APPENDIX E

EXISTING VACANT LOTS IN RECORDED SUBDIVISIONS

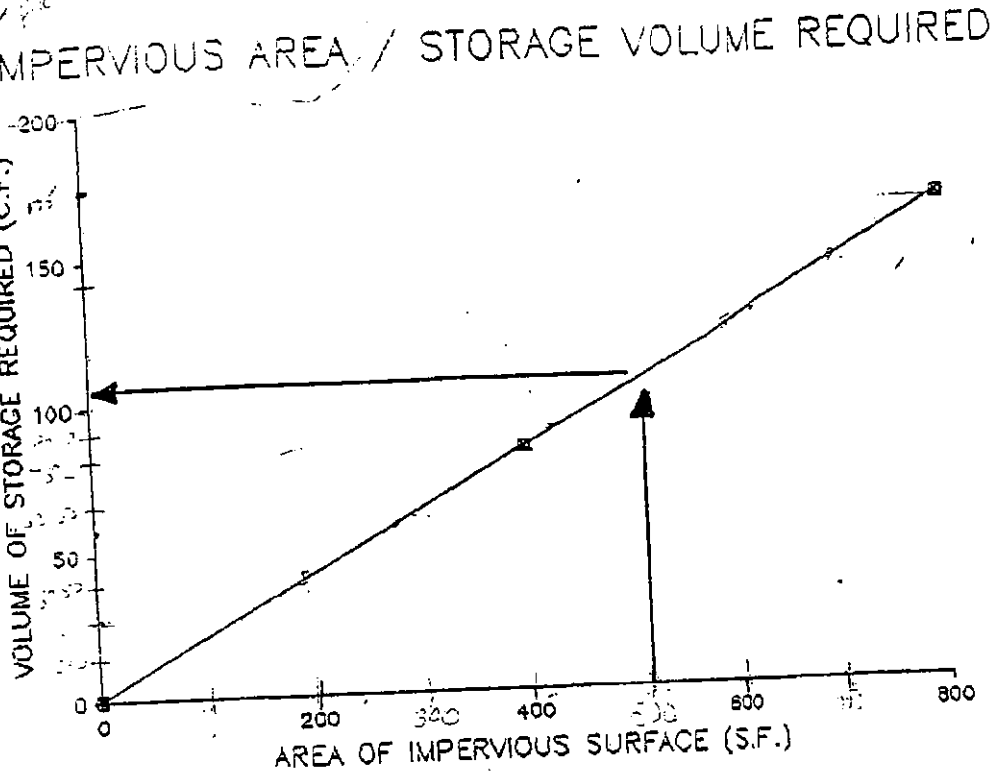
METHOD OF STORAGE COMPUTATION&EXAMPLE LOT LAYOUTS

Due to the second home nature of many subdivisions in the Tobyhanna Creek Watershed, there are several large subdivisions with many vacant lots where they are not just yet sold, or were bought with a future building date in mind. An analysis was performed to see what impact a total build-out of these lots would have on storm water runoff. It was found that by building on the vacant lots in recorded subdivisions that flows could increase upwards to 134 cubic feet per second for particular subwatersheds. It is therefore advantages, however, not mandatory, to control the runoff from the undeveloped individual lots. A procedure for municipalities to adopt to control this runoff is attached as APPENDIX E of the Model Ordinance.

Should the municipalities not implement the existing vacant lot provisions in Appendix E, then Appendix E shall be excluded from the ordinance.

FIGURE 1

STORAGE VOLUME REQUIRED FOR INDIVIDUAL LOTS IN RECORDED SUBDIVISIONS WERE VACANT AT THE TIME OF PLAN ADOPTION



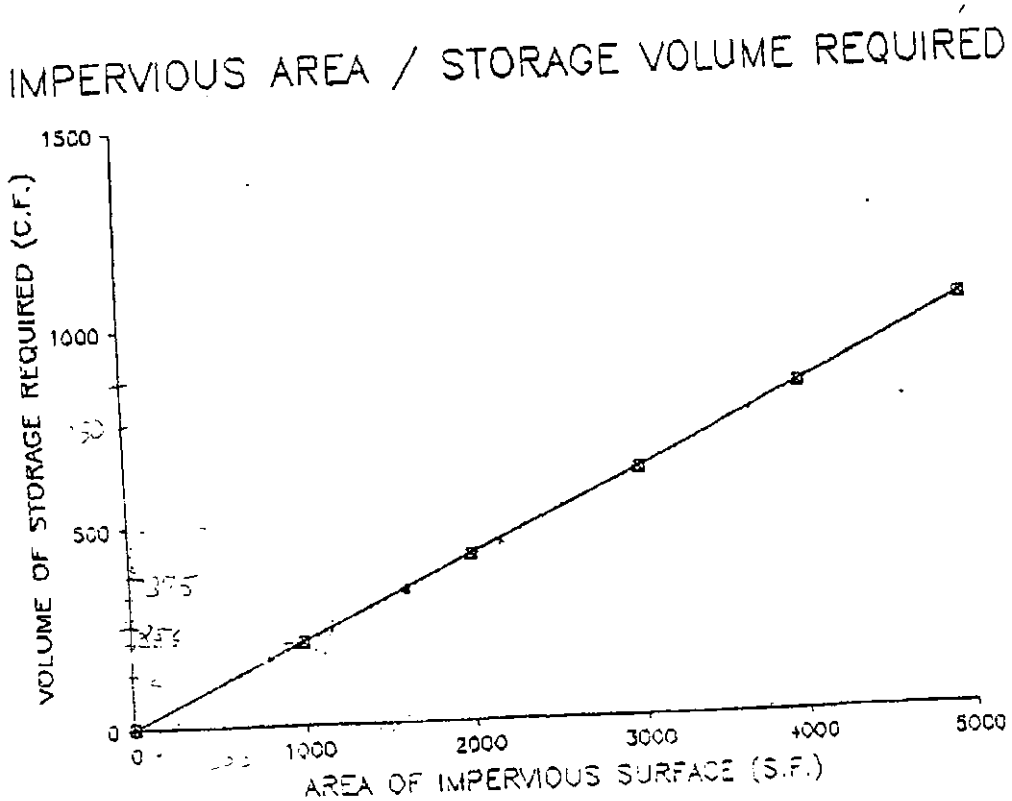


TABLE 6

STORAGE VOLUME (CUBIC FEET) PER LINEAL FOOT OF STORAGE TRENCH WITH #3A AGGREGATE OR #4 AGGREGATE

DEPTH OF TRENCH FT.	TRENCH WIDTH (FT.)			
	2	3	4	5
1	0.7	1.1	1.4	1.8
2	1.4	2.1	2.8	3.5
3	2.1	3.2	4.2	5.3
4	2.8	4.2	5.6	7.0
5	3.5	5.3	7.0	8.8
6	4.2	6.3	8.4	10.5
7	4.9	7.4	9.8	12.2

TABLE 7

STORAGE VOLUME (CUBIC FEET) PER LINEAL FOOT OF PERFORATED PIPE

PIPE DIAMETER (IN.)	VOLUME IN CF/FT. OF PIPE
4	0.1
6	0.2
8	0.35
10	0.5
12	0.8
15	1.2
18	1.8
24	3.1

STEP 1.

Determine Impervious Surfaces

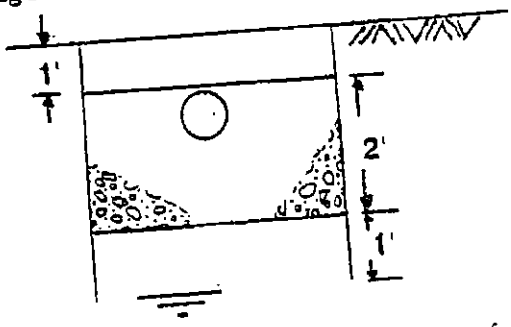
House Roof 1	12 X 48 =	576
House Roof 2	12 X 48 =	576
Deck***	12 X 18 =	216
Deck	4 X 24 =	96
Drive	12 X 50 =	600
Garage	12 X 12 =	144
		2,208 S.F.

STEP 2.

Required storage volume from Figure 1 = 505 cubic feet

STEP 3.

Refer to soil log for septic system. Indicates mottling at 48 inches. The percolation rate is 96 minutes/inches. Therefore, from Figure 2, choose seepage trenches for each rain gutter outlet.



STEP 4.

Determine length of trench required - use 6-inch perforated pipe.

GUTTER OUTLET	REQ'D VOL.(C.F.) FROM FIGURE 1	DEPTH OF AGGREGATE FT.	TRENCH WIDTH FT.
1	118	2	3
2	118	2	3
3	30	2	3

GUTTER OUTLET	VOLUME OF STORAGE* PER FT. OF TRENCH	VOLUME OF STORAGE** PER FT. OF PIPE	TOTAL	TOTAL LENGTH OF TRENCH REQ'D (FT.)
1	2.1	0.2	2.3	118/2.3 = 51
2	2.1	0.2	2.3	118/2.3 = 51
3	2.1	0.2	2.3	30/2.3 = 13

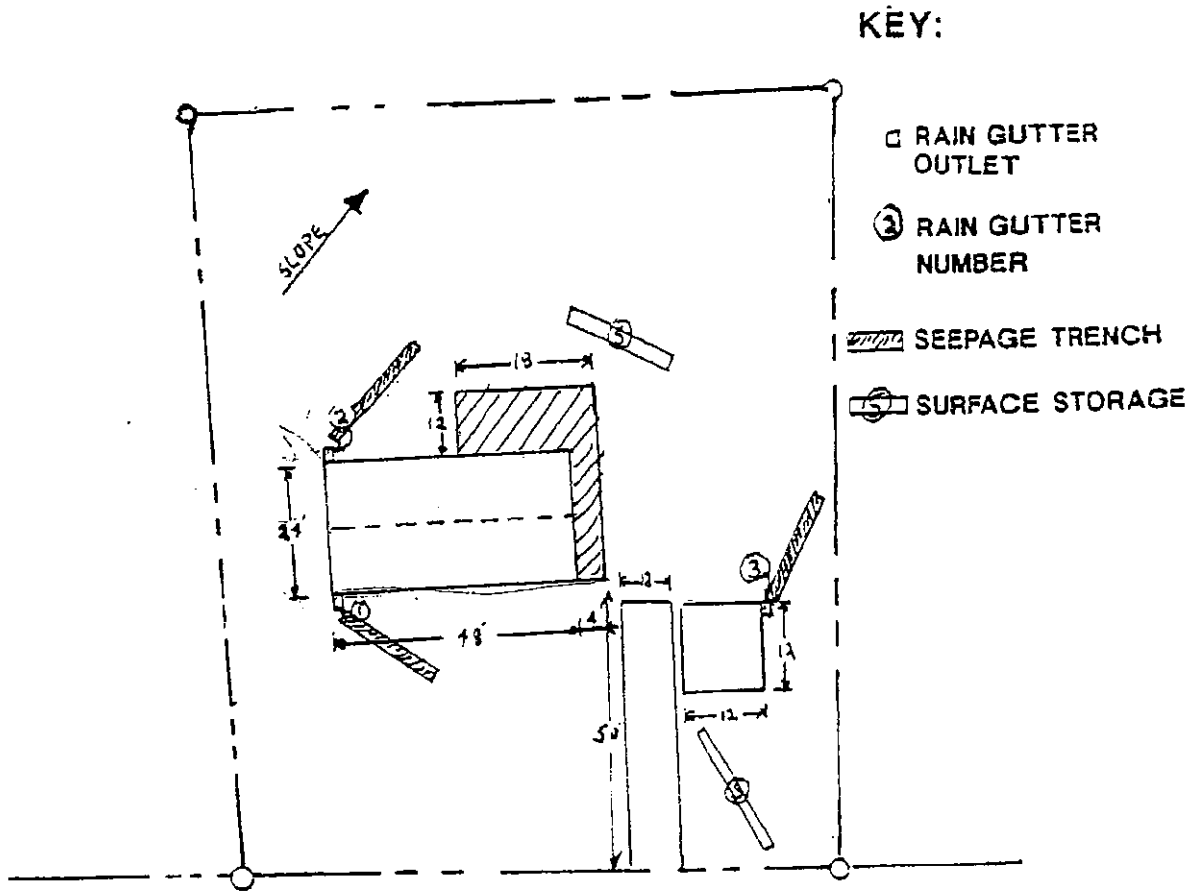
* From Table 5
** From Table 6
*** Wood decks with spacing between boards are exempt from the calculations.

STEP 5.

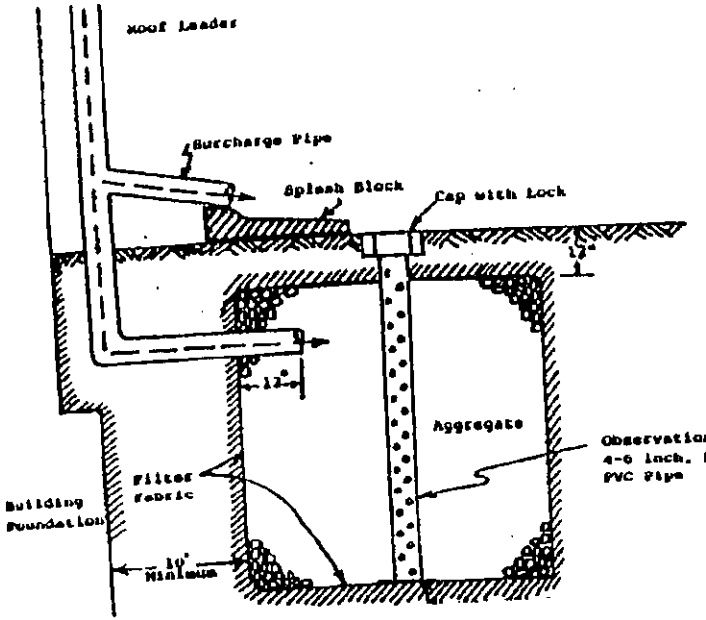
Determine remainder of impervious surfaces which requires detention and required storage volume from Figure 2.

Deck	312 S.F.	912 S.F. = 135 C.F. of Storage
Drive	600 S.F.	
	912 S.F.	

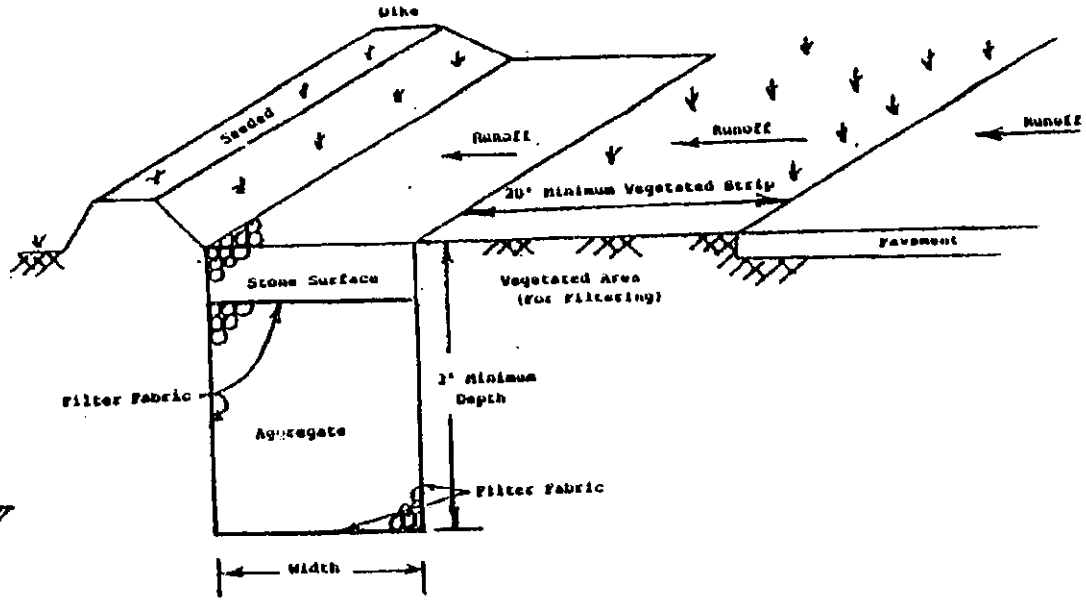
Use trench 6' wide by 1' deep x 31 feet long or 2 - 6' x 1' x 16' trenches in locations shown on plan.



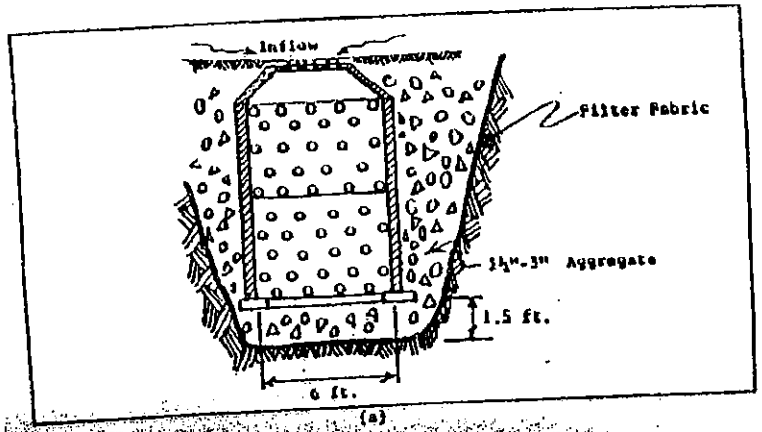
TYPICAL LOT LAYOUT



Typical Dry Well Cross Section



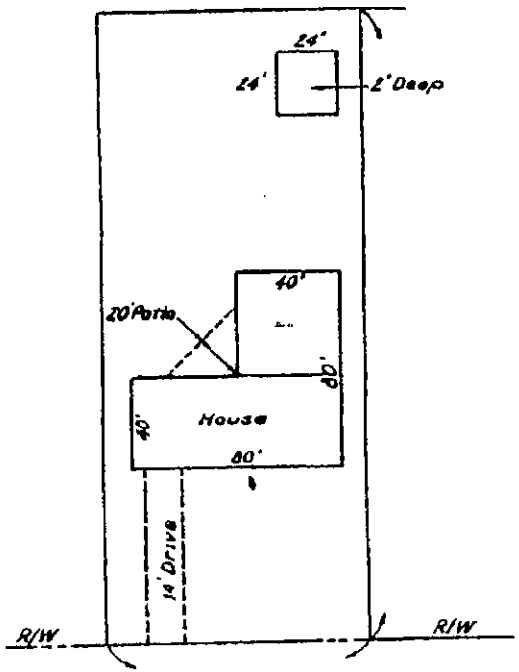
Typical Section of Infiltration Trenches
Modified after Frederick Co., MD. [1979]



(a)

Source: Modified from Sullivan (1981)

ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO.3
POND STORAGE



ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO. 4
UNDERGROUND TANK STORAGE