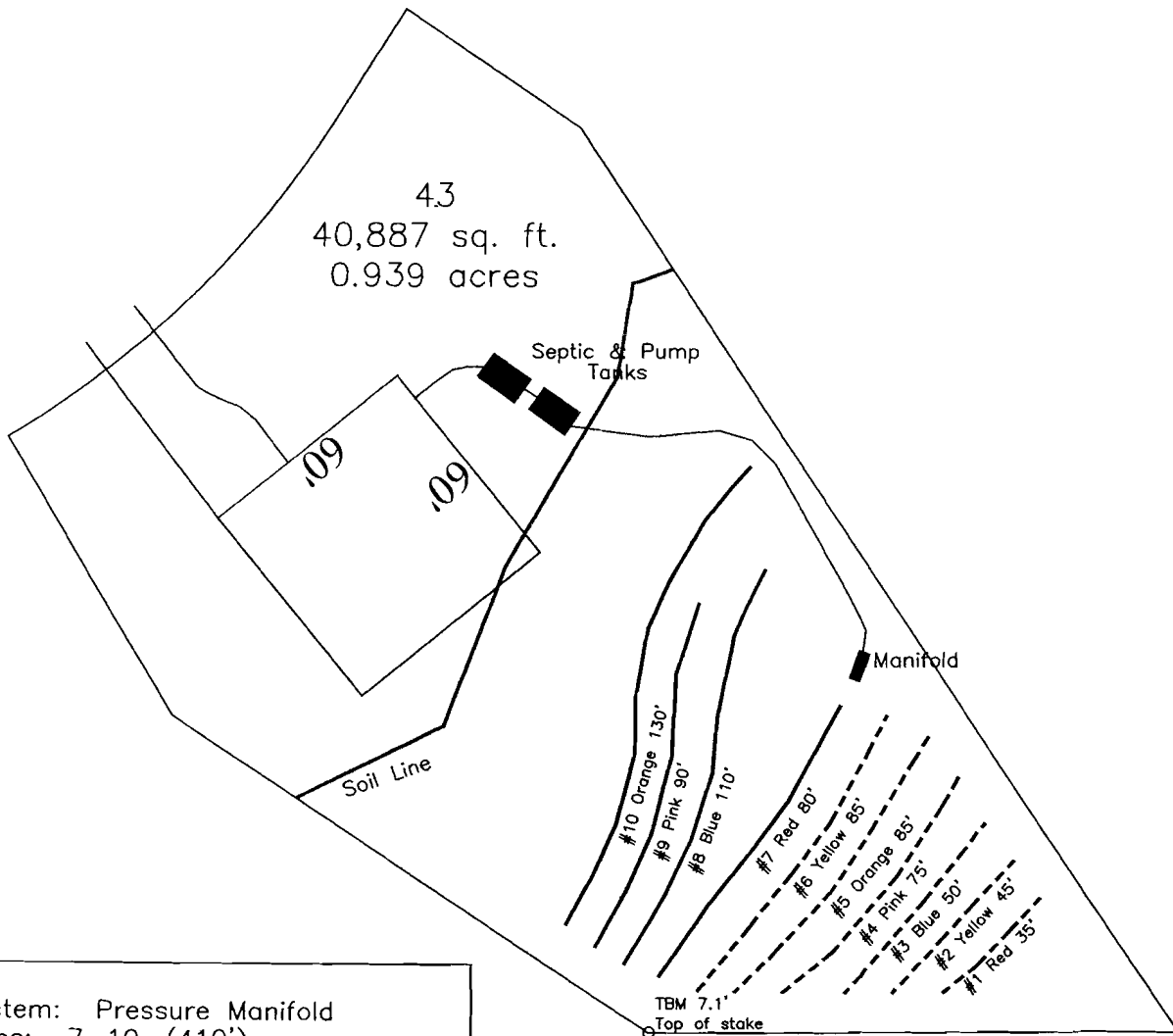
Lot # 42

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.0				
1	Orange			2.5	97.5	50	50
2	Blue			3.3	96.7	85	85
3	Red			4.2	95.8	110	110
4	Yellow			5.2	94.8	112	110
5	<i>Pink</i>			5.9	94.1	123	120
6	<i>Blue</i>			7.7	92.3	112	112
7	<i>Orange</i>			9.3	90.7	112	112
				Total		704	699

	<u>System</u>	<u>Repair</u>
	Lines 5-7	Lines 1-4
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.35	0.35
System Installation LTAR	0.34	0.33
Total Line Length	344	365
Square Footage	1032	1095
Proposed Trench Bottom	20"	20"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:		

Legend Oaks Subdivision Phase III Lot 43 4-Bedroom Septic System Layout



System: Pressure Manifold
Lines: 7-10, (410')
Accepted Status System
0.35 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-6, (375')
Accepted Status System
18" Trench Bottom
0.35 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot # 43

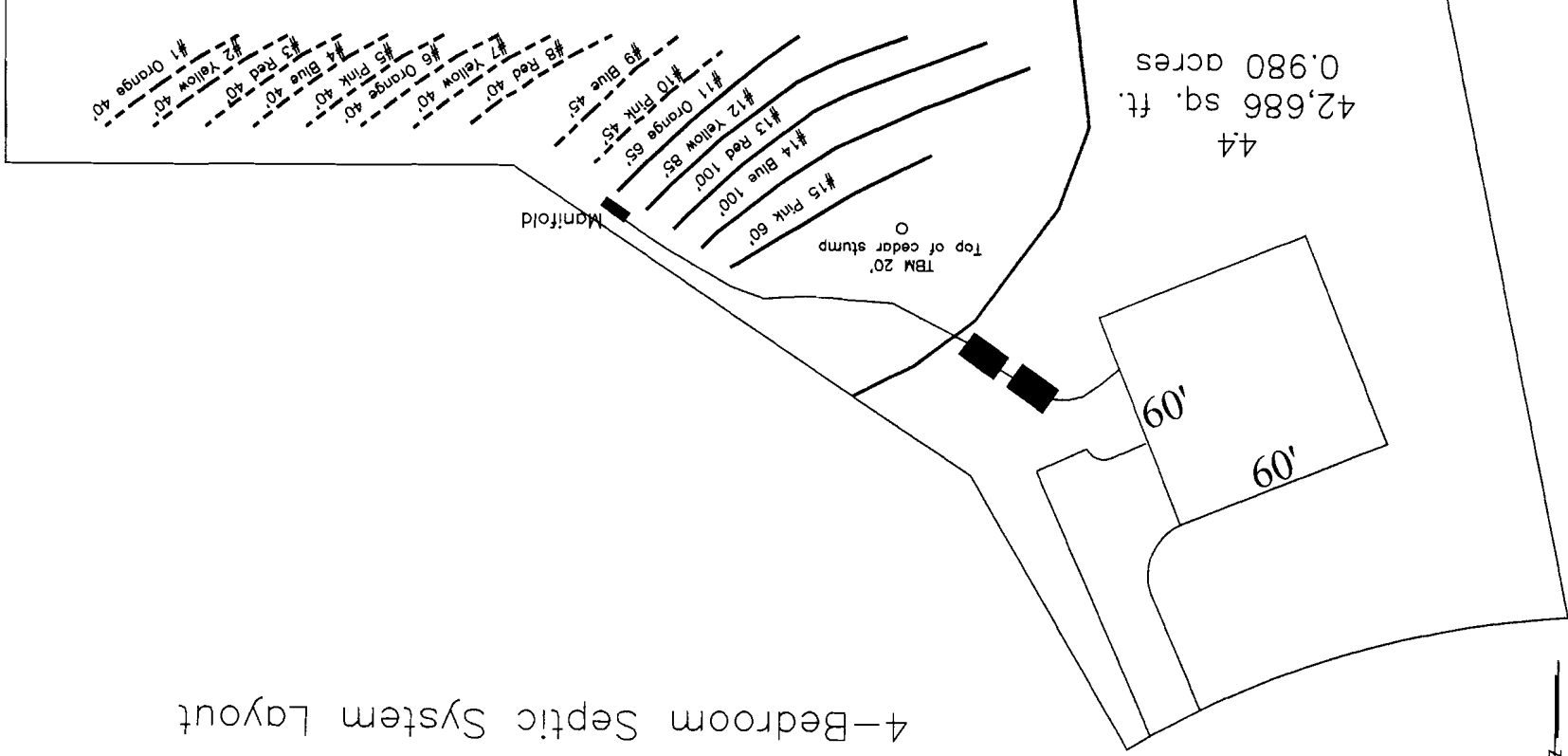
4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		7.1		100.0		<u>in field</u>	<u>installation</u>
INST. 1			107.1				
1	Red			3	104.1	35	35
2	Yellow			3.7	103.4	45	45
3	Blue			4.8	102.3	57	50
4	Pink			5.9	101.2	75	75
5	Orange			7	100.1	85	85
6	Yellow			7.8	99.3	88	85
7	<i>Red</i>			<i>8.9</i>	<i>98.2</i>	<i>88</i>	<i>80</i>
8	<i>Blue</i>			<i>10.1</i>	<i>97</i>	<i>117</i>	<i>110</i>
9	<i>Pink</i>			<i>11.3</i>	<i>95.8</i>	<i>95</i>	<i>90</i>
10	<i>Orange</i>			<i>12.7</i>	<i>94.4</i>	<i>131</i>	<i>130</i>
					Total	816	785

	<u>System</u>	<u>Repair</u>
	Lines 7-10	Lines 1-6
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.35	0.35
System Installation LTAR	0.29	0.33
Total Line Length	410	375
Square Footage	1230	1125
Proposed Trench Bottom	18"	18"
Distribution Method	Pressure Manifold	Pressure Manifold
Notes:		

Legend Oaks Subdivision

Phase III
Lot 44
4-Bedroom Septic System Layout



System: Pressure Manifold
Lines: 7-10, (410')
Accepted Status System
0.35 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-6, (375')
Accepted Status System
18" Trench Bottom
0.35 Soil LTAR

Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot # 44

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		20.0		100.0		<u>in field</u>	<u>installation</u>
INST. 1			120.0				
1	Orange			1.8	118.2	48	40
2	Yellow			2.6	117.4	47	40
3	Red			3.7	116.3	46	40
4	Blue			5	115	42	40
5	Pink			6.2	113.8	47	40
6	Orange			7.5	112.5	40	40
7	Yellow			8.6	111.4	44	40
8	Red			9.9	110.1	45	40
9	Blue			11	109	45	45
10	Pink			12.1	107.9	55	45
11	Orange			13.2	106.8	65	65
12	Yellow			14.3	105.7	89	85
13	Red			15.6	104.4	103	100
14	Blue			17	103	105	100
15	Pink			18.3	101.7	62	60
					Total	883	820

	<u>System</u>	<u>Repair</u>
	Lines 11-15	Lines 1-10
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft ²)	0.33	0.33
System Installation LTAR	0.29	0.29
Total Line Length	410	410
Square Footage	1230	1230
Proposed Trench Bottom	18"	24"

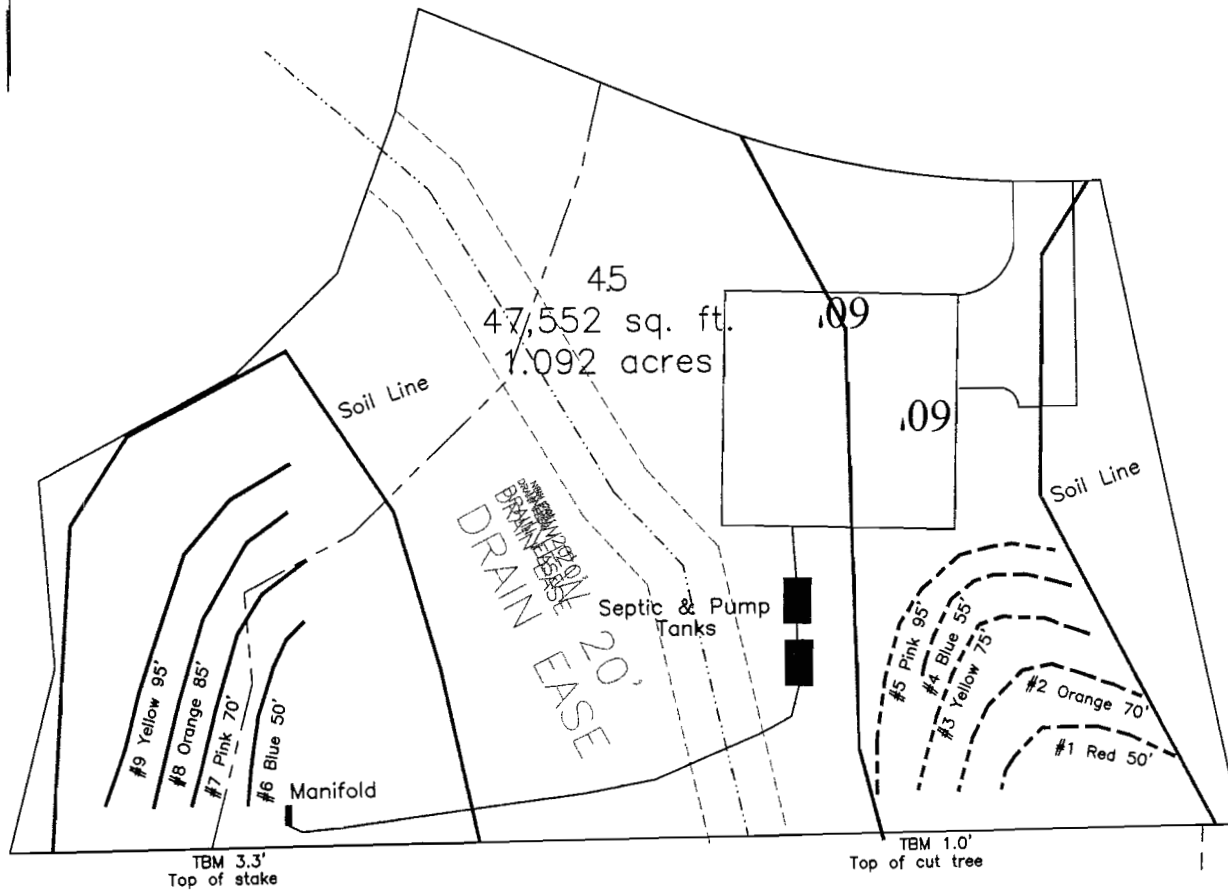
Distribution Method

Pressure Manifold

Pressure Manifold

Notes: TBM is the top of a marked Cedar Stump below layout

Legend Oaks Subdivision
Phase III
Lot 45
4-Bedroom Septic System Layout



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

System: Pressure Manifold
Lines: 1-5, (345')
Accepted Status System
0.35 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-5, (310')
Accepted Status System
16" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 50'



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Legend Oaks, Phase III

Lot #45

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		0.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			100.7				
1	Red			2.5	97.1	54	50
2	Orange			3.6	95.8	70	70
3	Yellow			4.9	94.3	78	75
4	Blue			6.4	92.3	58	55
5	Pink			8.4	100.7	95	95
TBM 2		3.3		100.0			
INST. 2			103.3				
6	Blue			4.9	98.4	50	50
7	Pink			6.3	97	72	70
8	Orange			7.7	95.6	85	85
9	Yellow			10.3	93	105	105
					Total	667	655

	<u>System</u>	<u>Repair</u>
	Lines 6-9	Lines 1-5
System Type	Accepted Status System EZ-FLOW	Accepted Status System EZ-FLOW
Suggested Soil LTAR (gal/day/ft2)	0.40	0.40
System Installation LTAR	0.35	0.39
Total Line Length	345	310
Square Footage	1035	930
Proposed Trench Bottom	18"	16"

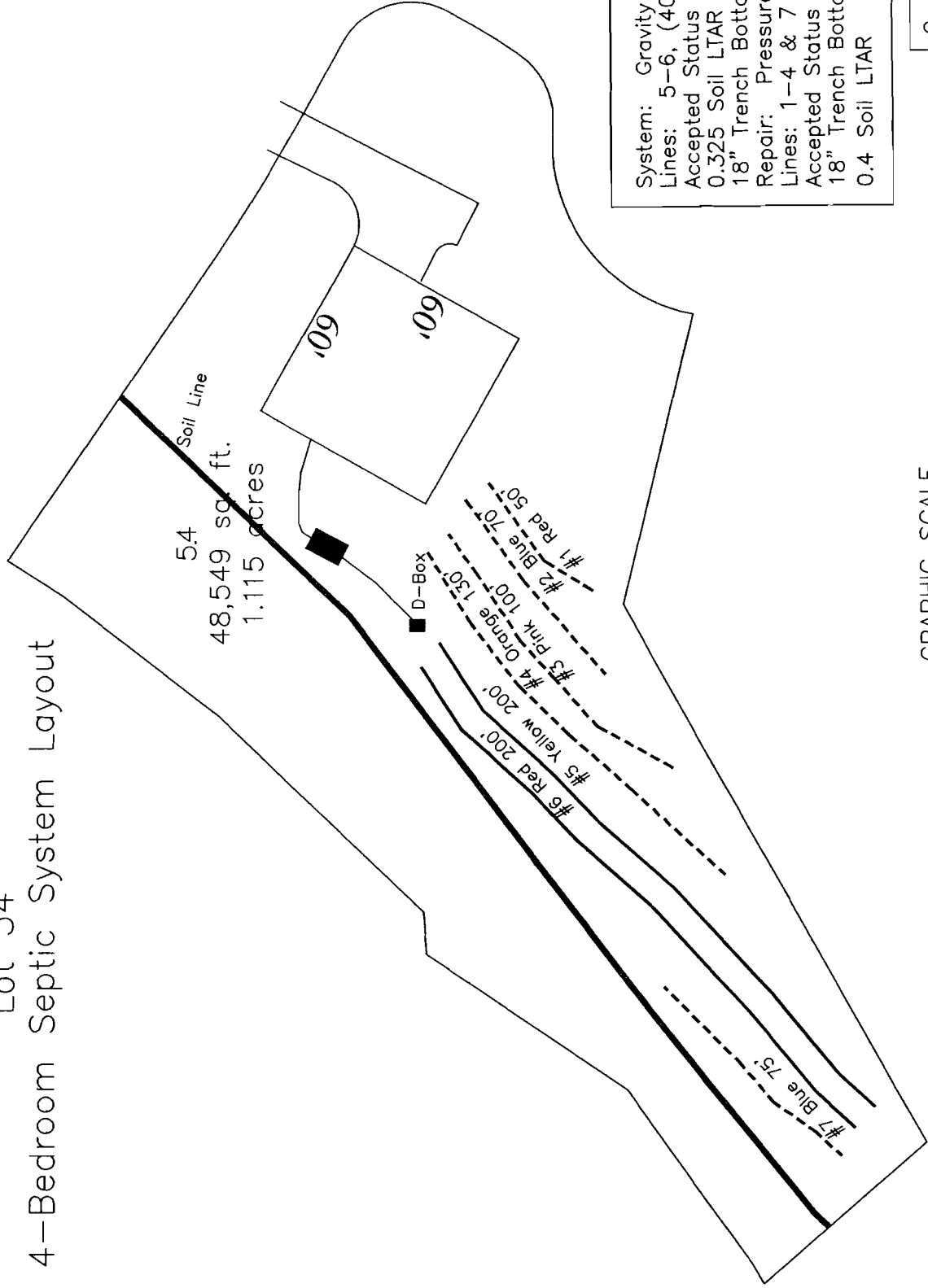
Distribution Method

Pressure Manifold

Pressure Manifold

Notes: TBM 1 is top of stake on property line.
TBM 2 is top of cut tree on property line

Legend Oaks Subdivision Phase III Lot 54 4-Bedroom Septic System Layout



System: Gravity to D-Box
Lines: 5-6, (400')
Accepted Status System
0.325 Soil LTAR
18" Trench Bottom
Repair: Pressure Manifold
Lines: 1-4 & 7 (400')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

GRAPHIC SCALE
1" = 50'



Site LTAR must be confirmed by local Health Department.
CCSC does not guarantee any permits or approvals.
Soil observations & septic system layouts based on opinions
of CCSC personnel during field evaluations in April/May 2009.

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Legend Oaks, Phase III

Lot #54

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		7.7		100.0		<u>in field</u>	<u>installation</u>
INST. 1			107.7				
1	Red			2.5	105.2	53	50
2	Blue			4.1	103.6	71	70
3	Pink			5.7	102	100	90
4	Orange			7.8	99.9	135	130
5	Yellow			10.2	97.5	200	200
6	Red			12.5	95.2	200	200
7	Blue			14.0	93.7	75	60
					Total	834	800

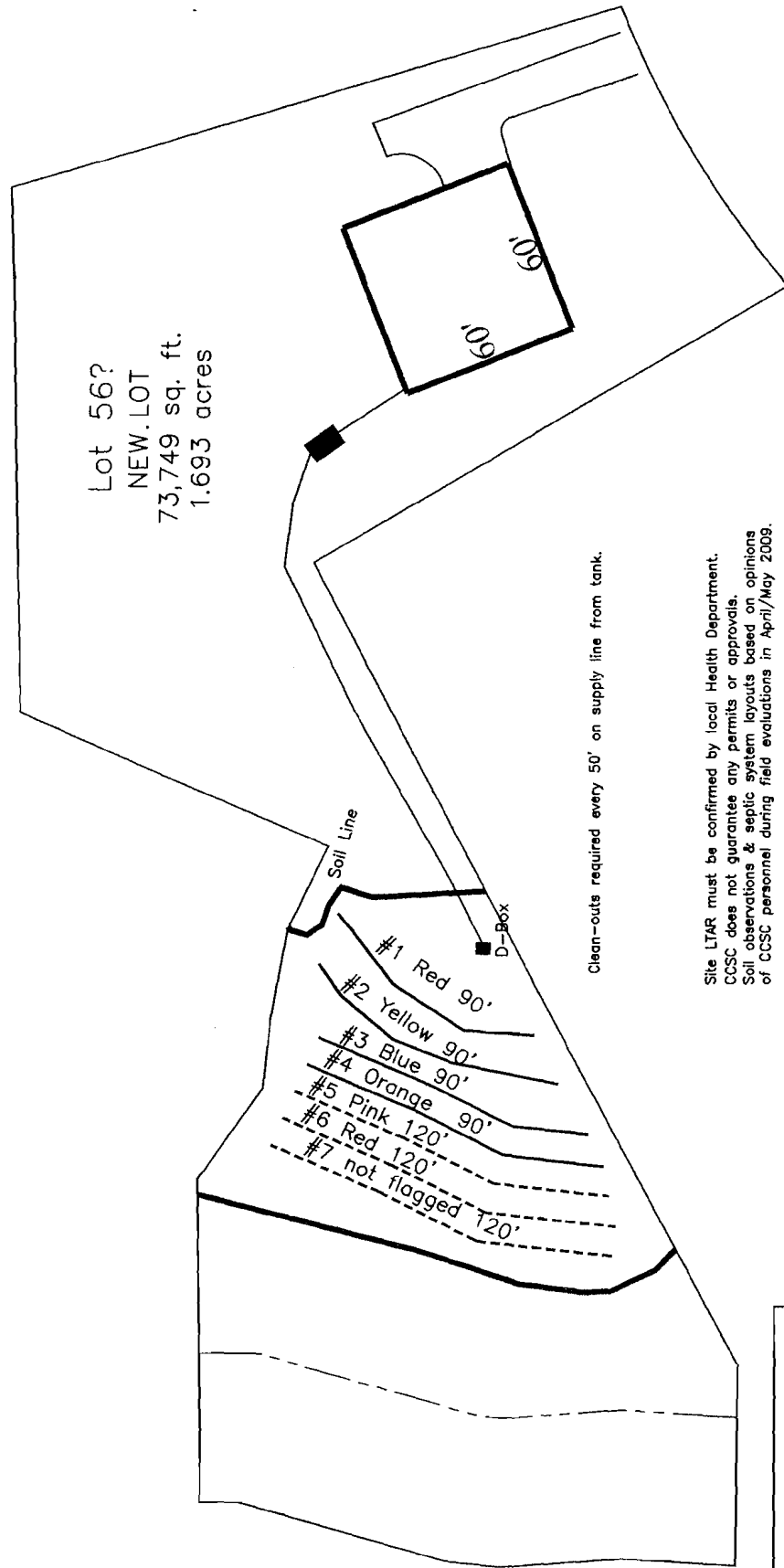
	<u>System</u>	<u>Repair</u>
	Lines 5-6	Lines 1-4,7
System Type	Accepted Status System	Accepted Status System
	EZ-FLOW	EZ-FLOW
Suggested Soil LTAR	0.325	0.325
(gal/day/ft2)		
System Installation LTAR	0.30	0.29
Total Line Length	400	400
Square Footage	1200	1200
Proposed Trench Bottom	18"	18"

Distribution Method Gravity to D-Box Pressure Manifold

Notes: TBM is cut tree on P-line

Legend Oaks Subdivision Phase III

New lot (56?) 4-Bedroom Septic System Layout



GRAPHIC SCALE
1" = 60'



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System: Gravity to D-Box
Lines: 1-4, (360')
Accepted Status System
0.4 Soil LTAR
18" Trench Bottom
Repair: Gravity to D-Box
Lines: 5-7, (360')
Accepted Status System
18" Trench Bottom
0.4 Soil LTAR

Legend Oaks, Phase III

New Lot

4-Bedroom Home (480 gal./day)

<u>LINE #</u>	<u>COLOR</u>	<u>BS</u>	<u>HI</u>	<u>FS</u>	<u>ELEVATION</u>	<u>LINE LENGTH</u>	<u>Design Length</u>
TBM		8.8		100.0		<u>in field</u>	<u>installation</u>
INST. 1			108.8				
1	Red			1.8	107	100	90
2	Yellow			3.5	105.3	105	90
3	Blue			5	103.8	115	90
4	Orange			6.7	102.1	115	90
5	Pink			8.7	100.1	130	120
6	Red			11.4	97.4	145	120
7	not flagged			14.1	94.7	145	120
					Total	855	720

	<u>System</u>	<u>Repair</u>
	Lines 1-4	Lines 5-7
System Type	Accepted Status System	Accepted Status System
	EZ-FLOW	EZ-FLOW
Suggested Soil LTAR	0.40	0.4
(gal/day/ft ²)		
System Installation LTAR	0.35	0.35
Total Line Length	360	360
Square Footage	1080	1080
Proposed Trench Bottom	18"	18"
Distribution Method	Gravity to D-Box	Gravity to D-Box
Notes:	TBM is cut tree below line #9	