ORDINANCE # 798

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF NORTH PEKIN, ILLINOIS, THAT IN ORDER TO PROTECT THE CITIZENS AND PROPERTY OF THE VILLAGE OF NORTH PEKIN, ILLINOIS, THAT ORDINANCE TITLE 10, CHAPTER 19, SECTION 13, STORM WATER RETENTION REQUIREMENTS FOR COMMERCIAL USE, IS HEREBY ADOPTED AND CREATED AS FOLLOWS:

10-19-13: STORM WATER RETENTION REQUIREMENTS FOR COMMERCIAL USE

(A) It shall be the responsibility of the owner, his agent or his contractor to assure that any new development of previously undeveloped land and any improvement of land for commercial use shall meet all storm water retention requirements as set forth in (C) below. "Commercial use" as used herein shall include any development other than single-family residential.

(B) In particular, but not by way of limitation, it shall be the responsibility of the owner, his agent or his contractor to assure that any new contract shall meet all storm water retention requirement as set forth in (C) below.

(C) Storm water retention requirements shall be established by the Village Engineer based on the Rational Method for estimating peak runoff rate for a specified design storm. The allowable runoff rate before development, Q_a, and the peak runoff rate after development, Q_p, shall be determined. The required storage volume shall be the difference in runoff rates (Q_p - Q_a) times the duration of the design storm. The owner, his agent, or his contractor shall propose a storm water retention facility which provides the required storage volume and which restricts the rate of storm water discharge from the retention facility such that the maximum discharge rate shall not exceed the allowable runoff rate Q_a. Developments which are large, complex, or extra sensitive to drainage consideration may require a more sophisticated analysis. The Village maintains the right to determine adequacy of storm water detention.

(D) It shall be the responsibility of the owner to obtain from the Village Engineer, prior to construction of a new development or improvement of land for commercial use, written approval certifying that the storm water retention facility meets requirements. No building permit shall issue for construction of any improvement of land for commercial use until such certification has been obtained from the Village Engineer.

(E) Any individual, firm, association or corporation violating any of the provisions of this Ordinance shall, upon conviction, be fined not less than One Hundred Dollars ($100.00) norm ore than Five Hundred Dollars ($500.00). Each day that a violation is allowed to exist shall constitute a separate offense.

This Ordinance shall be in full force and effect ten (10) days following its publication as required by law.

PASSED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF NORTH PEKIN, TAZEWELL COUNTY, ILLINOIS, IN REGULAR AND PUBLIC SESSION THIS 21st DAY OF February, 2006.

APPROVED:

Barbara Kaiser

Mayor Barbara Kaiser

Passed: 2/21/06
Approved: 2/21/06
Published: 2/21/06

B. Kaiser _____
D. Johnson Aye
S. Flowers Aye
T. Cooper Aye
E. Wamsley Absent
S. Garrison Aye
P. Hutchinson Aye

ATTESTED:

Judith A. Johnson

Village Clerk

EXAMINED AND APPROVED:

Village Attorney

METHOD OF COMPUTING STORM WATER RETENTION
AND ALLOWABLE DISCHARGE

RATIONAL METHOD:

Q = C.I.A.

Q = Resultant runoff rate in cubic feet per second (c.f.s.)
C = Coefficient of runoff:

before development (agriculture) = 0.25
grass = 0.30
rooftops and paved areas = 0.95
R-1 residential = 0.50

I = Intensity of rainfall = 4" per hour for 15 minute duration for design storm
A = Area in acres

1. Determine area of entire site (in acres), A

2. Determine area of paved ground and rooftops (in acres), A1

3. Determine area of grass (in acres), A2

4. Determine allowable runoff rate, Q_a, as follows:

$$Q_a = 0.35 \times 4 \times A \text{ (c.f.s.)}$$

5. To find if retention is needed, compute the following:

A. $Q_1 = 0.95 \times 4 \times A1$

B. $Q_2 = 0.30 \times 4 \times A2$

C. $Q_p = Q_1 \div Q_2$ (Runoff Rate after Development) c.f.s.

If Q_p rate is greater than Q_a, retention is required.

6. Determine required retention volume, V, as follows:

$$V = (Q_p - Q_a) \times 15 \text{ minutes} \times 60 \text{ seconds/minute (cubic feet)}$$