

01/16/04	REVISED AS PER COMMENTS
02/19/04	REVISED AS PER COMMENTS
04/27/04	REVISED AS PER COMMENTS
05/24/04	REVISED AS PER COMMENTS

**GRADING PLAN
HIDDEN CREEK**

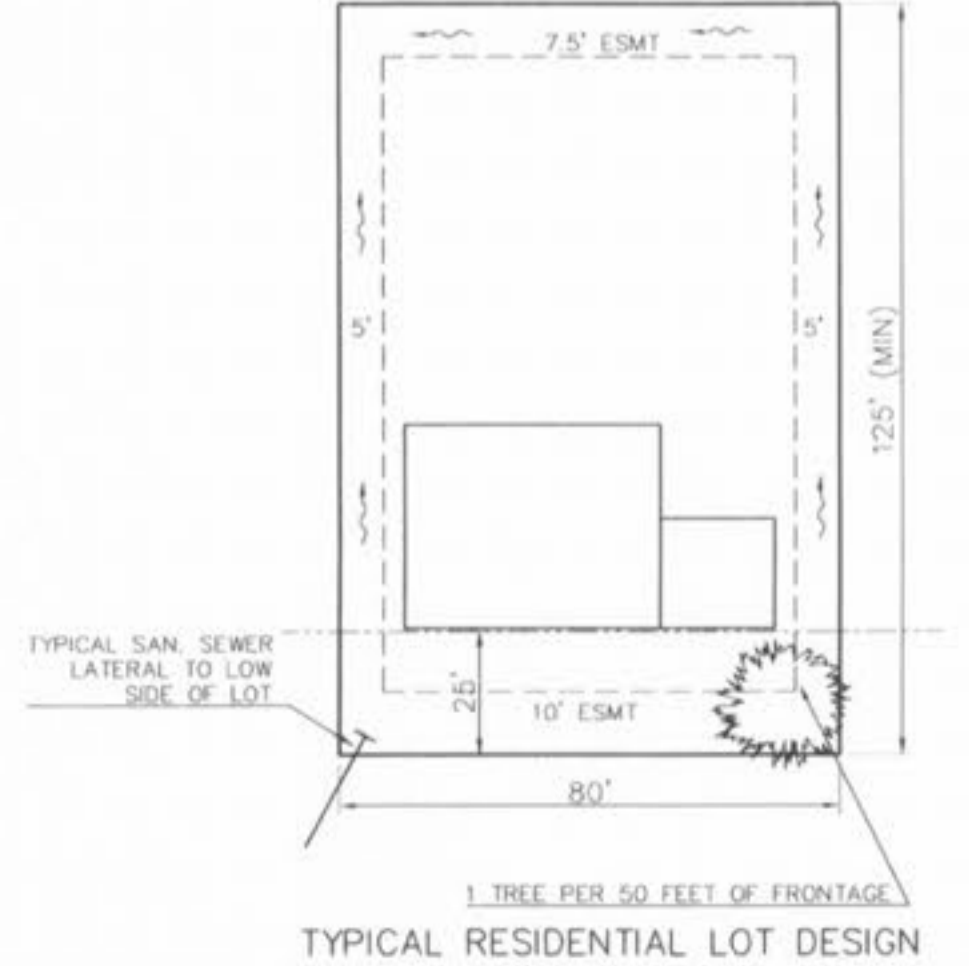
ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448



ORDER NO. 02-0162-01
DATE 12/15/03
PH2-5

O'FALLON FILE
NUMBER 1002.02

THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE OR NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.



**REAR YARD SWALE
TYPICAL CROSS SECTION**
N.T.S.

Max Discharge (Q) = 4.00 cfs
Max Velocity (V) = 4.00 fpa
n = 0.030 (grass)
Max Side Slope = 3:1

Slope (%)	Discharge (cfs)	Velocity (ft/sec)	Depth (ft)
0.5	4.00	1.89	0.84
1.0	4.00	2.46	0.74
2.0	4.00	3.12	0.65
3.0	4.00	3.71	0.60
4.0	3.54	4.00	0.54
5.0	2.51	4.00	0.46
6.0	1.91	4.00	0.40
7.0	1.52	4.00	0.36
8.0	1.24	4.00	0.32
9.0	1.04	4.00	0.29
10.0	0.89	4.00	0.24

Rear yard swales must be lined with seed and mulch. If grass cannot be adequately established then rear yard swales must be sodded. If they cannot be adequately sodded then commercial control blankets must be used.

MIN DEPTH 1'

1% minimum

