ORDINANCE AMENDING BUILDING CODE REGULATIONS SET FORTH IN TITLE 4 OF THE VILLAGE CODE

WHEREAS, the Village of Barrington Hills (hereinafter the "Village") is a duly organized and existing Illinois home rule municipality pursuant to the Illinois Municipal Code, 65 ILCS 5/1-1-1 *et seq.*; and

WHEREAS, the Village of Barrington Hills is authorized and empowered, under the Municipal Code and the Code of Ordinances of the Village of Barrington Hills, to adopt regulations applicable to building within the Village; and

WHEREAS, in conformity with this authorization, the Village has previously adopted regulation pertinent to building within the Village, and has codified those regulations in Title 4 Building Regulations; and

WHEREAS, staff has recently reviewed the regulations set forth in Title 4 Building Regulations and has recommended that Title 4 be substantially revised as set forth in Exhibit A, attached hereto and incorporated herein; and

WHEREAS, the Village President and Board of Trustees have reviewed the amendments recommended and based on the recommendations of staff, deem it prudent and necessary to adopt the amendments; which will amend Title 4, Building Regulations as set forth in the Village Code.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Barrington Hills, Cook, Kane, Lake and McHenry Counties, Illinois, as a home rule municipality, the following:

SECTION ONE: That the forgoing recitals are hereby incorporated by reference as if fully set forth herein.

SECTION TWO: That Building Regulations codified as Title 4 – Building Regulations be amended as set forth in Exhibit A, to be effective in accordance with Illinois law.

SECTION THREE: That all other ordinances and resolutions, or parts thereof, in conflict with the provisions of this Ordinance, are, to the extent of such conflict, expressly repealed.

SECTION FOUR: That this Ordinance shall be in full force and effect January 1, 2019 after its passage, approval, and publication in pamphlet form as provided by law.

Ayes: 6 Nays: 1 Absent: 0

PASSED AND APPROVED by the President and Board of Trustees of the Village of Barrington Hills, this 27th day of August, 2018.

APPROVED:

Village President

ATTEST:

Village Clerk

e. Drop boxes shall be arranged in series, so that each trench is completely filled to the full depth of the gravel or to the top of the chamber in a chamber system before effluent flows to the succeeding trench.

f. The drop boxes connecting the trenches shall have watertight joints and direct connections to the distribution lines in adjacent trenches. Drop boxes, tight joint "T's" or forty five degree (45°) ells shall be used to connect adjacent trenches.

g. Where the drop box trench connects with the higher trench, it shall not be deeper than the top of the gravel in the higher trench or the top of the higher chamber in a chamber system. Drop boxes shall rest on undisturbed earth and the backfill shall be carefully tamped.

h. The invert of the first drop box line shall be at least six inches (6") lower than the invert of the septic tank or aerobic treatment plant outlet. (See section 4-2-7-1, appendix J of this chapter.)

i. All other construction features of the serial distribution field shall comply with subsections (H)1 through (H)8 of this section.

7. Seepage Beds: The total bottom area of the seepage bed shall be one and one-half ($1^1/_2$) times the area specified in section 4-2-7-1, appendix G of this chapter. Construction features shall conform to subsections (H)1 through (H)7 of this section as illustrated in section 4-2-7-1, appendix K of this chapter. Distribution lines shall be spaced no farther than six feet (6') center to center and shall be equally spaced. Lines adjacent to the bed sidewalls shall be three feet (3') from the bed sidewall.

8. Curtain Drain: When required by drainage conditions as identified in subsection (D) of this section, a curtain drain system shall be installed upslope from the seepage field to intercept and accept the lateral movement of surface or ground water and discharge the water below the field in a manner that shall not cause a nuisance.

9. Location and Design: Curtain drains shall not be within fifteen feet (15') of a seepage field line and the final ten feet (10') must be a single piece. Curtain drain trenches shall be six inches (6") to twelve inches (12") wide and thirty six inches (36") to forty eight inches (48") deep or to the top of the seasonal high water table. The trench may hold a clay or plastic piping as well as gravel having a minimum particle size of one and one-half inches ($1^1/_2$").

(I) Buried Sand Filters:

1. General: Sand filters shall be only used in a repair situation. The effluent shall be discharged in accordance with the requirements of this section.

2. Design Requirements:

a. Size: Buried sand filters shall be sized as follows:

(1) Residential: The sand filter surface area for residential systems shall be two hundred (200) square feet per bedroom. Where a sand filter is used in conjunction with an aerobic treatment plant, the size of the sand filter may be reduced by thirty percent (30%).

(2) Nonresidential: The surface area of the sand filter shall be designed for one square foot per gallon per day for waste with an influent biochemical oxygen demand (BOD) not to exceed three hundred (300) parts per million (ppm). A sand filter with flows of eight hundred one (801) gallons or more per

day shall have the influent distributed into the sand filter by a dosing system designed according to subsection (I)2i of this section. The sand filter shall be dosed four (4) times per day with equal flows not to exceed the design capacity of the filter.

b. Sand Filter Media: The depth of filter media shall be a minimum of twenty four inches (24"). The sand shall have an effective size of 0.5 to 2.0 millimeters, and a uniformity coefficient of less than 3.5. It shall be washed and free of clay and silt.

c. Alternate Media: Other filter media may be used in a subsurface filter provided it meets the criteria of subsection (I)2b of this section and complies with the following requirements:

(1) Is chemically and biologically inert.

(2) Will support biological growth.

(3) Has a hardness equivalent to, or greater than, that of sand.

d. Filter Media Cover: The filter media shall be covered, as illustrated in section 4-2-7-1, appendix L of this chapter, with a minimum of ten inches (10") of washed gravel or washed stone having a particle size ranging from three-fourths inch ($^3/_4$") minimum to one and one-half inches ($1^1/_2$") maximum. The gravel or stone shall be covered by straw, newspaper, or untreated building paper or other pervious material prior to backfilling. Tar paper, plastic, or other impervious material prior to backfilling. Tar paper, plastic, or other impervious material shall not be used between the filter media and the earth backfill. A minimum of twelve inches (12") earth cover shall be provided.

e. Distribution and Collection Lines: The distribution and collection lines shall conform to the requirements for distribution lines as given in subsection (H)7 of this section. The distribution lines shall be level, shall be located three feet (3') from sidewalls, and shall be spaced on three foot (3') centers. They shall be solid pipe to the filter media. The collection lines shall have a slope of six inches (6") per one hundred feet (100') and one collection line shall be provided for each ten feet (10') of width or fraction thereof. The upper end of the collection line shall be capped.

f. Bedding Material: The bedding material for the collection lines shall be placed on the excavation before placement of the collection lines as shown in section 4-2-7-1, appendix L of this chapter and shall consist of a minimum of two inches (2") of washed gravel or washed stone having a particle size ranging from three-fourths inches ($^3/_4$") minimum to one and one-half inches ($1^1/_2$") maximum.

g. Venting: A vent shall be placed on the downstream end of the distribution lines as shown in section 4-2-7-1, appendix L of this chapter. The vent shall extend above the ground surface and be screened with one-fourth inch ($^1/_4$") mesh screen or equivalent.

h. Drainage: Surface drainage shall be directed away from the filter. If conditions prohibit gravity drainage of the filter effluent, a pumping chamber shall be installed. The chamber shall be constructed of a watertight, noncorrosive material and shall be provided with a removable lid, which will serve as an access for inspection, cleaning, and general maintenance. An access port or extension collar shall extend at least six inches (6") above the ground surface, and the access shall have a minimum dimension of twelve inches (12"). The chamber shall have sufficient depth and the pump controls shall be set in a manner to allow for complete drainage of the filter to eliminate any ponding of effluent within the filter.

i. Distribution of Effluent: Buried sand filters designed to treat nonresidential property with flows of eight hundred one (801) gallons or more per day shall have the effluent distributed into the sand filter by pumping. The pumps, pumping chamber, and ancillary equipment shall comply with the following:

(1) Dosing Volume: The dosing volume is the amount of liquid pumped or siphoned during each cycle minus the amount that drains back from the sand filter after each dose.

(2) Pump Selection: The pump shall be submersible pump designed for corrosive liquids.

(3) Siphons: Siphons can be designed where elevation exists between the sand filter and the siphon chamber. However, the siphon shall be designed to deliver the same flow rate at the same head at the distribution system as a pump system. The distribution system consisting of manifold and laterals shall be designed so that it will drain after each siphon. This shall be accomplished by placing the manifold above the laterals.

(J) Aerobic Treatment Plants:

1. General: After the effective date of this code, aerobic treatment plants shall comply with the requirements of the National Sanitation Foundation (NSF) standard number 40, individual aerobic wastewater treatment, May 1983, and shall bear the NSF seal. A copy of a list of approved aerobic treatment plants may be obtained from the building officer.

2. Class II Effluent: Aerobic treatment systems listed by NSF for class II effluent (BOD5-60 mg/l and suspended solids 100 mg/l) shall discharge to one of the following:

a. A subsurface seepage system designed and constructed in accordance with the requirements of subsection (H) of this section.

b. A sand filter designed and constructed in accordance with the requirements of subsection (I) of this section.

3. Class I Effluent: Aerobic treatment plants listed by NSF for class I effluent (BOD5-20 mg/l and suspended solids 40 mg/l) shall discharge to a subsurface seepage field designed and constructed to be at least two-thirds ($^{2}/_{3}$) the size listed in section 4-2-7-1, appendix G of this chapter as obtained from soil investigation.

4. Sizing: Aerobic treatment plants which are listed by NSF as class I and rated at five hundred (500) gallons per day may be allowed for the treatment of domestic sewage from dwellings having a maximum of three (3) bedrooms.

5. Installation: All components of aerobic treatment plants shall be installed at the time of the original installation. If there are practical difficulties, then a solid end cap shall be securely placed over the end of the discharge line until the system can be completed, to prevent a violation of subsection (D)7 of this section.

6. Access: Access to aerobic treatment plants shall be adequate to allow maintenance and service of all components within the plant.

7. Operation Permit: Upon the installation of an approved aerobic treatment plant, the property owner shall secure an operation permit from the building officer at a fee to be established by the village board as a record and notice of the installation. The permit shall be in a form containing all pertinent

information as to construction, installation and operation of the aerobic treatment plant. A copy of the permit shall be filed with the village and the Illinois department of public health and the county in which the plant is situated. This permit shall be annually renewed on the anniversary date of the installation for as long as an aerobic treatment plant is used in the private sewage disposal system for the dwelling. Failure to obtain or renew the permit shall constitute a violation of this title.

(K) Maintenance of Private Sewage Disposal Systems:

1. After January 1, 2014, as a condition of receiving a building permit to install a new private sewage disposal system or repair or renovate an existing system, the property owner shall sign the permit acknowledging that they are aware of and accept the responsibility to service and maintain the private sewage disposal system in accordance with village requirements.

2. For systems installed and permitted after January 1, 2014, the property owner shall maintain all maintenance records on forms provided or approved by the Illinois department of public health and make records available upon request of the village. These records shall be transferred from owner to owner. Records shall be kept for the life of the system.

3. After January 1, 2014, private sewage disposal systems installed and permitted under this section are required to be maintained and serviced to ensure proper operation in accordance with the following:

a. Septic tank to a subsurface seepage system or septic tank followed by a sand filter discharging to a subsurface seepage system.

(1) Private sewage disposal system septic tanks serving residential properties shall be evaluated prior to or within three (3) years after the date of installation of the system. The system may be evaluated by the homeowner, a private sewage disposal system installation contractor, a licensed environmental health practitioner, an Illinois licensed professional engineer, a representative of the Illinois department of public health, or an agent of the Illinois department of public health. The evaluation shall determine whether the tanks and all of the components of the private sewage disposal system have layers of scum and settled solids greater than thirty three percent (33%) of the liquid capacity of the tank. If the layers of scum and settled solids are greater than thirty three percent (33%), the tanks and compartments shall be pumped out and maintenance shall be performed. After the first evaluation, the system shall be evaluated a minimum of once every five (5) years. Depending on the system's use, the tanks and compartments may need to be evaluated and pumped more frequently.

(2) Private sewage disposal system septic tanks serving nonresidential property shall be evaluated within three (3) years after the date of installation of the system. The system may be evaluated by a private sewage disposal system installation contractor, a licensed environmental health practitioner, an Illinois licensed professional engineer, a representative of the department, or an agent of the department or local health department. The evaluation shall determine whether the tanks and all of the compartments of the private sewage disposal system have layers of scum and settled solids greater than thirty three percent (33%) of the liquid capacity of the tank. If the layers of scum and settled solids are greater than thirty three percent (33%), the tanks and compartments shall be pumped out and maintenance shall be performed. After the first evaluation, the system shall be evaluated at minimum once every three (3) years. Depending on the system's use, the tanks and compartments may need to be evaluated and pumped more frequently.

b. An aerobic treatment unit (ATU) requires evaluation and maintenance at least once every six (6) months. The system may be evaluated by a private sewage disposal system installation contractor,

a licensed environmental health practitioner, an Illinois licensed professional engineer, a representative of the Illinois department of public health, or an agent of the Illinois department of public health. The homeowner of an ATU may conduct the inspection and maintenance as defined within the act, but the inspection and maintenance shall be performed per the manufacturer's requirements to assure proper operation. If the required inspections and maintenance are not performed, the system is in violation of the act and this section.

c. Buried sand filters require an evaluation to determine whether the tanks and all of the compartments of the private sewage disposal system have layers of scum and settled solids greater than thirty three percent (33%) of the liquid capacity of the tank. If the layers of scum and settled solids are greater than thirty three percent (33%), the tanks and compartments shall be pumped out and maintenance shall be performed. The system shall be evaluated a minimum of once every year. The system may be evaluated by a private sewage disposal system installation contractor, a licensed environmental health practitioner, an Illinois licensed professional engineer, a representative of the Illinois department of public health, or an agent of the Illinois department of public health. Depending on the system's use, the tanks and compartments may need to be evaluated and pumped more frequently.

4. A failure to properly operate, maintain, and have routine service conducted on a private sewage disposal system is a violation of this title.

(L) Swimming Pool Wastewater:

1. General: Wastewater generated from the operation of a swimming pool includes clear wastes, such as drainage from the pool proper, deck drainage, and perimeter overflow system drainage; and turbid wastes, such as filter wash and backwash water.

2. Approved Treatment and Disposal: Wastewater from swimming pools may not be discharged to a private sewage disposal system receiving domestic sewage. It shall be disposed of in the following manner:

a. Clear water wastes may be discharged directly to storm sewers, surface drainageways or to the ground surface without additional treatment. Such drainage shall not result in nuisance conditions including, but not limited to, offensive odor, stagnant wet area or a breeding environment for insects.

b. Wash or backwash water from an approved treatment system of swimming pool wastewater may be discharged to natural drainage areas, storm sewers, seepage pits, or to the ground surface. Diatomaceous earth filter wash or backwash water may be discharged to one of the above after treatment consisting of one of the following approved systems:

(1) Passing the wastewater through a separation tank designed for removal of the diatomaceous earth and suspended solids.

(2) Settling the wastewater in a tank which is capable of holding the volume of one backwash. "One backwash" is defined as the amount of water generated from the backwash of the filters for a period of two (2) minutes for diatomaceous earth filters, at the required backwash flow rate. The tank shall be dewatered after settling and prior to subsequent backwashes. Settled sludge shall be periodically removed to prevent flushing of solids during backwashing. (See section 4-2-7-1, appendix M of this chapter.)

(3) A separate private sewage disposal system designed and constructed in accordance with the applicable provisions of this section.

(M) Servicing, Cleaning, Transporting And Disposing Of Wastes From Private Sewage Disposal Systems:

1. General: The collection, storage, transportation, and disposal of all septage shall be handled in accordance with this subsection (M).

2. Truck Identification: The name under which the business is conducted and the address of each contractor shall be painted on each side of every pumper truck operated by him. The letters shall be easily legible and at least three inches (3") high.

3. Equipment Inspection: Equipment shall be subject to inspection and approval by a representative of the department of the village at any reasonable time; and upon request, shall be available for inspection at a designated location.

4. Vehicle Construction And Equipment: Each vehicle used for collection and transportation of waste shall be equipped with a leak-proof and tightly sealed tank for septage hauling. The interior and exterior sections of all portable containers, pumps, hoses, tools, or other implements which have been contaminated shall be rinsed clean after each use and the rinsings shall be disposed of such that no health hazard or nuisance results. Trucks and tanks shall comply with the following:

a. The vehicle shall be equipped with either a vacuum pump or other type of pump which is self-priming and will not allow any seepage from the diaphragm or other packing glands.

b. The discharge nozzle will be located so that there is no flow or drip onto any portion of the truck.

c. The discharge nozzle shall be capped when not in use.

5. Seepage Disposal Site: Each licensed contractor engaged in septage disposal shall file with the department, and each year amend, a statement describing the location and methods of disposal of septage. Methods of septage disposal approved by the department are as follows:

a. Discharge to A Municipal Sanitary Sewer System: Discharge to a municipal sanitary sewer system is approved when the municipality has approval from the Illinois environmental protection agency to receive septage from private sewage disposal systems; and the contractor has written approval from the municipality to discharge septage into the system.

b. Application to Agricultural Land: Septage may be applied to agricultural land provided the following criteria are met:

(1) Depth: The depth to the groundwater table or to fractured limestone formations is at least four feet (4') below the ground surface.

(2) Disposal: The septage is disposed of in the following manner:

A. It originates from private sewage disposal systems which treat only domestic sewage;

B. It is not applied to land which has been saturated by rainfall during the twenty four (24) hour period preceding the intended application time;

C. It is not applied to land with water ponded upon it;

D. It is not applied to land within one hundred fifty feet (150') of wells, homes, or other water supplies, ponds, or streams;

E. It is not applied to land having greater than five percent (5%) slope;

F. It is not applied to land that is intended to grow root vegetables, or other low growing fruits and vegetables which may be eaten raw;

G. It is applied at a rate which does not exceed five thousand (5,000) gallons of septage per acre per month;

H. Where it is determined by the department or the village that a nuisance condition exists, then the septage shall be incorporated into the soil.

(3) Discharge To Sludge Lagoons Or Sludge Drying Beds: Discharge to a sludge lagoon or drying bed must be approved by the Illinois environmental protection agency, or the owner/operator of the lagoon or drying bed must have a permit from the Illinois environmental protection agency to receive septage from the contractor. If the contractor is going to construct a sludge lagoon or drying bed, a permit will be necessary from the Illinois environmental protection agency to construct and operate the proposed facility.

(4) Discharge To An Incinerator Device: Discharge of septage to an incinerator must be approved by the Illinois environmental protection agency or the owner/operator of the incinerator must have a permit from the Illinois environmental protection agency to receive septage from the contractor.

(5) Discharge To A Sanitary Landfill: Discharge to a sanitary landfill must be approved by the Illinois environmental protection agency or the owner/operator of the landfill must have a permit from the Illinois environmental protection agency to receive the septage from the contractor.

6. Other Wastes: Automotive grease, oil, grit, or toxic wastes, or any waste other than septage shall not be applied to agricultural land.

(N) Minimum Performance Standards For Private Sewage Disposal Contractors:

1. General: All private sewage disposal contractors working within the corporate limits of the village shall be licensed by the Illinois department of public health pursuant to 225 Illinois Compiled Statutes 225/4. All notification forms, plans and percolation test results, and copies thereof, shall bear the seal of a registered professional engineer. The affixing of a registered professional engineer's seal to any work which has not been done by, or under the professional supervision, of the registered professional engineer is a violation of the Illinois professional engineering act and the village shall cause the act to be enforced.

a. Installers of Private Sewage Disposal Systems: Licensed contractors who install or repair private sewage disposal systems within the corporate limits of the village shall:

(1) Obtain a permit from the building officer prior to the commencement of a new system or repair. The application for the permit shall be in writing on forms provided for this purpose and shall include at a minimum: name of the property owner, legal description of the property, existing and proposed contours, location of any lakes, streams, surface and subsurface drainageways within one hundred

feet (100') of the system, water table elevation, location of any well and potable water lines, locations and results of percolation tests, design calculations and location and dimension of the system (including reserve seepage field).

(2) Construct or repair the private sewage disposal system in accordance with this section.

(3) Comply with the inspection requirements in subsection 4-2-8(C) of this chapter.

b. Pumpers and Tank Cleaners: Contractors who pump, service and clean septic tanks and dispose of their contents shall:

(1) Notify the department or the village of the site utilized for disposal, and of any changes in the site of disposal.

(2) Comply with all requirements of subsection (M) of this section.

(3) Provide an annual estimate of the total gallons of septage disposed of at each site. This estimate shall be given at the time application is made for license renewal.

2. Nonperformance Of Private Sewage Disposal Services: Licensed private sewage disposal contractors who have not installed, modified, or renovated any systems or have not serviced or cleaned any private sewage disposal systems during the preceding year, shall so indicate on the renewal application to the department at the time application is made for license renewal.

3. Enforcement: Failure to comply with the minimum performance standards of this section, shall constitute sufficient grounds for suspension, revocation or refusal to renew a license. The department's "Rules And Regulations Of Practice And Procedure In Administrative Hearings" (77 Ill. adm. code 100) will govern such actions.

(O) Appendices: The appendices attached hereto are incorporated herein.

(P) Prerequisite To Building Permit: The building officer shall be provided with adequate proof of compliance with this section prior to the issuance of a building permit.

(Q) Enforcement: The board of health shall administer and enforce this section to the extent not preempted by the Illinois department of public health. (Ord. 13-16, 10-28-2013)

4-2-7-1: APPENDICES:

APPENDIX A
QUANTITY OF SEWAGE FLOWS

Type Of Establishment	Gallons Per Person Per Day (Unless Otherwise

		Noted)
Permanent dwellings:		
	Board houses	50
	Boarding schools	150
	Institutions, other than hospitals (per bed)	125
	Mobile homes, individual (per bedroom)	200
	Mobile home parks (per space)	400
	Multi-family dwellings (per bedroom)	150
	Rooming houses	40
	Single-family dwellings (per bedroom)	200[1]
Travel and recreational facilities:		
	Airports, railway stations, bus stations	5
	Campgrounds:	
		Comfort station with toilets and showers (per space)	35
		Comfort station with toilets, no showers (per space)	25
		Day camps, no meals	25
		Travel trailer parks with water and sewer hookups (per space)	50
	Cottages and/or small dwellings with seasonal company (per bedroom)	150
	Country clubs (per member)	25
	Highway rest areas	5
	Hotels and motels (per bed)	50
	Picnic parks	5
	Places for public assembly	5
	Swimming pools and bathing beaches	10

Theaters:	
Movie (per seat)	5
Drive-in (per car space)	10
Commercial, industrial, and miscellaneous:	
Churches (per seat):	3
With kitchens, add (per meal)	3
Construction camps or sites, factories:	
With toilets and showers	35
With toilets, no showers	20
Hospitals (per bed)	250
Laundries (per customer)	50
Offices and other day workers	15
Restaurants, with toilets (per meal)	10
Restaurants, without toilets (per meal)	3
Additional for bars and cocktail lounges	2
Schools:	
With cafeterias and showers	25
With cafeterias or showers	20
Without cafeterias or showers	15
Service stations (per vehicle served)	10
Shopping centers (per 1,000 square feet floor area)	250
Stores (per toilet room)	400

Note:
1. See appendices F and G of this section.

APPENDIX B
APPROVED PLASTIC PIPE MATERIALS

Material	Symbol	Standard
Acrylonitrile-butadiene-styrene	ABS	ASTM DI788-78a
Polyethylene (corrugated and perforated)	PE	ASTM F405-77a
Polyethylene (smooth wall and perforated)	PE	ASTM D3350-80
Polyvinylchloride	PVC	ASTM DI784-78
Polyvinylchloride (schedule 40, 80 and 120)	PVC	ASTM DI784-78 DI785-76
Styrene-rubber	SR	ASTM D2852-77
Styrene-rubber (perforated)	SR	ASTM D3298-74

APPENDIX C
LIST OF APPROVED PLASTIC PIPE FOR SEPTIC USES

X - Indicates approved use

Types Of Pipes	ASTM Standard	Building Sewer[1]	Sewer Lines[1]	All Distribution Lines
		5 ft. from building to septic/aeration tank to 6 ft. beyond tank or distribution box	Additional treatment facilities, and sand filter collection and distribution lines	
ABS (sewer pipe)	D2751-05	X[2]	X[2]	X[2]
ABS (DWV schedule 40)	D2661-06; F628-06	X	X	X
PVC (type PSM)	D3034-06	X[2]	X[2]	X[2]
PVC (DMV schedule 40)	D2665-07; F891-04	X	X	X
PVC	D2729-03		X	X

(STD/perforated)				
PE (corrugated or perforated)	F405-05[3]			X

Notes:
1. Commingling of plastic materials shall not be done except through use of proper adapters (see adopted Illinois state plumbing code at section 4-2-9 of this chapter). When building sewer is of a type of material that is different from building drain, proper transition fittings shall be used.
2. Pipe shall not have a standard dimension ratio (SDR) greater than 35.
3. Heavy duty only.

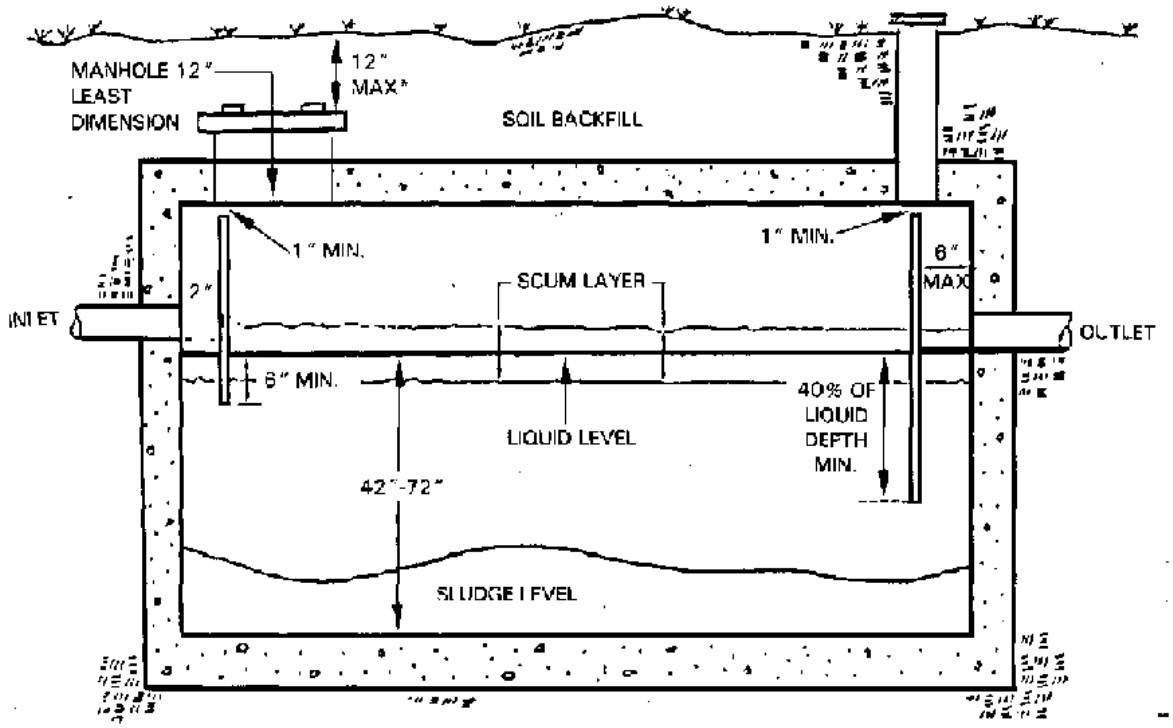
APPENDIX D
LOCATION OF COMPONENTS OF PRIVATE DISPOSAL SYSTEMS[1]

Component Part Of System	Minimum Distance Allowable From[1]					
	Well Or Suction Line From Pump To Well	**Water Supply Line[3] (Pressure)**	**Lake, Stream, Or Other Body Of Water[4]**	**Dwelling**	**Property Line Or ROW[5]**	**Field Drain Tile**
Building sewer[2]	50'	10'	50'	-	-	-
Septic tank/aerobic treatment plant	50'	10'	50'	10'	10'	-
Distribution box	75'	10'	50'	10'	10'	-
Subsurface seepage system (except chamber systems)	75'	25'	50'	20'	10'	10'
Sand filter	75'	25'	50'	20'	10'	10'
Chamber system	100'	25'	100'	20'	10'	25'
Class V injection wells[6]	200'[7]	25'	25'	10'	5'	10'

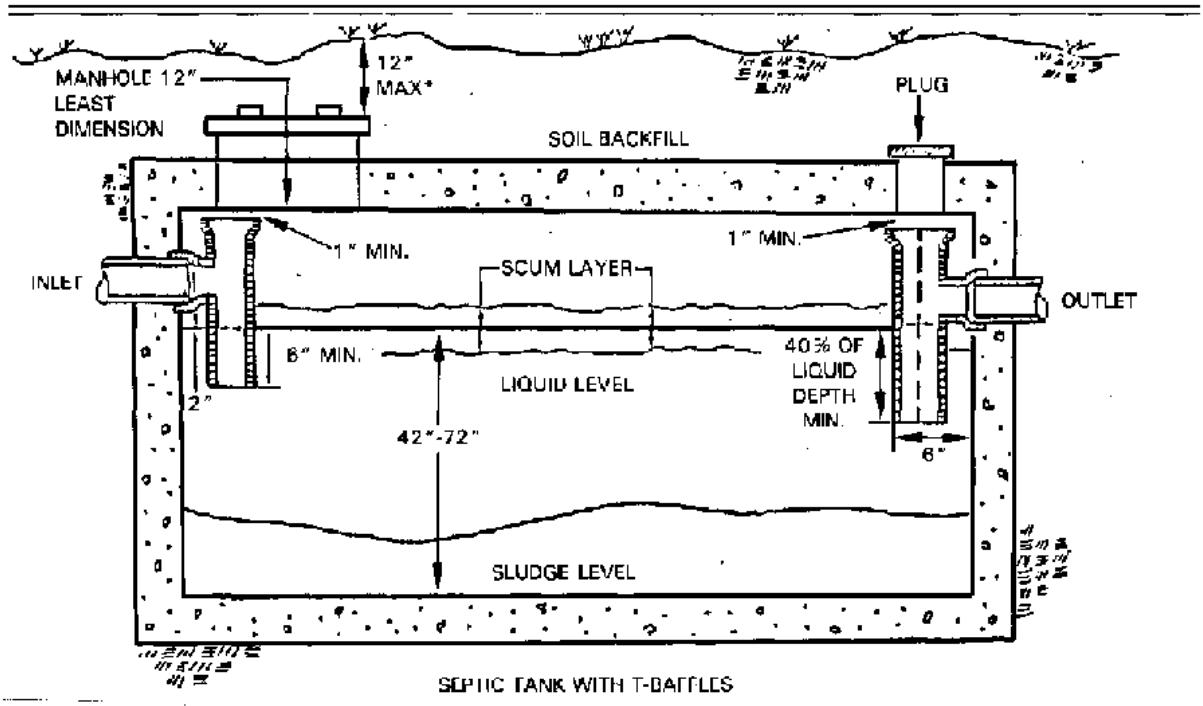
Notes:
1. These distances have been determined for use in clay, silt, and loam soils only. The minimum distances required for the use of a private sewage disposal in sand or other types of soil shall be determined and approved by the village when the soil in question can provide equal or greater treatment of the sewage. See subsection (D) of this section for additional requirements.
2. The building sewer may be located to within 10 feet of a well or suction line from the pump to the well when cast iron pipe with mechanical joints or schedule 40 PVC pipe with watertight joints is used for the building sewer.
3. See subsection (D)4 of this section for details on the separation of sewer and water lines.
4. The minimum distance allowable from an in ground swimming pool is 25 feet. See subsection (L) of this section for additional requirements.
5. Whichever line is most restrictive.
6. Class V injection wells are defined in Illinois pollution control board rules. They are typically a shallow well used to place fluids directly below the land surface. See e.g., 35 Illinois administrative code 704.105, 704.106, and 704.280.
7. A lesser separation distance may be obtained with approval or a waiver from the IEPA.

APPENDIX

E



SEPT C TANK WITH SLIP-IN BAFFLES



SEPTIC TANK WITH T-BAFFLES

** See subsection 4-2-7(F)2 of this chapter.*

APPENDIX F
MINIMUM VOLUMES FOR SEPTIC
TANKS SERVING RESIDENTIAL UNITS

Number Of Bedrooms	Minimum Liquid Capacity Of Tank In Gallons
2 or less	1,250
3	1,500
4	2,000
5	2,500
6	3,000
7 or more	3,500

MINIMUM VOLUMES FOR SEPTIC TANKS
SERVING NONRESIDENTIAL UNITS

Sewage Flow In Gallons Per Day	Minimum Liquid Capacity Of Tanks In Gallons
Less than 500	750
500 to less than 1,500	1.5 (gallons per day)
1,500 to less than 14,500	1,125 + 0.75 (gallons per day)
14,500 or greater	Consult village

APPENDIX G
SUBSURFACE SEEPAGE SYSTEM SIZE DETERMINATION

Exhibit A - Loading Rates In Square Feet Per Bedroom And Gallons/Square Feet/Day

NR = Subsurface disposal system not recommended.

Design Group	**Soil Group (Most Limiting Layer)**	**Minimum Separation To Limiting Layer**	**Permeability Range**	**Size Of System**	
				Residential Reg. Absorption	**Institutional/ Commercial Allowable**

				(Sq. Ft. Per Bedroom)	Rate (GPD/Sq. Ft.)
I	1A	NR	Very rapid	NR	NR
II	2A; 2B; 2K	3 ft.	Rapid	200	1.0
III	3B; 3K	3 ft.	High moderately rapid	220	0.91
IV	3A; 3L; 4D; 4K	3 ft.	Low moderately rapid	240	0.84
V	4A; 4B; 4H; 4L; 5D	3 ft.	Very high moderate	265	0.75
VI	4F; 4M; 5B	3 ft.	High moderate	290	0.69
VII	4N; 5A; 5C; 5H; 5K; 6D	2 ft.	Moderate	325	0.62
VIII	4O; 5E; 5I; 5L; 6A; 6B; 6E; 6H; 6K	2 ft.	Low moderate	385	0.52
IX	5F; 5M; 6C; 6L; 7D; 7F	2 ft.	High moderately slow	445	0.45
X	5G; 6F; 6I; 7E; 7C; 7H	2 ft.	Low moderately slow	500	0.40
XI	5N; 6G; 6J; 6M; 7F; 7I	2 ft.	Slow	740	0.27
XII	7G; 7J; 7L; 8E; 8I	2 ft.	Very slow	1,000	0.20
XII	5O; 6N; 6O; 7M; 7N; 7O; 8J; 8M; 8O	NR	NR	NR	0.00
XIII	9	Subsurface disposal not recommended			

Note: Limiting layers include fragipans; bedrock; compact glacial tills; seasonal high water table or other soil profile features that will materially affect the absorption of liquid from the disposal field.

Exhibit B - Key for Determining Sewage Loading Rates (Gallons/Square Foot/Day) [1]

Structure And Parent Material	Single Grain: Weak; Platy[2]	Granulary, Angular, And Subangular Blocky; Prismatic[8]									Structureless Or Massive				
		Loess; Outwash; Alluvium, Lacustrine						Till			Loess; Outwash; Alluvium, Lacustrine			Till[3]	
		Weak		Moderate; Strong		Strong		Moderate; Strong							
1. Fragmental; ext. or very gravelly sand	>1.00[4]	n/a[5]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2. Sand; loamy coarse sand; loamy sand; gravelly sand; gravelly loamy sand	1.00	1.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1.00	n/a	n/a	n/a	n/a
3. Fine sand; loamy fine sand;	0.84	0.91	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.91	0.84	n/a	n/a	n/a

coarse sandy loam															
4. Sandy loam; fine sandy loam; gravelly sandy loam; gravelly loam; gravelly silt loam	0.75	0.75	n/a	0.84	n/a	0.69	n/a	n/a	0.75	n/a	0.84	0.75	0.69	0.62	0.52
5. Loam; silt loam; very fine sandy loam; sandy clay loam; silt; very fine sand; loamy very fine sand; gravelly clay loam	0.62	0.69	0.62	0.75	0.52	0.45[6]	0.40[6]	0.62	0.52	n/a	0.62	0.52	0.45[6]	0.27[6]	N/R[7]
6.	0.5	0.	0.4	0.6	0.5	0.4	0.2	0.5	0.4	0.2	0.	0.4	0.2	N/	N/

Silty clay loam (<35 % c); clay loam (<35 % c)	2	52	5[6]	2	2	0	7	2	0[6]	7[6]	52	5[6]	7[6]	R	R
7. Silty clay loam (>35 % c); clay loam (>35 % c)	n/a	n/a	0.40[6]	0.45[6]	0.40[6]	0.27[6]	0.20[6]	0.40[6]	0.27[6]	0.20[6]	n/a	0.20[6]	N/R	N/R	N/R
8. Sandy clay; clay	n/a	n/a	n/a	n/a	0.20[6,9]	n/a	n/a	n/a	0.20[6,9]	n/a	n/a	n/a	N/R	N/R	N/R
9. Organics; fragic; lithic; paralithic	Soil properties have very severe limitations; subsurface disposal not recommended														

Notes:
1. Disturbed soils are highly variable and require special on site investigations.
2. Moderate or strong platy structures for the soil textures in groups 4, 5, and 6 have a loading rate of 0.40 g/sq.ft/d. Platy structure having firm or very firm consistency or caused by mechanical compaction has a loading rate of 0.0 g/sq. ft/d.
3. Basal glacial tills structured by geogenic processes have the same loading rates as structureless glacial till.
4. This soil group is estimated to have very rapid permeability and exceeds the maximum established rate in appendix G, exhibit A of this section.
5. n/a means not applicable.
6. These soil groups are estimated to have moderately slow to very slow permeability and are less than the minimum established rate in appendix G, exhibit A of this section.
7. N/R means not recommended. These soils have loading rates considered too low for conventional subsurface disposal.

8. In some areas, lacustrine material may have physical properties similar to glacial till and should be placed in the glacial till columns.
9. Nonswelling (1:1 lattice) clays formed in bedrock residuum have a loading rate of 0.27 g/sq.ft/d. Swelling (2:1 lattice) clays are not recommended for subsurface disposal.

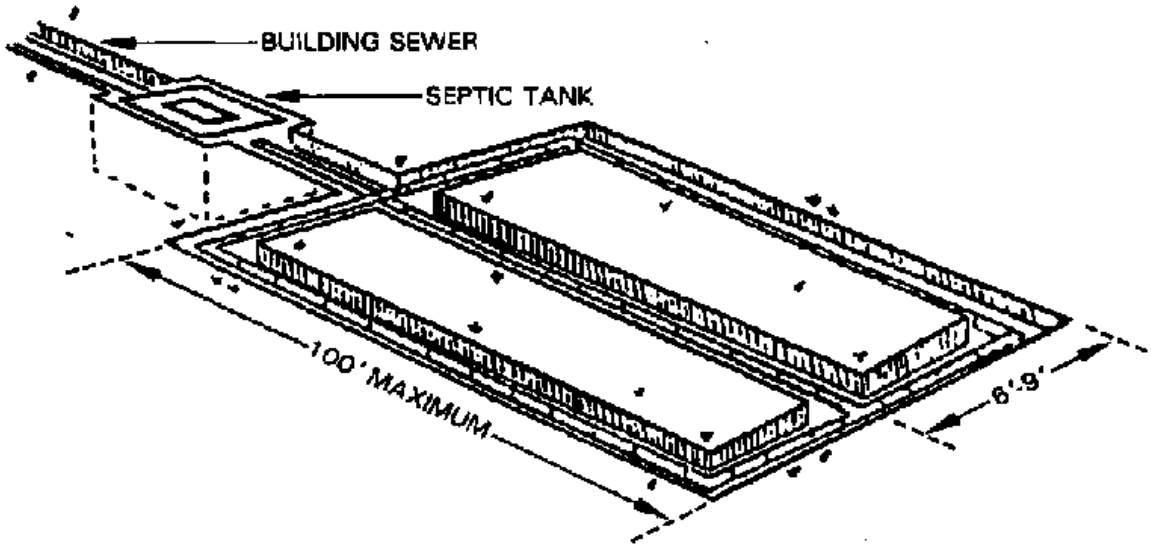
APPENDIX H

Standards For Seepage Field Construction	
Trench bottom, minimum width	8"
Trench bottom, maximum width	36"
Trench bottom, minimum depth	18"
Trench bottom, maximum depth	36"
Trench bottom, slope	Level
Distribution line, minimum diameter	4"
Distribution line, minimum earth cover	6"
Distribution line, maximum earth cover	24"
Distribution line, maximum slope	Level
Distribution line, maximum length	100'

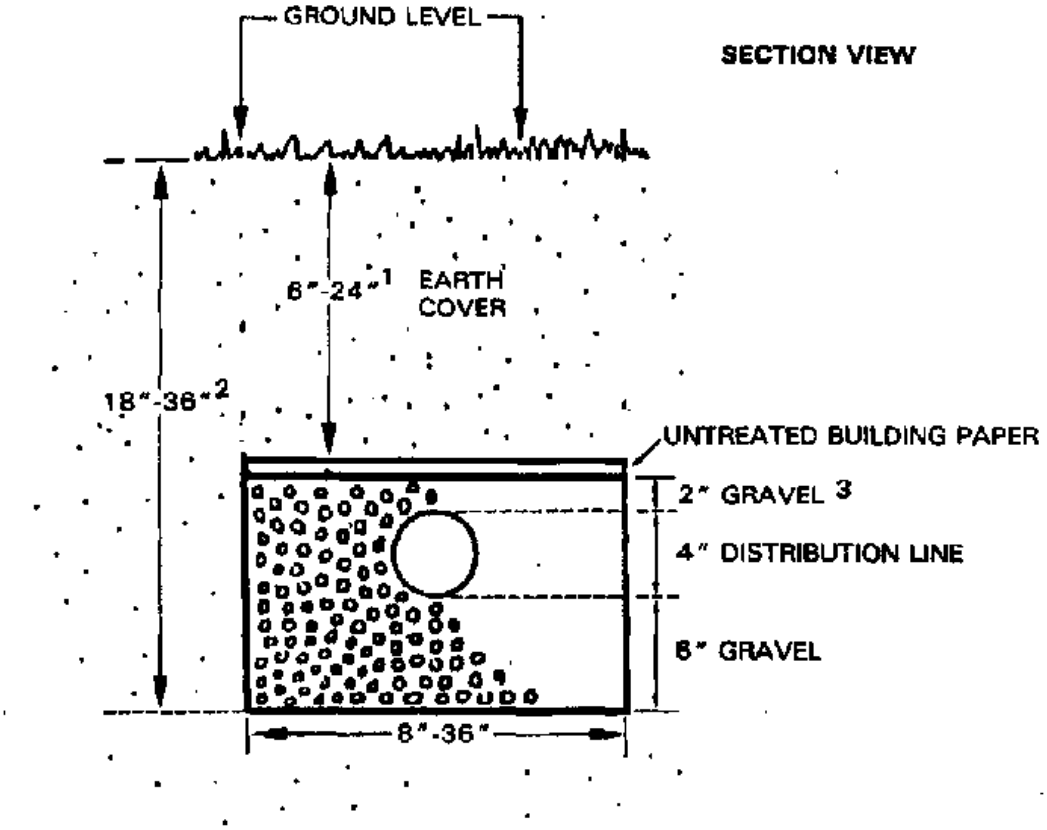
Size And Spacing For Seepage Field Construction		
Width Of Trench At Bottom	Minimum Center To Center Spacing Of Distribution Lines	Effective Absorption Area Per Linear Foot Of Trench
8"	6.0'	0 .67 sq. ft.
12"	6.0'	1 .0 sq. ft.
18"	6.0'	1 .5 sq. ft.
24"	6.0'	2 .0 sq. ft.
30"	7.5'	2 .5 sq. ft.
36"	9.0'	3 .0 sq. ft.

APPENDIX I

SEPTIC TANK AND SUBSURFACE SEEPAGE FIELD



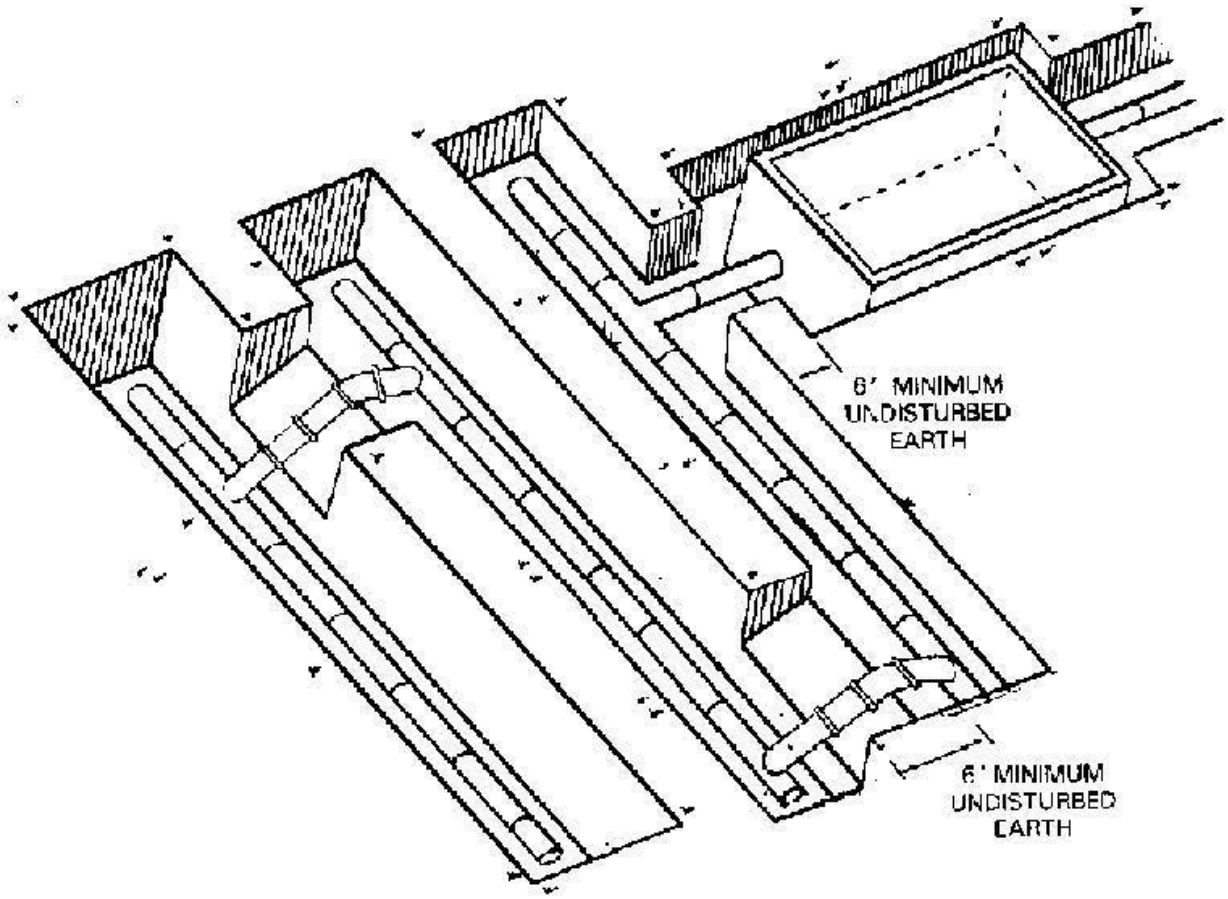
PLAN VIEW

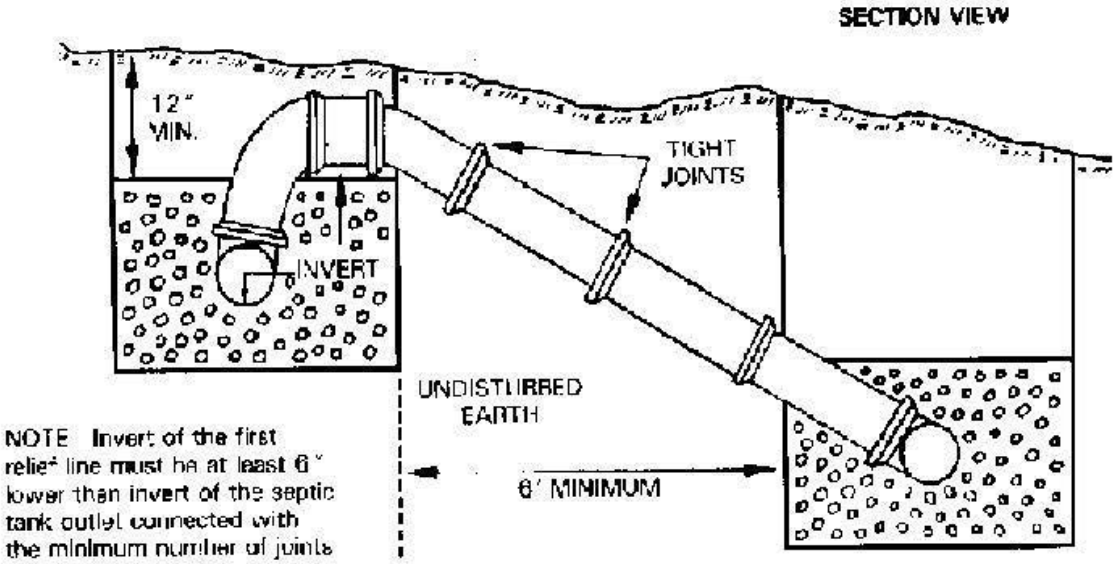


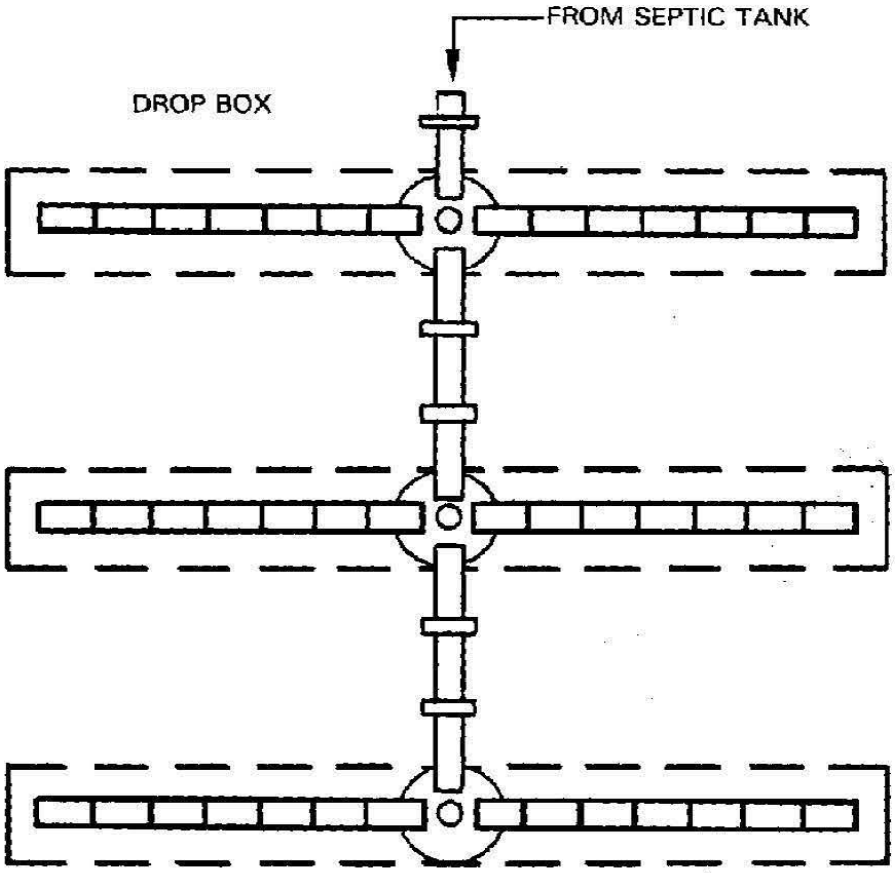
NOTES:

1. 12"-24" IS RECOMMENDED
2. 24" IS RECOMMENDED
3. 5" OR MORE IS RECOMMENDED

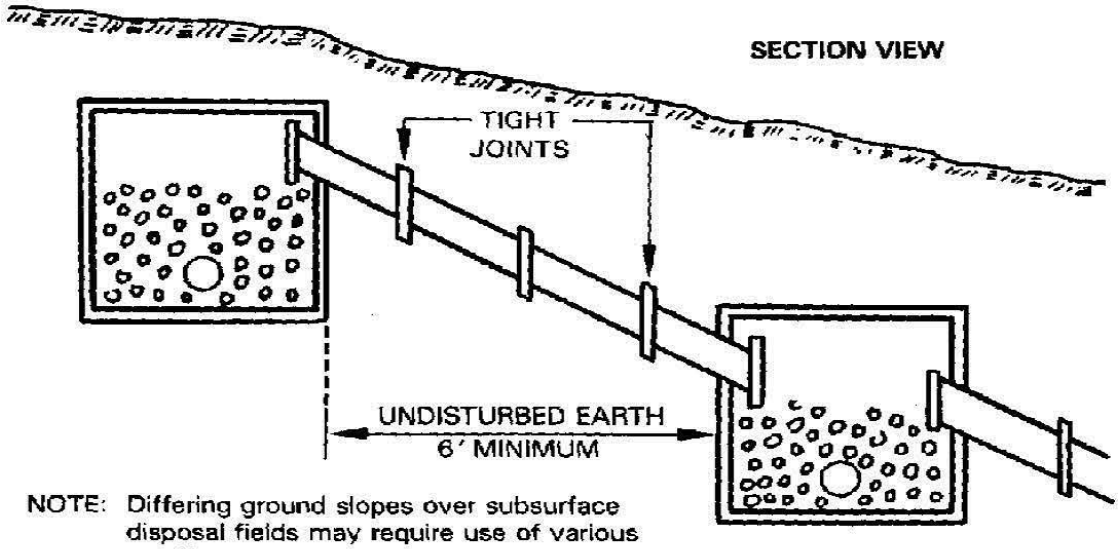
APPENDIX J
SERIAL DISTRIBUTION


6' MINIMUM
UNDISTURBED
EARTH
6' MINIMUM
UNDISTURBED
EARTH


SECTION VIEW
12"
MIN.
TIGHT
JOINTS
INVERT
UNDISTURBED
EARTH
6' MINIMUM
NOTE Invert of the first
relief line must be at least 6"
lower than invert of the septic
tank outlet connected with
the minimum number of joints

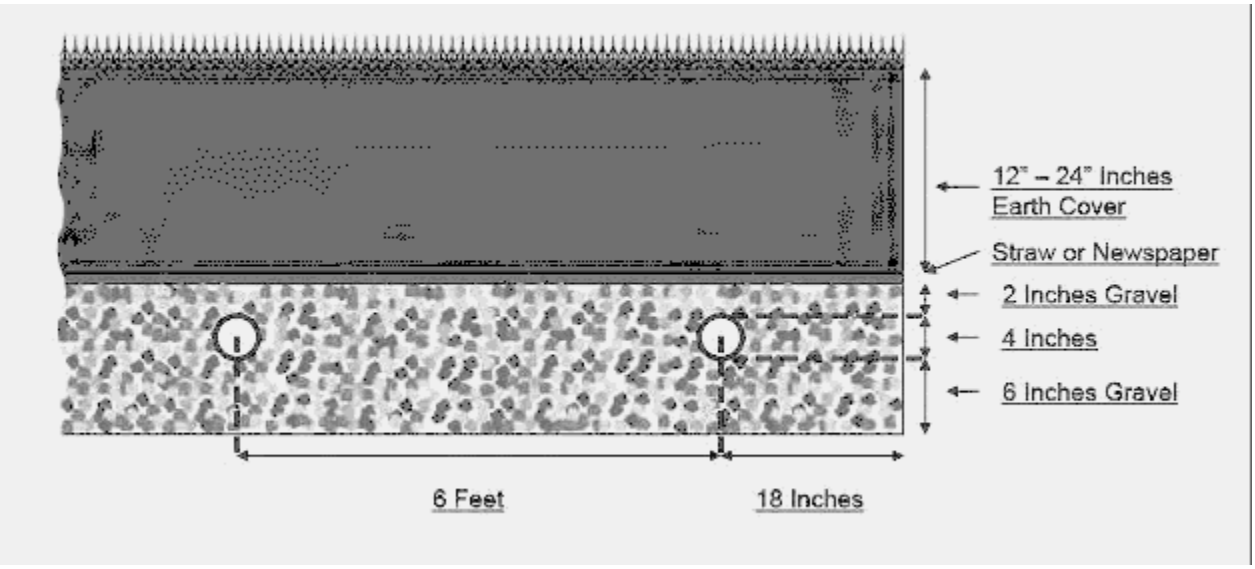


PLAN VIEW

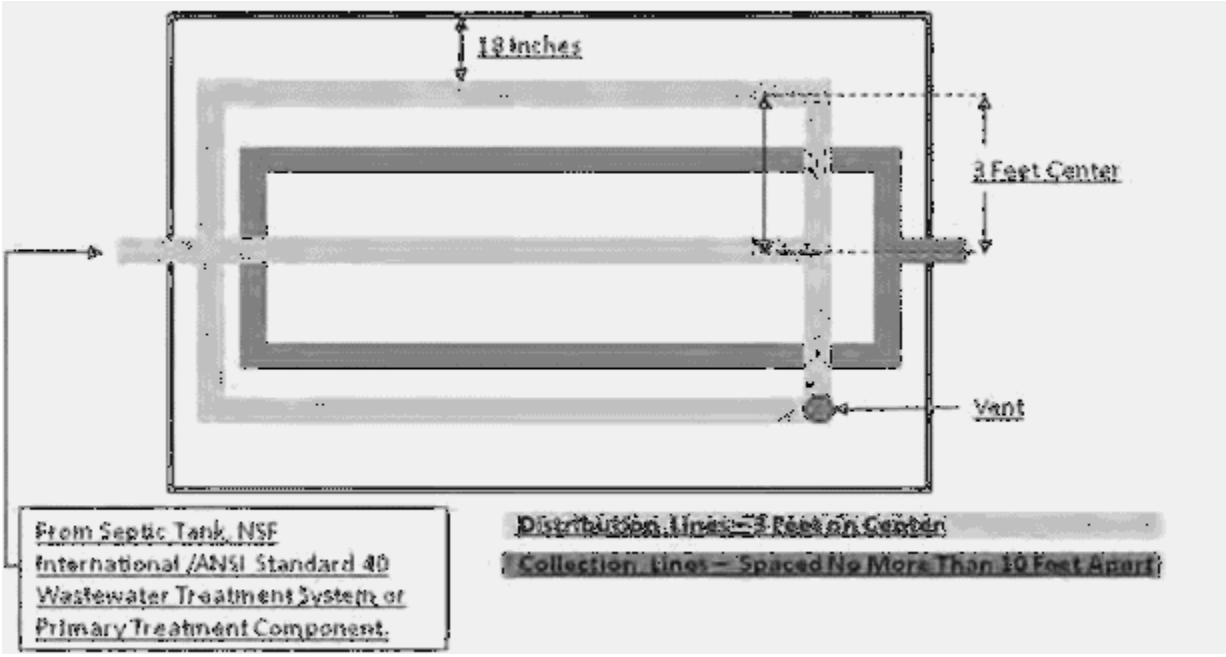


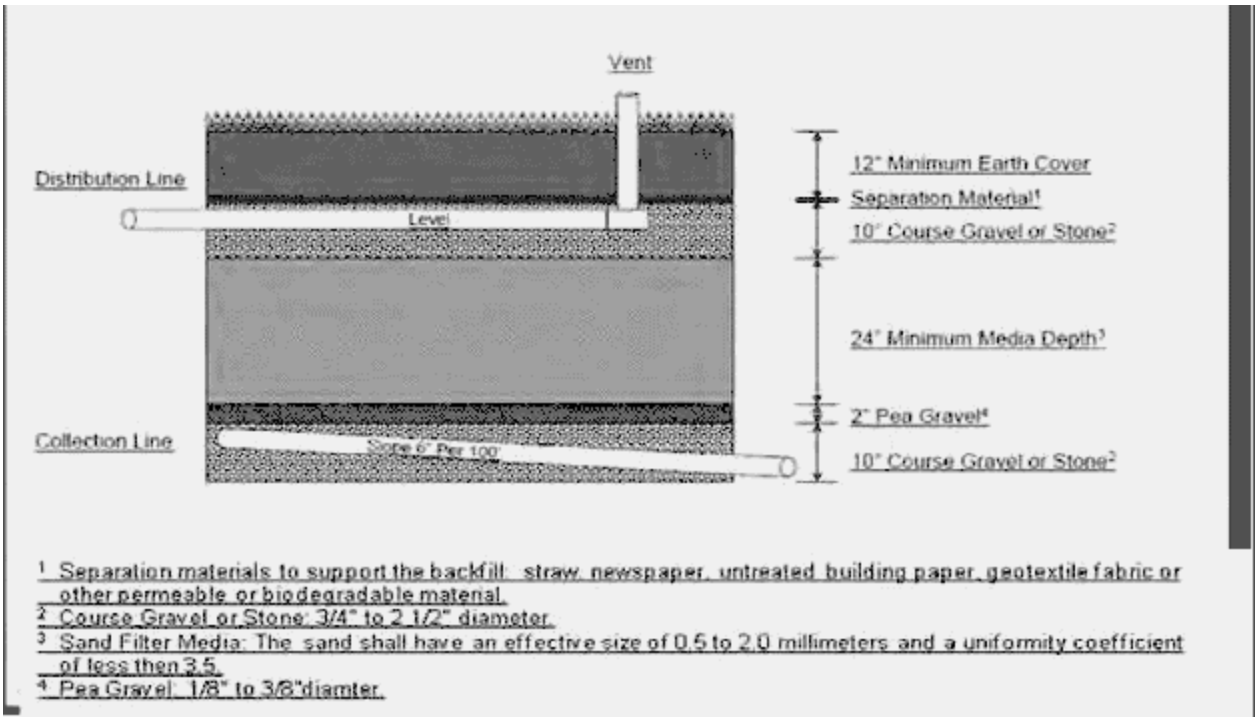
NOTE: Differing ground slopes over subsurface disposal fields may require use of various combinations of fittings connected with the minimum number of joints.

APPENDIX K
SEEPAGE BED

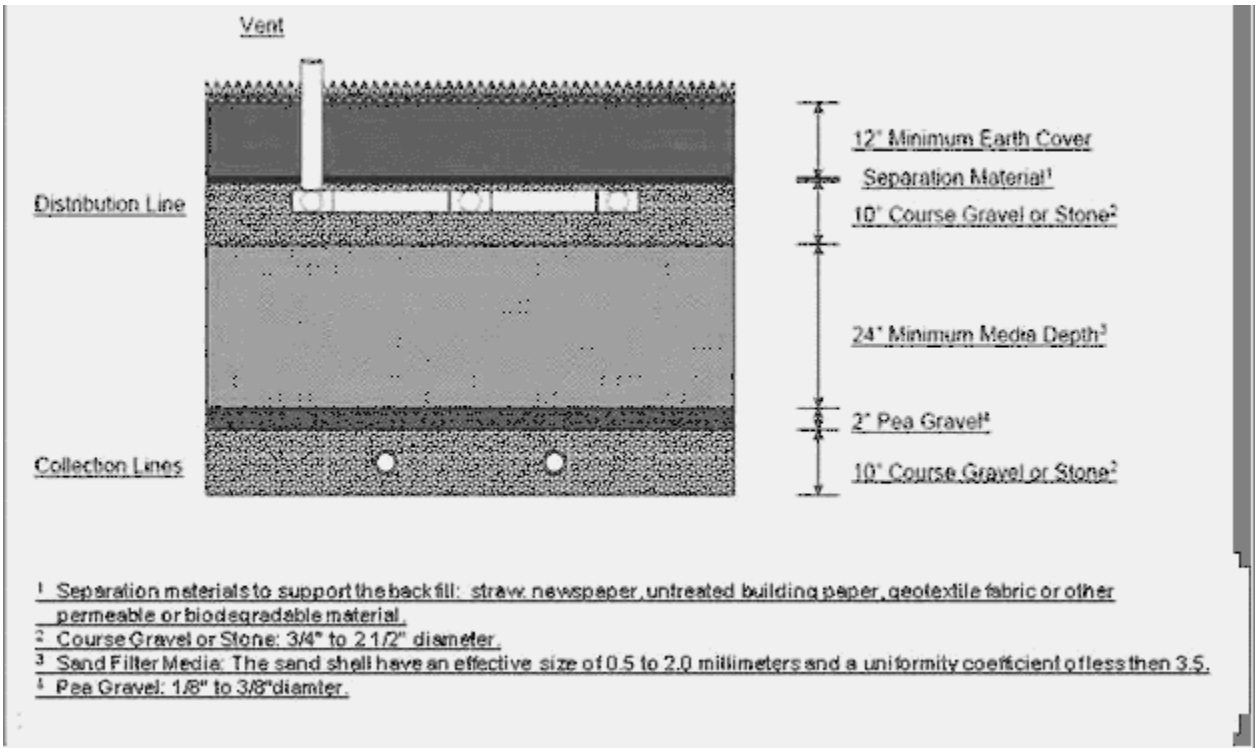


APPENDIX L
BURIED SAND FILTER



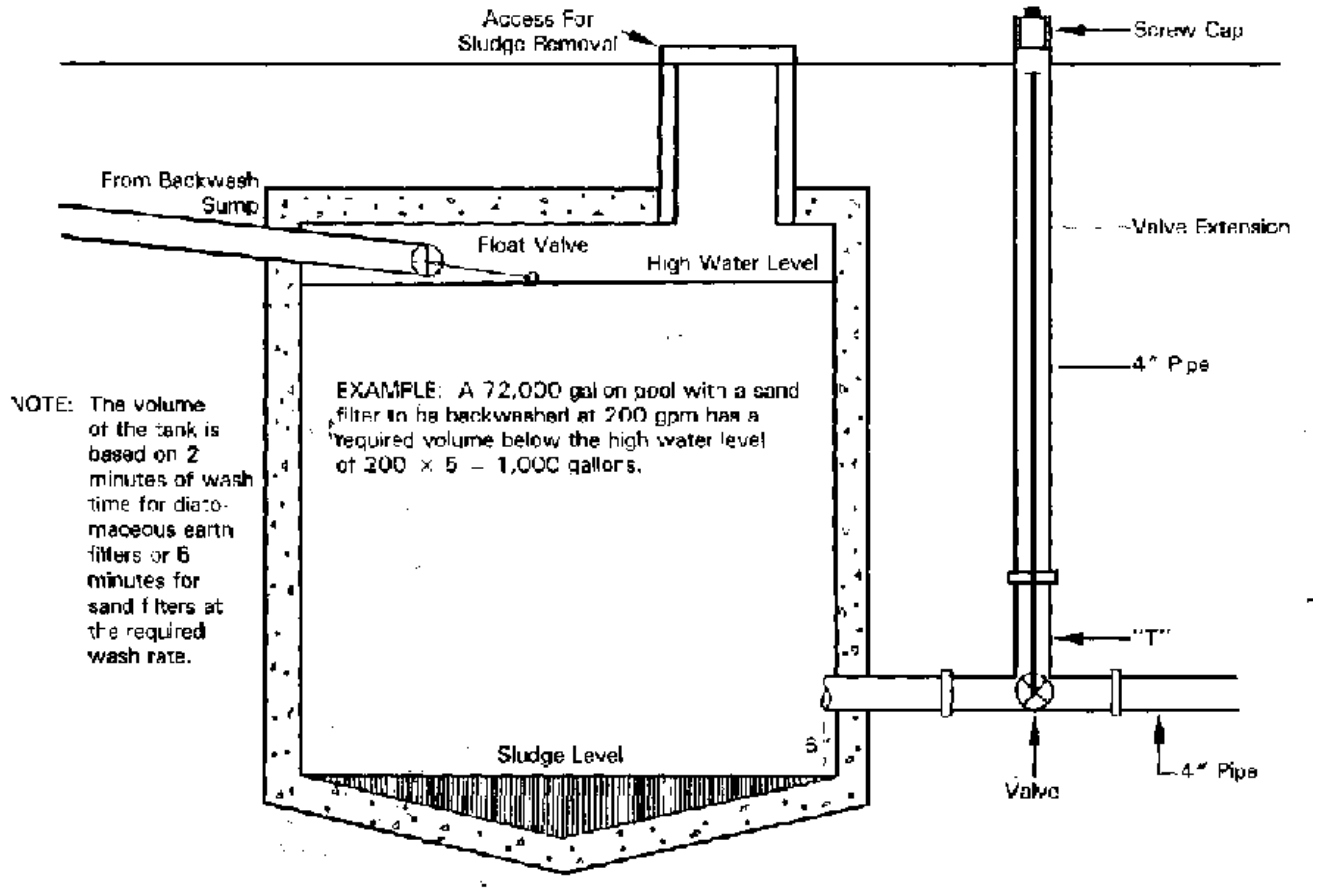


[1] Separation materials to support the backfill: straw, newspaper, untreated building paper, geotextile fabric or other permeable or biodegradable material.
[2] Course Gravel or Stone: 3/4" to 2 1/2" diameter.
[3] Sand Filter Media: The sand shall have an effective size of 0.5 to 2.0 millimeters and a uniformity coefficient of less then 3.5.
[4] Pea Gravel: 1/8" to 3/8"diamter.



[1] Separation materials to support the backfill: straw, newspaper, untreated building paper, geotextile fabric or other permeable or biodegradable material.
[2] Course Gravel or Stone: 3/4" to 2 1/2" diameter.
[3] Sand Filter Media: The sand shall have an effective size of 0.5 to 2.0 millimeters and a uniformity coefficient of less then 3.5.
[4] Pea Gravel: 1/8" to 3/8"diamter.

APPENDIX M
SWIMMING POOL BACKWASH WATER HOLDING TANK



(Ord. 13-16, 10-28-2013)

4-2-8: INTERNATIONAL RESIDENTIAL CODE ADOPTED; ADDITIONS; EXCEPTIONS:

(A) Code Adopted: The International Residential Code, 2015 edition, is hereby adopted for detached one and two family dwellings and townhouses, except for such exceptions and additions as are hereinafter provided.

(B) Exceptions: Chapters 25-32 of the International Residential Code are not adopted as part of the Barrington Hills building code.

(C) Additions to the One and Two Family Dwelling Code:

1. Add section 106.1.5: The Building Officer shall require the plans and specifications for one and two family dwellings and townhouses to be certified and stamped by a registered architect or professional engineer licensed by the State of Illinois and may require such certification and stamps for nonresidential plans and specifications. Soil tests may be required if in the opinion of the Building Officer such tests are deemed necessary.
(Ord. 76-6, 5-24-1976)

2. In lieu of Section R-111:

a. The following inspections are required:

1. FOOTING FORMS

When the forms are set and before the concrete is poured.

2. FOUNDATION FORMS

When the forms are set and before the concrete is poured.

3. BACKFILL

When the concrete is poured, waterproofed, drain tile is in place and covered with gravel but before the foundation is backfilled.

4. PLUMBING UNDERGROUND

When piping is located between the floors or underground but before the covering is in place. Flushing of the underground shall be witnessed.

5. FRAMING OR STRUCTURAL

Before any drywall, plaster or interior finish is applied. Rough-in of the electrical, plumbing, ductwork must be in place before the inspection. An inspection per floor is required.

6. HVAC ROUGH

When piping and ductwork is installed.

7. ELECTRICAL ROUGH IN

When rough-in work is complete and before drywall, concrete or backfill is in place.

8. AIR LEAKAGE

When all roughs are complete and exterior finish is complete.

9. PLUMBING ROUGH IN

When rough-in work is complete.

10. SEPTIC FIELD INSPECTIONS

When tanks and field tile are complete, before backfill.

11. INSULATION

When insulation is installed prior to drywall.

12. CONCRETE FLOOR BASEMENT

When base reinforcing is prepared and in place, and before the concrete is poured. All utilities and service equipment in the concrete must be in place before the inspection.

13. CONCRETE FLOOR GARAGE

When base reinforcing is prepared and in place, and before the concrete is poured. All utilities and service equipment in the concrete must be in place before the inspection.

14. ELECTRIC SERVICE

When meter socket and main panel are installed.

15. FINAL PLUMBING

When final work is complete and before the system is operational.

16. FINAL HVAC

When all HVAC components are complete.

17. FINAL ELECTRIC

When all electrical components are complete.

18. FINAL ENERGY

When all Building components are complete.

19. FINAL BUILDING

When all Building components are complete.

20. DRIVEWAY CULVERT

When driveway culvert is installed.

Note: the inspections for all exterior structures and accessory building are additional.

Swimming Pool Inspection, in order of occurrence:

1. When bottom is ready to be poured and all grounding in place.

2. When deck is ready to be poured and all grounding in place.

3. When all work described in the building permit application is completed.

Satellite Antenna Inspection: When antenna is anchored to the concrete platform and effectively grounded and screening is in place as described in the building permit application.

Final Inspection: When the building, including pole buildings, is completely finished with those items required by the provisions of this Chapter and rough grading done.
(Ord. 89-13, 10-23-1989)

Inspection for Certificate of Occupancy or Completion: A certificate of occupancy or completion shall be issued when all final corrections are made and a spotted survey is received. In addition, for a residence, there is required prior to the issuance of a certificate of occupancy (i) an as-built drawing of the septic system, a final grading plan and (ii) a water sample report indicating the water complies with the IEPA (Illinois Environmental Protection Agency) requirements. Occupancy of any building, including, but not limited to, storage of furniture, equipment or other personal property, or the use of such building, prior to the issuance of a certificate of occupancy or completion, shall be subject to

the fines and penalties of Section 4-1-9 of this Title.
(Ord. 03-17, 8-25-2003)

Re-inspections occur when a project fails there scheduled inspection. A re-inspection fee or additional inspections on a project that are necessary to ensure compliance that are in excess of the original list of inspections as determined by the Building Official is $75.00 per inspection.

Other Inspections: In addition to the called inspections above, the Building Officer may make or require any other inspections to ascertain compliance with this Code and any other laws enforced by the Building Officer. Work shall not be done on any part of the building or structure beyond the point indicated in each successive inspection without first obtaining the written approval of the Building Officer. Such written approval shall be given only after an inspection has been made at each successive step in the construction as indicated by each of the inspections required above.

3. Add section 106.3: A building plan for each model must be filed with the Building Officer incorporating all off-site constructed aspects of the structure as well as its final site assembly down to the foundation. These plans must bear the seal and signature of a registered architect or professional engineer licensed to practice in the State of Illinois.

4. Section 301.2

Ground Snow Load	30
Wind Speed (mph)	3 second 90 normal 75
Topographic Effects	No
Seismic Design Category	C
Special wind region	No
Wind-borne debris zone	No
Seismic Design Category	A
Weathering	Severe
Frost line depth	42 inches
Termite	Moderate to heavy
Winter Design Temperature	-4 degrees
Ice Shield Underlayment	Yes
Flood Hazard	See Village Stormwater Requirements
Air Freezing Index	2000
Mean Annual Temperature	50 degrees

5. Delete section R304.1 and insert the following: Minimum area: Every dwelling unit shall have at least one habitable room which shall have not less than 150 square feet of floor area. Other habitable rooms shall have an area of not less than 100 square feet. Every kitchen shall have not less than 80 square feet of floor area. Habitable rooms except kitchens shall be not less than seven feet in any horizontal dimension.

6. Add section R309.6 Any door connecting a garage to a residence must be a minimum of 6" higher than the garage floor.

7. Delete section R313 Automatic Sprinklers are not required in Single Famil, Duplexes and Townhomes.

8. Add section R401.4.3 Footing design shall be based upon a soil bearing capacity of 4,000 pounds per square foot, the following minimums shall be met and where unusual loading conditions or less than 4,000 pounds per square foot bearing value exists, larger footings may be required. Additionally, footings of lesser dimensions as well as trenched foundations will be allowed provided soils information prepared and certified by a recognized soils testing laboratory is provided in substantiating the use of same. Trenched foundations will be allowed only in those areas where the character of the soil is such that the trench walls will, in the opinion of the Building Officer, remain stable and in place during the pour.

9. Add section R401.1.1.1 Minimum footing for residential buildings shall be a minimum of 8" x 16" with an 8" foundation wall centered on footings. Column footings for one-story dwellings shall be a minimum of four (4) square feet in area and twelve (12) inches thick; for dwellings over one story the minimum shall be six (6) square feet and twelve (12) inches thick.

10. Add the following to section R402.1 all references to wood footings and foundations are deleted. The use of wood footings and foundations are not allowed.

11. Add section R408.8: The underfloor grade shall be a minimum of 18 inches below the bottom of the floor joist or beams, shall be cleaned of all vegetation and organic material and shall have a sub base of 4" pea gravel with a vapor barrier.

12. Add Section R501.3 Floor framing utilizing Engineered I-Joists, Trusses and nominal framing less than 2 x 8 shall be protected with 1/2 inch gypsum wall board to the underside of the joist when an automatic sprinkler is not installed.

13. Add section R503.2.4 Floor sheathing shall be a minimum of ½ inch.

14. Add section R602.3.6: Wall sheathing shall be a minimum of $^{1}/_{2}$ inch thickness over studs for an exterior wall.

15. Add section R803.2.4 Roof sheathing shall be a minimum of ½ inch in thickness.

16. Add section R807.2 The attic access panel shall not be located over a shelf or other obstruction. (Ord. 76-6, 5-24-1976)

17. Delete Chapter 11 and insert the 2015 International Energy Conservation Code.

18. Delete Chapters 25 – Chapter 32 and insert the Illinois Plumbing Code.

19. Add section E3801.2.1 all electric wiring systems shall be in EMT, IMC or rigid conduit.

20. Chapter 44 delete all references to plumbing shall be deleted and the Illinois Plumbing Code inserted.

21. Adopt the following appendices F, K, O,

4-2-9: ILLINOIS STATE PLUMBING CODE ADOPTED; ADDITIONS; EXCEPTIONS:

(A) Code Adopted: There is hereby adopted by reference as providing safe and practical standards and specifications for the installation, alteration and use of plumbing facilities in the village, the Illinois state plumbing code, 2014 edition, a publication of the State of Illinois department of Public Health, Division of Sanitary Engineering (77 Ill. adm. code, part 890, ch. I) as may be amended from time to time.

(B) Addition to Illinois State Plumbing Code:

1. "Administrative authority" as used in this section means the building officer of this village. (Ord. 15-03, 2-23-2015)

(C) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 97-2, 3-24-1997)

4-2-10: LAKE COUNTY WATERSHED DEVELOPMENT ORDINANCE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Adoption Of Lake County Watershed Development Ordinance By Reference: The Lake County watershed development ordinance, as most recently amended by the county of Lake on October 13, 2015, is hereby adopted by reference and is in full force and effect within the village of Barrington Hills and is found in its own compilation. (Ord. 16-3, 1-25-2016)

(B) Reserved.

(C) Additions to the Lake County Watershed Development Ordinance:

1. "New" Impervious Surface Area - WDO section IV.A.1.f:

The definition of the term "new" as it relates to impervious surface area created after the original effective date of the Lake County watershed development ordinance (10/18/92) shall apply only to parcels located in Lake County. "New" impervious surface area shall refer to impervious surfaces created after January 20, 2004 for parcels located in McHenry County, after January 1, 2002 for parcels located in Kane County, and after September 26, 2011 for parcels located in Cook County. (Ord. 11-09, 9-26-2011)

Footnotes - Click any footnote link to go back to its reference.
Footnote 1: See section 4-2-4 of this chapter.

Add New Section

4-2-11: INTERNATIONAL FUEL GAS CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Fuel Gas Code 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Fuel Gas Code:

1. Section 101. Insert the Village of Barrington Hills

4-2-12: INTERNATIONAL WILDLAND URBAN INTERFACE CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Wildland Urban Interface Code 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Wildland Urban Interface Code:

1. Section 101. Insert the Village of Barrington Hills

4-2-13: INTERNATIONAL SWIMMING POOL AND SPA CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Swimming Pool and Spa Code, 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Swimming Pool and Spa Code:

1. Section 101. Insert the Village of Barrington Hills

(D) Barriers: A four foot barrier/fence or a pool safety cover is not required to be installed. Should a barrier/fence or pool safety cover be installed it must comply with The International Code Council Swimming Pool and Spa Code 2015.

4-2-14: INTERNATIONAL EXISTING BUILDING CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Existing Building Code, 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Existing Building Code:

1. Section 101. Insert the Village of Barrington Hills

4-2-15: INTERNATIONAL PROPERTY MAINTENANCE CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Property Maintenance Code, 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Property Maintenance Code:

1. Section 101. Insert the Village of Barrington Hills

(D) Scope: The International Property Maintenance Code, 2015 shall only apply to dangerous buildings, unoccupied buildings and vacant buildings as defined herein within the Village of Barrington Hills.

1. ***DANGEROUS BUILDING:***
A. Any building that is dangerous to the public health because of its construction or condition, or which may cause or aid in the spread of disease or cause injury to the health of its occupants or to neighboring structures; or
B. Any building which, because of faulty construction, age, lack of proper repair or any other cause, is especially liable to fire and constitutes or creates a fire hazard; or
C. Any building, which, by reason of faulty construction, age or lack of repair is likely to collapse or fall.

2. UNOCCUPIED BUILDING: *A building or portion thereof which lacks the habitual presence of human beings who have a legal right to be on the premises, including buildings ordered vacated by the Building Official pursuant to authority granted to him by this code.*
In determining whether a building is "unoccupied", the Building Official may consider these factors, among others:
A. A building at which substantially all lawful residential or business activity has ceased.

B. The percentage of the overall square footage of occupied to unoccupied space or the overall number of occupied and unoccupied units.
C. The building is substantially devoid of contents. The condition and value of fixtures or personal property in the building are relevant to this determination.
D. The building lacks utility services, i.e., water, sewer, electric or natural gas.
E. The building is the subject of a foreclosure action.
F. The building is not actively for sale as part of a contractual agreement to sell the building.
G. The presence or recurrence of uncorrected code violations.

3. VACANT BUILDING**:** *A building or portion of a building which is:*
A. Unoccupied and unsecured; or
B. Unoccupied and secured by boarding or other similar means for more than thirty (30) days; or
C. Unoccupied and a dangerous structure; or
D. Unoccupied as a result of having been declared unsafe for occupancy by the Building Official pursuant to applicable provisions of this code; or
E. Unoccupied and having multiple violations of this code; or
F. Unoccupied and the building or its premises have been the site of unlawful activity at any time while unoccupied, or at any time during the previous six (6) months whether occupied or not; or
G. Unoccupied as a result of having been condemned or declared unsafe for occupancy by the Building Official and unlawfully occupied; or
H. Unoccupied for over sixty (60) days and during which time the building official has issued an order to correct public nuisance conditions and the same have not been corrected in a code compliant manner; or any building deemed to be a dangerous building under this section or a dangerous structure as defined in this code.

4-2-16: INTERNATIONAL ENERGY CONSERVATION CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The International Code Council Energy Conservation Code, 2015 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the International Energy Conservation Code:

1. Section 101. Insert the Village of Barrington Hills

4-2-17: ILLINOIS ACCESSIBILITY CODE ADOPTED; EXCEPTIONS; ADDITIONS:

(A) Code Adopted: The ILLINOIS Accessibility Code, 1997 edition is hereby adopted by reference as the building code of the village subject to such deletions and additions of sections as are hereinafter provided.

(B) Promulgation of Rules: The president and board of trustees may adopt rules and regulations to implement the provisions of this chapter. (Ord. 96-5, 4-22-1996)

(C) Additions to the Illinois Accessibility Code:

1. When there are conflicts with this code and other Village Codes, the stricter of the requirements shall be applied Section 101. Insert the Village of Barrington Hills

CHAPTER 3
EROSION AND SEDIMENTATION CONTROL REGULATIONS

4-3-1: FINDINGS AND PURPOSE:

(A) The president and board of trustees of the village of Barrington Hills hereby find as follows:

1. That excessive quantities of soil are eroding from areas that are undergoing development for certain nonagricultural uses including, but not limited to, the construction of buildings, the building of roads and highways and the creation of recreational facilities;

2. That the washing, blowing and falling of eroded soil across and upon roadways endangers the health and safety of users thereof by decreasing vision and reducing traction of road vehicles;

3. That said soil erosion necessitates the costly repairing of gullies, washed out fills and embankments;

4. That the sediment from said soil erosion tends to clog sewers and ditches and to pollute and silt rivers, streams, lakes and reservoirs;

5. That said sediment limits the use of water and waterways for most beneficial purposes, destroying fish and other aquatic life and that said sediment is costly and difficult to remove; and

6. That said sediment reduces the channel capacity of waterways, resulting in greatly increased chances of flooding at grave danger to public health and safety.

(B) The president and board of trustees of the village of Barrington Hills therefor declare that the purpose of these regulations is to provide minimum standards to safeguard persons, to protect property and prevent the despoliation of the environment and to promote the public welfare by regulating and controlling the design, construction, quality of materials and use and maintenance of any development or other activity which disturbs or breaks the topsoil or otherwise results in the movement of earth on land situated in the village of Barrington Hills, Illinois. (Ord. 78-14, 10-30-1978)

4-3-2: DEFINITIONS:

For the purposes of these regulations contained in this chapter, the definitions contained in this section shall be observed and applied, except when the context clearly indicates otherwise. Words

used in the present tense shall include the future, and words used in the singular number shall include the plural number, and the plural the singular; the word "shall" is mandatory and not discretionary; the word "may" is permissive; the masculine gender includes the feminine and neuter. Whenever a word or term defined herein appears in the text of this chapter, its meaning shall be construed as set forth in the definition thereof and any word appearing in parenthesis directly thereafter shall be construed in the same manner.

AGRICULTURAL: The use of land for agricultural purposes, including farming, dairying, pasturage, apiculture, horticulture, floriculture, viticulture and animal and poultry husbandry (including the breeding and raising of horses as an occupation) and the necessary accessory uses for handling or storing the produce.

BUILDING PERMIT: A permit issued by the village of Barrington Hills, Illinois, for the construction, erection or alteration of a structure or building or redevelopment of a property.

CERTIFY OR CERTIFICATION: Specific inspections and tests, where required, have been performed and that such tests comply with the applicable requirements of this chapter.

CUBIC YARDS: The amount of material in excavation and/or fill measured by the method of "average end areas".

ENGINEER: A professional engineer registered in the state of Illinois.

EXCAVATION: Any act by which organic matter, earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting therefrom.

EXISTING GRADE: The vertical location of the existing ground surface prior to excavation or filling.

FILL: Any act by which earth, sand, gravel, rock or any other material is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the conditions resulting therefrom.

GRADING: Excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

GREEN BOOK: The current edition of "Illinois Procedures And Standards For Urban Soil Erosion And Sedimentation Control" as compiled and published by the northeastern Illinois soil erosion and sedimentation control steering committee for the soil and water conservation districts of northeastern Illinois.

LAND SURVEYOR: A surveyor registered in the state of Illinois.

PARCEL: All contiguous land in one ownership, or land being developed as a unit.

PERMITTEE: Any person to whom a site development permit is issued.

PERSON: Any person, firm or corporation, public or private, the state of Illinois and its agencies or political subdivisions, and the United States of America, its agencies and instrumentalities and any agent, servant, officer or employee of any of the foregoing.

PLAN COMMISSION: The village of Barrington Hills plan commission.

RELEASE RATE: The flow or rate of flow of stormwater draining from a site, measured in cubic feet per second.

REMOVAL: As to vegetation, means cutting vegetation to the ground or stumps, complete extraction or killing by spraying.

SITE: A lot or parcel of land or a contiguous combination thereof, where grading work is performed as a single unified operation.

SITE DEVELOPMENT: Altering terrain and/or vegetation and including, but not limited to, constructing roads, streets or driveways, buildings of any character, ponds or waterways, or in any way altering the natural condition of a parcel.

SITE DEVELOPMENT PERMIT: A permit issued by the village of Barrington Hills, Illinois, for site development using approved methods to control erosion and sedimentation.

VACANT: Land on which there are not structures or only structures which are secondary to the use or maintenance of the land itself.

VILLAGE: The village of Barrington Hills, Illinois.

WATERSHED: All land drained by, or contributing water to the same stream, lake, stormwater facility, or draining to a point. (Ord. 78-14, 10-30-1978; amd. Ord. 82-12, 10-25-1982; Ord. 07-12, 4-23-2007)

4-3-3: GENERAL CRITERIA AND STANDARDS:

The following general principles shall apply to any movement of earth, any sedimentation and erosion control plan and the granting of a permit for the execution of said plan as hereinafter provided:

(A) The smallest practical area of land shall be exposed at any given time during development.

(B) Such minimum area exposure shall be kept to as short a duration of time as is practical.

(C) Temporary vegetation or, where appropriate, mulching or other nonviable cover shall be used to protect areas exposed during development.

(D) Sediment basins, debris basins, desilting basins or silt traps shall be installed and maintained to remove sediment from runoff waters from land undergoing development.

(E) Provision shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development.

(F) Permanent, final plant covering or structures shall be installed as soon as possible.

(G) The plan of development shall relate to the topography and soils of the site so the potential for erosion is minimized.

(H) Natural plant covering shall be retained and protected so far as is consistent with developing the site. (Ord. 78-14, 10-30-1978)

(I) The natural course of drainage and seepage of surface water shall not be altered so as to increase the natural flow of surface water onto adjoining properties at a rate beyond an increase that is incidental to the development of any single property. In the case of redevelopment sufficient measures shall be taken to ensure that the existing release rate does not increase. In all cases existing watershed boundaries shall not be altered due to development. (Ord. 07-12, 4-23-2007)

4-3-4: PLANS AND PERMIT:

(A) When A Permit Is Required:

1. Before land is cleared, graded, transported or otherwise disturbed by the movement of earth for purposes including, but not limited to, the construction of buildings, the mining of minerals, including sand and gravel, the development of golf courses and the construction of driveways, roads and streets or any alterations to the topography of proposed or existing developments by any person within the village, a site development permit embodying the proposed earth movement shall be obtained from the village where development comes under any one or more of the following provisions unless such development is exempted therefrom by subsection (A)2 of this section:

a. Excavation, fill or any combination thereof, will exceed three hundred (300) cubic yards.

b. Excavation, fill or any combination thereof, will disturb an area exceeding twenty thousand (20,000) square feet in size.

c. Plant cover is to be removed from an area exceeding twenty thousand (20,000) square feet on any vacant parcel of land or on any parcel of land exceeding ten (10) acres in size.

2. A site development permit shall not be required in the following cases:

a. Excavations below finished grade for septic tanks and drainfields, tanks, vaults, tunnels, equipment basements, swimming pools, cellars or footings of buildings or structures for which a building permit shall have been issued by the village, unless part of a development which would otherwise require such a permit.

b. Tilling of the soil for fire protection purposes.

c. Engaging in the following, but only if in connection with farming or other agricultural activities:

(1) The construction of sod waterways, or

(2) The construction of terraces, or

(3) The construction of surface water diversions, or

(4) The construction of grade stabilization structures, or

(5) The tilling of the soil for agricultural purposes.

(B) Permit Application:

1. No site development or building permit shall be issued until the applicant submits a site development plan prepared by an engineer or landscape architect, together with other submissions required by these regulations, and certifies that any land clearing construction or development involving the movement of earth shall be in accordance with such plan and submissions.

2. Each application for a site development permit shall be made by the owner of the property or his authorized agent to the village building officer on a form furnished for that purpose. When grading or plant cover removal is proposed as part of building construction and falls within the limitations of subsection (B)1 of this section, a combined application may be made for the site development permit and the building permit. In such instances, a site development plan and the building permit application shall be submitted to the village building officer in the number of copies he requires. In the above instance, a land surveyor shall certify as to the accuracy of the existing and proposed contours. Each application shall be accompanied by the following unless the building officer finds any item unnecessary to ensure compliance with the provisions of these regulations. To the extent determined appropriate by the building officer, prior or concurrent submittals to the plan commission under the village subdivision regulations or to the zoning board of appeals under the village zoning ordinance may be utilized for applications under this chapter rather than be substantially duplicated. No exemption from subsection B(2)a below shall be granted to any applicant who intends to move in excess of five hundred (500) cubic yards of dirt:

a. For site developments, provide a vicinity sketch showing
acreage of site, boundary line survey, zoning, type of proposed sewer and water facilities, location of existing utilities, buildings and drains on and within one hundred feet (100') of the site, together with a legend and scale. There shall be included on or with such a vicinity sketch:

(1) A soil map of the subject property showing the predominant
soil types on the site.

(2) Enough information on those areas abutting or adjacent to the site to show existing drainage patterns and the drainage course that may affect or be affected by the development of the site.

(3) The name and address of the developer and/or owner.

(4) The name and address of any consulting firm retained by the applicant, together with the name of applicant's principal contact at such firm.

(5) Limits of natural flood plain(s), if any.

(6) Areas to be sodded, seeded, mulched or paved.

(7) Acreage of area to be vegetatively stabilized, if any.

(8) Areas to be left undisturbed.

b. For proposed site grading, provide a topographic map of the site and the adjacent one hundred foot (100') wide peripheral strip showing existing and proposed contours, final structure and street elevations, street profiles, if any, and what measures will be employed to protect cut and fill slopes from surface erosion.

c. Proposed storm water drainage plans shall be submitted together with a tributary area drainage map and hydraulic analysis of the existing and proposed site drainage. In addition, the following data will be submitted to show what the existing conditions are at the proposed and natural outlets for the site.

(1) Whether the drainage course is bare earth or vegetated.

(2) Whether the proposed outlet will be in open sun, open shade or dense shade.

(3) Whether the natural or proposed outlet is subject to intermittent, long term or continuous flow.

(4) Whether the existing outlet is actively eroding.

(5) Whether there is evidence of a high water table (permanent or seasonal).

(6) Whether the area is subject to seepage or spring flow.

(7) The elevation of normal water level in all proposed and natural outlets.

(8) A profile below outlet for a sufficient distance to indicate the natural gradient of the accepting natural outlet and/or stream channel (200 foot minimum).

(9) A cross-section and profile of existing stream channels where applicable.

(10) A ditch design and computations for all seeded, sodded or bare earth outlets, ditches and similar water conduction facilities.

d. Estimate Schedule and Phasing of Development of the Site:

Phase I		Stripping and/or clearing
Phase II		Rough grading and construction

Phase III		Final grading and vegetative establishment
Phase IV		Maintenance

All erosion and sediment control plans submitted to the Village Building Officer for approval shall show all the erosion and sediment control measures needed to provide protection throughout all the phases of construction listed above. These plans shall also include any off-site borrow and spoil areas, sewer lines, utility lines and haul and access roads and shall further indicate:

(1) The date when site clearing will commence.

(2) Duration of exposure of disturbed areas.

(3) Installation of temporary sediment control measures (vegetative and structural) by phase and date.

(4) Installation of storm drainage by phase and date.

(5) Paving of driveways, streets and parking areas, if any, by phase and date.

(6) Establishment of permanent vegetative cover (plans will show what will be done to shorten the duration of exposure of disturbed areas as soon after grading as possible), including seeding mixes and rates, type of sod, seedbed preparation, seeding dates, lime and fertilizer application, temporary seedings, if needed, mulching or similar stabilization procedures.

(7) Details of all structural sediment control measures.

(8) Computations for sediment basins, if any. (Ord. 78-14, 10-30-78)

e. The most recent edition of the "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", excluding pages 5 - 36 of the appendix, as compiled by the Soil and Water Conservation District of Northeastern Illinois through the Northeastern Illinois Soil Erosion and Sedimentation Control Steering Committee, is hereby incorporated into this Section 4-3-4 and made part hereof by this reference in order to provide direction as to the consideration of factors which should enter into the preparation of a site development plan. (Ord. 82-12, 10-25-82)

(C) Review: To further the specific purposes of these regulations, the following review procedures are established:

1. Processing of Site Development Application: The Village Building Officer shall review all site development applications. In so doing, the Building Officer when necessary or appropriate may obtain assistance from and rely on advice or determinations of the Village Engineer. Following such review, the Building Officer, in writing, shall: a) Approve the site development application if he finds it to be in conformance with the provisions of these regulations and issue a permit; b) Approve the site development application subject to such reasonable conditions as he may deem necessary to secure substantially the objectives of these regulations, and issue a permit subject to those conditions; or c) Disapprove the site development application.

2. Prohibition of Earth Removal: No site development permit shall be issued for an intended building site unless:

a. Such permit is accompanied by or combined with a valid building permit issued by the Village, or

b. The proposed earth moving is coordinated with any overall plan previously approved by the Village for the area in which the site is situated.

(D) Appeals:

1. The applicant or any adjoining property owner (disregarding intervening streets and roads) may appeal the decision of the Village Building Officer to the Barrington Hills Plan Commission within fifteen (15) days after the date of said decision. Upon receipt of an appeal, the Plan Commission shall schedule and hold a public hearing after giving fifteen (15) days' published notice thereof. Within thirty (30) days following said hearing, the Plan Commission shall transmit its findings and recommendations in writing to the Village President and Board of Trustees for final disposition. Factors to be considered on review shall include, but not be limited to, possible saturation of fill and unsupported cuts by water, both natural and domestic; run-off surface waters that produce erosion and silting of drainage ways; excessive or unnatural run-off; nature and type of soil or rock that, when disturbed by the proposed grading, may create each movement and produce slopes that cannot be landscaped; and excessive and unnecessary scarring of the natural landscape through grading or removal of vegetation.

2. The person or persons appealing the decision of the Building Officer shall be responsible for notifying adjoining and contiguous property owners a minimum of fifteen (15) days in advance of the public hearing. Streets and roads shall be disregarded in determining adjoining and contiguous properties. If applicant directly or indirectly owns or controls the adjoining and contiguous property, notice shall be given to the owner of the next adjoining and contiguous property. Proof of notification shall be presented to the plan commission at the time of hearing in the form of a written receipt from each adjacent owner or proof of mailing to the last known address in the case of an absent owner, such mailing to have been accomplished with sufficient time to give at least fifteen (15) days' notice to the owner prior to the hearing date. Lack of proper notification to adjacent property owners will be reason for refusal of a hearing on the subdivision by the plan commission.

(E) Responsibility: Failure of the village officials to observe or recognize hazardous or unsightly conditions or to recommend denial of the site development permit or of the village building officer or plan commission to deny said permit, shall not relieve the permittee from responsibility for the condition or damage resulting therefrom, and shall not result in the village, its officers or agents being responsible for any condition or damage resulting therefrom.

(F) Retention Of Plans: Plans, specifications and reports for all site developments shall be retained in original form by the village building officer in the village offices.

(G) Inspections: The village building officer shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the same fails to comply with the site development plan. Where it is found by inspection that conditions are not substantially as stated or shown in the said plan, the village building officer may stop further work until approval is obtained for a revised site plan conforming to the existing conditions. Plans for all work contemplated by the site plan, bearing the stamp of approval of the village building officer shall be maintained at the site during progress of the work. Until the final inspection is made, a sign issued by the village indicating permission to work has been granted by the village shall be prominently displayed on the front property line of the property involved so as to be visible from the street on which the property fronts. In order to obtain inspections in accordance with the following schedule, the permittee shall notify the village building officer at least two (2) full working days before the said inspection is to be made:

1. Preliminary Control Work: When all erosion and sediment control devices for each phase of site development has been completed.

2. Rough Grading: When all rough grading for each phase of site development has been completed; and

3. Final Inspection: When all work, including installation of all drainage and other structures and required planting, has been completed. (Ord. 78-4, 10-30-1978)

4-3-5: OPERATION STANDARDS AND REQUIREMENTS:

(A) Applicability: All earth moving and grading operations not specifically exempted by provisions of these regulations shall comply with the applicable standards and requirements of this section in addition to other requirements of these regulations. (Ord. 78-14, 10-30-1978)

(B) Green Book Adopted By Reference: The "Illinois Procedures And Standards For Urban Soil Erosion And Sedimentation Control", excluding pages 5 - 36 of the appendix, as compiled by the soil and water conservation district of northeastern Illinois through the northeastern Illinois soil erosion and sedimentation control steering committee is hereby incorporated into this section and made a part hereof by reference for the purpose of delineating procedures and methods of operation pursuant to a site development plan approved under section 4-3-4 of this chapter. In the event of a conflict between provisions of these regulations or other village ordinances, the said provisions of these regulations or other village ordinances shall govern. (Ord. 82-12, 10-25-1982)

(C) Grading Requirements:

1. The highest proposed ground elevation at a building corner shall be no higher than thirty six inches (36") greater than the existing (predevelopment) ground elevation at that location except where approved by the village engineer. The fill depths are not to exceed thirty six inches (36") in accordance with section R-603.2, site preparation, from the 1979 edition of the one- and two-family dwelling code (published by Building Officials and Code Administrators, International, Inc.). For building teardowns, the highest proposed ground elevation at the new building corner shall be set at

the existing ground elevation of the teardown building unless otherwise approved by the village engineer.

2. The proposed ground elevation at a building corner may exceed the limit of thirty six inches (36") above existing (predevelopment) ground elevations under the following conditions:

   a. The allowable increase in ground elevation may be further increased by twenty four inches (24") where habitable space and/or sleeping room/bedroom are proposed below finished elevation.

   b. Where an increase in ground elevation of thirty six inches (36") (or 60 inches when applying the criteria of subsection (C)2a of this section) results in a finished elevation that is twelve inches (12") or more below the finished floor elevations of two (2) or more adjoining properties, an additional increase in proposed ground elevation of up to twelve inches (12") may be approved by the village engineer.

   c. Where an increase in ground elevation of thirty six inches (36") (or the highest allowable increase in ground elevation when applying the criteria of subsections (C)2a and (C)2b of this section) results in a finished floor elevation that is below the elevation of the adjacent roadway to which drainage is directed, an additional twelve inch (12") increase in proposed ground elevation may be approved by the village engineer.

   d. The requirements above do not relieve the applicant from meeting the requirements of horizontal setback from the watercourses per subsection 5-3-9(E) of this code or the vertical separation requirements of chapter 5 of this title.

3. Where the proposed increase in ground elevations exceed the increase allowable under subsections (C)1 and (C)2 of this section, the applicant shall demonstrate to the satisfaction of the village engineer that the proposed release rate is equal to or less than the release rate that would result from meeting the requirements of the aforementioned subsections; otherwise the provisions of section 4-3-6 of this chapter shall apply. (Ord. 07-12, 4-23-2007)

(D) Special Precautions:

1. If, at any stage of the work, the village building officer determines by inspection that the nature of the formation is such that further work, as authorized by an existing permit, is likely to imperil any property, public way, watercourse or drainage structure, the village building officer may require, as a condition to allowing the work to be done, that such reasonable precautions be taken as he considers advisable to avoid the likelihood of such peril. "Special precautions" may include, but shall not be limited to, specifying a flatter exposed slope, construction of additional drainage facilities, berms, terracing, compaction or cribbing, installation of plant materials for erosion control and reports of an engineer whose recommendations may be made requirements for further work.

2. Where it appears that storm damage may result because the work is not complete, work may be stopped and the permittee required to install temporary structures or take such other measures as may be required to protect adjoining property or the public safety. On large operations or where unusual site conditions prevail, the village building officer may specify the time to start grading and time of completion or may require that the operations be conducted in specific stages so as to ensure completion of protective measures or devices prior to the advent of seasonal rains.

(E) Expiration Of Permit: Every site development permit shall expire by limitation and become null and void if the work authorized by such permit has not commenced within one hundred eighty (180) days or is not completed within one year from date of issue; except that the building officer may, if the permit holder presents satisfactory evidence that unusual difficulties have prevented work being started or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit. (Ord. 78-14, 10-30-1978; amd. Ord. 07-12, 4-23-2007)

4-3-6: EXCEPTIONS:

(A) Authorization: The village president and board of trustees, after recommendation by the Barrington Hills plan commission, may authorize exceptions to any of the requirements and regulations set forth herein.

(B) Application For Exception: Application for any exception shall be made by a verified petition of applicant stating fully the grounds of the application and the facts relied upon by the petitioner. Such petition shall be filed with the building officer together with the site development permit application. Notice of filing of an exception application shall be given to contiguous owners as required under subsection 4-3-4(D) of this chapter. In order for the land referred to in the petition to come within the provisions of this section, it shall be necessary that the Barrington Hills plan commission find all of the following facts with respect thereto:

1. That the land is of such shape or size or is affected by such physical conditions or is subject to such title limitations of record that it is impossible or impractical for the subdivider to comply with all of the regulations of this chapter.

2. That the exception is necessary for the preservation and enjoyment of a substantial property right of the petitioner.

3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property in the vicinity of the subject property.

(C) Referral Of Proposed Exception: Each proposed exception shall be referred to the village engineer, village planner, village attorney and any others involved, and such officers or departments shall transmit to the Barrington Hills plan commission their recommendations, which recommendations shall be reviewed prior to the granting of any exception.

(D) Barrington Hills Plan Commission: After a public meeting thereon, the Barrington Hills plan commission, by resolution, may recommend approval of the site development permit application with the exceptions and conditions it deems necessary or it may recommend disapproval of such site development permit application and exception application or it may take such other action as is appropriate. Recommendations of the Barrington Hills plan commission shall be submitted in writing to the village president and board of trustees for final action. (Ord. 78-14, 10-30-1978)

4-3-7: REVOCATION OR SUSPENSION OF PERMIT:

(A) Authority: In the event any person holding a site development permit pursuant to these regulations violates the terms of the permit or conducts or carries on said site development in such a manner as to adversely affect the health, welfare or safety of persons residing or working in the neighborhood of the property of the said permittee or conducts or carries on said site development so that it is materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the building officer shall recommend revocation or suspension of the site development permit and, upon such recommendation, all work provided for in such permit shall stop until such recommendation shall have been acted upon.

(B) Procedure For Revoking Or Suspending A Site Development Permit: No site development permit shall be permanently revoked or suspended until a hearing is held by the Barrington Hills plan commission. Written notice of such hearing shall be served upon the permittee, either personally or by registered mail and shall state:

1. The grounds for complaint or reasons for the proposed revocation or suspension in clear and concise language.

2. The time when, and the place where, such hearing is to be held. Such notice shall be served by registered mail or personal service on the permittee at least five (5) days prior to the date set for the hearing. At any such hearing, the permittee shall be given an opportunity to be heard and he may call witnesses and present evidence on his behalf. Upon conclusion of such hearing, the Barrington Hills plan commission shall transmit its findings and recommendations to the village president and board of trustees for final action.

3. The hearing provided for in subsection (B)2 of this section shall be held by the Barrington Hills plan commission not less than fifteen (15) days after receipt by the plan commission of the village building officer's recommendation for revocation or suspension and the giving of notice to the permittee as herein provided. (Ord. 78-14, 10-30-1978)

4-3-8: FEES:

The filing fee for a site development permit application is five hundred dollars ($500.00). If a public hearing is required, the applicable will be assessed an additional one hundred dollars ($100.00) for purposes of public hearing notice and meeting costs. In the event that the filing fee would substantially exceed the cost of processing the application hereunder, the building officer shall be authorized to certify in writing that the filing fee under this section should be reduced; the filing fee hereunder, upon such certification, shall be one hundred dollars ($100.00). ~~two hundred dollars ($200.00) minimum plus ten dollars ($10.00) per acre for the first twenty (20) acres and five dollars ($5.00) per acre for each acre in excess of twenty (20) acres. For the purpose hereof, the term acre shall refer to an area excavated or filled or otherwise disturbed and not to an undisturbed area. If a public hearing is required, the applicant will be assessed an additional one hundred dollars ($100.00) to cover costs. If in the case of any specific permit application the applicant shall demonstrate to the village building officer that: a) fees have theretofore been paid to the village in connection with subdivision application or zoning variations or special uses affecting the parcel which is the subject of the site development application under this chapter; b) that prior submittals to or actions by the village plan commission or zoning board of appeals substantially reduce or make unnecessary actions or submittals hereunder which would otherwise be required and be~~

~~substantially duplicative of said other actions or submittals; and c) that the two hundred dollars ($200.00) minimum basic filing fee would substantially exceed the cost of processing the application hereunder, the building officer shall be authorized to certify in writing that the minimum basic filing fee under this section should be reduced; the filing fee hereunder, upon such certification, shall be seventy five dollars ($75.00) instead of two hundred dollars ($200.00). (Ord. 78-14, 10-30-1978)~~

4-3-9: NUISANCES:

These regulations shall not be construed as authorizing any person to maintain a private or public nuisance upon their property and compliance with these regulations shall not be a defense in any action to abate such nuisance. (Ord. 78-14, 10-30-1978)

4-3-10: VIOLATIONS AND PENALTIES:

No person shall construct, enlarge, alter, repair or maintain any grading, excavation or fill or cause the same to be done, contrary to or in violation of any provisions of the regulations of this chapter. Any person violating any of these regulations shall be deemed guilty of a separate offense for each and every day during which any violation thereof is committed, continued or permitted and, upon conviction of any such violation, such person shall be punished by a fine of not more than seven hundred fifty dollars ($750.00) for each offense. In addition to any other penalty authorized by this section, any person convicted of violating any of the regulations of this chapter shall be required to restore the property to the condition existing prior to commission of the violation or to bear the expense of such restoration. (Ord. 13-10, 6-24-2013)

4-3-11: SEPARABILITY:

It is the intent of the village that each separate provision of this chapter shall be deemed independent of all other provisions herein and it is further the intention of the village that if any provision of this chapter be declared invalid, all other provisions thereof shall remain valid and enforceable. (Ord. 78-14, 10-30-1978)

CHAPTER 4
SURFACE WATER DRAINAGE

4-4-1: UNLAWFUL ACTS:

It shall be a violation of this section for:

(A) Any owner of any property located within the village to alter the natural course of drainage and seepage of surface waters from his property so as to increase the flow of surface waters onto adjoining properties at a rate beyond an increase which is incidental to the reasonable development of his property.

(B) Any person to injure or obstruct a public highway right of way by plowing or excavating any ditch or other opening thereon; or by turning a current of water so as to saturate, wash or damage the same; or by plowing in or across or on the slopes of the side gutters or ditches; or by placing any material in such ditches; or leaving the cuttings of any landscape waste thereon or in any way interfering with the free flow of water therein. The placing of culverts or the change of drainage flow within the public highway right of way shall be unlawful without first obtaining a permit from the village engineer in accordance with the provisions of title 10 of this code.

(C) Any owner of property to allow the erosion(s) or transfer of sediment or material from the owner's property onto village maintained roadway(s). (Ord. 04-16, 12-20-2004)

4-4-2: NOTICE OF VIOLATION:

Whenever the building and zoning enforcement officer shall determine, in the course of his duties, the existence of a violation of section 4-4-1 of this chapter, the building officer shall provide notice of the violation in accordance with the provisions of subsection 4-1-7(B) of this title, or, where appropriate, shall issue a stop work order in accordance with the provisions of subsection 4-1-7(C) of this title. (Ord. 92-15, 8-24-1992)

4-4-3: APPEAL:

Any person aggrieved by any action taken or determination made pursuant to this chapter, other than the issuance of a stop work order pursuant to subsection 4-1-7(C) of this title, may appeal to the Barrington Hills plan commission in accordance with the provisions of subsection 4-3-4(D) of this title, upon payment of a filing fee of one hundred dollars ($100.00). Within thirty (30) days following the plan commission hearing, the plan commission shall transmit its findings and recommendations in writing to the village president and the board of trustees for final disposition. (Ord. 92-15, 8-24-1992)

4-4-4: VIOLATIONS AND PENALTIES:

No person shall unreasonably alter the natural course of drainage and seepage of surface waters or cause the same to be done, contrary to or in violation of any provisions of this chapter. Any person found to be in violation of the provisions of this chapter shall be deemed guilty of a separate offense

for each and every day during which any violation thereof is committed, continued or permitted and, upon conviction of any such violation, such person shall be punished by a fine of not more than seven hundred fifty dollars ($750.00) for each offense. In addition to any other penalty authorized by this section, any person convicted of violating any of the provisions of this chapter shall be required to restore the property to the condition existing prior to commission of the violation and to bear the expense of such restoration. (Ord. 13-10, 6-24-2013)

CHAPTER 5
FLOOD DAMAGE PREVENTION

4-5-1: PURPOSE:

This chapter is enacted pursuant to the village's home rule authority and the police powers granted to it by 65 Illinois Compiled Statutes 5/1-2-1, 5/11-12-12, 5/11-30-2, 5/11-30-8, and 5/11-31-2. The purpose of this chapter is to maintain this village's eligibility in the national flood insurance program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources. This chapter is adopted in order to accomplish the following specific purposes:

(A) To meet the requirements of the rivers, lakes and streams act[1];

(B) To assure that new development does not increase the flood or drainage hazards to others, or creating unstable conditions susceptible to erosion;

(C) To protect new buildings and major improvements to buildings from flood damage;

(D) To protect human life and health from the hazards of flooding;

(E) To lessen the burden on the taxpayer for flood control projects, repairs to flood damaged public facilities and utilities, and flood rescue and relief operations;

(F) To make federally subsidized flood insurance available for property in the village by fulfilling the requirements of the national flood insurance program;

(G) To comply with the rules and regulations of the national flood insurance program codified as 44 CFR 59-79, as amended;

(H) To protect, conserve, and promote the orderly development of land and water resources; and

(I) To preserve the natural characteristics and functions of watercourses and floodplains in order to moderate flood and storm water impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development. (Ord. 07-03, 1-22-2007)

4-5-2: DEFINITIONS:

For the purposes of this chapter, the following definitions are adopted:

ACCESSORY STRUCTURE: A nonhabitable structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

ACT: The rivers, lakes and streams act[2].

APPLICANT: Any person, firm, corporation or agency which submits an application.

APPROPRIATE USE: Only uses of the designated floodway that are permissible and will be considered for permit issuance. The only uses that will be allowed are as specified in subsection 4-5-7(B) of this chapter.

BASE FLOOD: The flood having a one percent (1%) chance of being equaled or exceeded in any given year. The base flood is also known as the 100-year frequency flood event. Application of the base flood elevation at any location is as defined in section 4-5-5 of this chapter.

BASE FLOOD ELEVATION (BFE): The elevation in relation to mean sea level of the crest of the base flood.

BASEMENT: That portion of the building having its floor subgrade (below ground level) on all sides.

BUILDING: A walled and roofed structure, including gas or liquid storage tank, that is principally above ground, including manufactured homes, prefabricated buildings, and gas or liquid storage tanks. The term also includes recreational vehicles and travel trailers installed on a site for more than one hundred eighty (180) days per year.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainageway, which has a definite bed and banks or shoreline, in or into which surface or ground water flows, either perennially or intermittently.

CHANNEL MODIFICATION: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, riprapping (or other armoring), widening, deepening, straightening, relocating, lining and significant removal of native vegetation from the bottom or banks. Channel modification does not include the clearing of dead or dying vegetation, debris, or trash from the channel. Channelization is a severe form of channel modification involving a significant change in the channel cross section and typically involving relocation of the existing channel (e.g., straightening).

COMPENSATORY STORAGE: An artificially excavated, hydraulically equivalent volume of storage

within the SFHA used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the floodplain. The uncompensated loss of natural floodplain storage can increase off site floodwater elevations and flows.

CONDITIONAL APPROVAL OF A DESIGNATED FLOODWAY MAP CHANGE: Preconstruction approval by IDNR/OWR and FEMA of a proposed change to the floodway map. This preconstruction approval, pursuant to this part, gives assurances to the property owner that once an appropriate use is constructed according to permitted plans, the floodway map can be changed, as previously agreed, upon review and acceptance of as built plans.

CONDITIONAL LETTER OF MAP REVISION (CLOMR): A letter which indicates that FEMA will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective flood hazard boundary map or flood insurance rate map, once the as built plans are submitted and approved.

CONTROL STRUCTURE: A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

CRITICAL FACILITY: Any facility which is critical to the health and welfare of the population and, if flooded, would create an added dimension to the disaster. Damage to these critical facilities can impact the delivery of vital services, can cause greater damage to other sectors of the community, or can put special populations at risk. Examples of critical facilities where flood protection should be required include: emergency services facilities (such as fire and police stations), schools, hospitals, retirement homes and senior care facilities, major roads and bridges, critical utility sites (telephone switching stations or electrical transformers), and hazardous material storage facilities (chemicals, petrochemicals, hazardous or toxic substances). Examples of critical facilities where flood protection is recommended include: sewage treatment plants, water treatment plants, and pumping stations.

DAM: All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Dams may also include weirs, restrictive culverts or impoundment structures. Underground water storage tanks are not included.

DESIGNATED FLOODWAY: The channel, including on stream lakes, and that portion of the floodplain adjacent to a stream or watercourse, generally depicted on the FEMA FIRM map, which is needed to store and convey the existing 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more than a ten percent (10%) increase in velocities.

(A) The floodways are designated for on the countywide flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk. When two (2) floodway maps exist for a waterway, the more restrictive floodway limit shall prevail.

(B) The floodways for those parts of unincorporated Cook, Kane, Lake, and McHenry Counties that are within the extraterritorial jurisdiction of the village that may be annexed into the village are designated for the Fox River, Flint Creek, and Spring Creek on the countywide flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk.

(C) To locate the designated floodway boundary on any site, the designated floodway boundary should be scaled off the designated floodway map and located on a site plan, using reference marks

common to both maps. Where interpretation is needed to determine the exact location of the designated floodway boundary, IDNR/OWR should be contacted for the interpretation.

DEVELOPMENT: Any manmade change to real estate, including:

(A) Construction, reconstruction, repair, or placement of a building or any addition to a building.

(B) Installing a manufactured home on a site, preparing a site for a manufactured home, or installing a travel trailer or recreational vehicle on a site for more than one hundred eighty (180) days. If the travel trailer or recreational vehicle is on site for more than one hundred eighty (180) days, it must be fully licensed and ready for highway use.

(C) Drilling, mining, installing utilities, construction of roads, bridges, or similar projects.

(D) Demolition of a structure or redevelopment of a site.

(E) Clearing of land as an adjunct of construction.

(F) Construction or erection of levees, walls, fences, dams, or culverts; channel modification; filling, dredging, grading, excavating, paving, or other nonagricultural alterations of the ground surface; storage of materials; deposit of solid or liquid waste.

(G) Any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal.

(H) Substantial improvement of an existing building.

Development does not include routine maintenance of existing buildings and facilities such as reroofing or resurfacing of roads when there is no increase in elevation, or gardening, plowing, and similar agricultural practices that do not involve filling, grading, or construction of levees.

ELEVATION CERTIFICATES: A form published by FEMA that is used to certify the elevation to which a building has been elevated.

EROSION: The general process whereby soils are moved by flowing water or wave action.

EXEMPT ORGANIZATIONS: Organizations which are exempt from this chapter including state, federal or local units of government.

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) has been completed before April 1, 1990.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FEMA: Federal emergency management agency and its regulations at 44 CFR 59-79, as amended.

FLOOD: A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waves, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD FREQUENCY: A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

FLOOD FRINGE: That portion of the floodplain outside of the designated floodway.

FLOOD INSURANCE RATE MAPS (FIRM): A map prepared by FEMA that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and floodplains and may or may not depict floodways.

FLOOD INSURANCE STUDY: An examination, evaluation and determination of flood hazards and if appropriate, corresponding water surface elevations.

FLOOD PROTECTION ELEVATION (FPE): The elevation of the base flood or 100-year frequency floods plus one foot (1') of freeboard at any given location in the SFHA.

FLOODPLAIN: That land typically adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation. Floodplains may also include detached special flood hazard areas, ponding areas, etc. The floodplain is also known as the special flood hazard area (SFHA).

(A) The floodplains are those lands within the jurisdiction of the village that are subject to inundation by the base flood or 100-year frequency flood. The SFHAs of the village are generally identified as such on the panel number(s) indicated in appendix A attached to the ordinance codified herein for the countywide flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk.

(B) The SFHAs of those parts of unincorporated Cook, Kane, Lake, and McHenry Counties that are within the extraterritorial jurisdiction of the village or that may be annexed into the village are generally identified as such on the panel number(s) indicated in appendix A attached to the ordinance codified herein for the countywide flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk.

FLOODPROOFING: Any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODPROOFING CERTIFICATE: A form published by FEMA that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

FLOODWAY: See definition of Designated Floodway.

HISTORIC STRUCTURE: Any structure that is:

(A) Listed individually in the national register of historic places or preliminarily determined by the secretary of the interior as meeting the requirements for individual listing on the national register;

(B) Certified or preliminarily determined by the secretary of the interior as contributing to the historic district or a district preliminarily determined by the secretary to qualify as a registered historic district;

(C) Individually listed on the state inventory of historic places by the Illinois historic preservation agency; or

(D) Individually listed on a local inventory of historic places that has been certified by the Illinois historic preservation agency.

HYDROLOGIC AND HYDRAULIC CALCULATIONS: Engineering analysis which determine expected flood flows and flood elevations based on land characteristics and rainfall events.

IDNR/OWR: Illinois department of natural resources, office of water resources.

LETTER OF MAP AMENDMENT (LOMA): Official determination by FEMA that a specific structure is not in a 100-year floodplain; amends the FIRM.

LETTER OF MAP REVISION (LOMR): Letter that revises base flood or 100-year frequency flood elevations, floodplains or floodways as shown on an effective FIRM.

LOWEST FLOOR: The lowest floor of the lowest enclosed area (including basement) of a building. An unfinished or flood resistant enclosure usable solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a buildings lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter.

MANUFACTURED HOME: A structure, transportable in one or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on site for more than one hundred eighty (180) consecutive days. The term "manufactured home" does not include a "recreational vehicle".

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

MITIGATION: Includes those measures necessary to minimize the negative effects which floodplain development activities might have on the public health, safety and welfare. Examples of mitigation include: excavation of compensatory storage, soil erosion and sedimentation control, and channel restoration. Mitigation may also include those activities taken to reduce a structure's susceptibility to flooding.

NAVD 88: North American vertical datum of 1988. NAVD 88 supersedes the national geodetic vertical datum of 1929 (NGVD).

NATURAL: When used in reference to channels means those channels formed by the existing surface topography of the earth prior to changes made by man. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no substantial alteration of the course or cross section of the stream caused by filling or excavating. A modified channel may regain some natural characteristics over time as the channel meanders and vegetation is reestablished. Similarly, a modified channel may be restored to more natural conditions by man through regrading and revegetation.

NEW CONSTRUCTION: Structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION: Manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) has been completed on or after April 1, 1990.

ORDINARY HIGH WATER MARK (OHWM): The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation or other easily recognized characteristics.

PUBLIC BODIES OF WATERS: All open public streams and lakes capable of being navigated by watercraft, in whole or in part, for commercial uses and purposes, and all lakes, rivers, and streams which in their natural condition were capable of being improved and made navigable, or that are connected with or discharge their waters into navigable lakes or rivers within, or upon the borders of the state of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water directly accessible thereto.

PUBLIC FLOOD CONTROL PROJECT: A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures, including a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

RECREATIONAL VEHICLE OR TRAVEL TRAILER: A vehicle which is:

(A) Built on a single chassis;

(B) Four hundred (400) square feet or less when measured at the largest horizontal projection;

(C) Designed to be self-propelled or permanently towable by a light duty truck; and

(D) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

REGIONAL PERMITS: Offered for preapproved projects which are considered minor projects that are permissible per IDNR/OWR part 3708 rules for Northeastern Illinois regulatory floodways. A complete listing of the terms and conditions for specific project types can be obtained from the IDNR/OWR website.

REGISTERED LAND SURVEYOR: A land surveyor registered in the state of Illinois, under the Illinois land surveyors act[3].

REGISTERED PROFESSIONAL ENGINEER: An engineer registered in the state of Illinois, under the Illinois professional engineering practice act[4].

REPAIR, REMODELING OR MAINTENANCE: Development activities which do not result in any increases in the outside dimensions of a building or any changes to the dimensions of a structure.

REPETITIVE LOSS: Flood related damages sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty five percent (25%) of the market value of the structure before the damaged occurred.

RETENTION/DETENTION FACILITY: A retention facility stores stormwater runoff without a gravity release. A detention facility provides for storage of stormwater runoff and controlled release of this runoff during and after a flood or storm.

RIVERINE SFHA: Any SFHA subject to flooding from a river, creek, intermittent stream, ditch, on stream lake system or any other identified channel. This term does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow, or other areas not subject to overbank flooding.

RUNOFF: The water derived from melting snow or rain falling on the land surface, flowing over the surface of the ground or collected in channels or conduits.

SEDIMENTATION: The processes that deposit soils, debris, and other materials either on other ground surfaces or in bodies of water or watercourses.

SPECIAL FLOOD HAZARD AREA (SFHA): See definition of Floodplain.

START OF CONSTRUCTION: Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or placement of a manufactured home on a foundation.

STATEWIDE PERMITS: Offered for preapproved projects that are considered minor projects which are permissible per the IDNR/OWR part 3700 rules. A complete listing of the statewide permits and permit requirements can be obtained from the IDNR/OWR website.

STRUCTURE: See definition of Building.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the cumulative percentage of damage during the life of the building equals or exceeds fifty percent (50%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes repetitive loss buildings. See definition of Repetitive Loss.

SUBSTANTIAL IMPROVEMENT: Any reconstruction, rehabilitation, addition, or improvement of a structure taking place during the life of the building which the cumulative percentage of improvements equals or exceeds fifty percent (50%) of the market value of the structure before the improvement or repair is started.

(A) "Substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual work done.

(B) The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or

2. Any alteration of a "historic structure" listed on the national register of historic places or the Illinois register of historic places, provided that the alteration will not preclude the structure's continued designation as a historic structure.

TRANSITION SECTION: Reaches of the stream or floodway where water flows from a narrow cross section to a wide cross section or vice versa.

VIOLATION: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance is presumed to be in violation until such time as that documentation is provided. (Ord. 07-03, 1-22-2007; amd. Ord. 08-12, 7-28-2008)

4-5-3: HOW TO USE THIS CHAPTER:

(A) The village engineer shall be responsible for fulfilling all of the duties listed in section 4-5-4 of this chapter.

(B) To fulfill those duties, the village engineer should first use the criteria listed in section 4-5-5, "Base Flood Elevation", of this chapter to determine whether the development site is located within a floodplain.

(C) Once it has been determined that a site is located within a floodplain, the village engineer must determine whether the development site is within a flood fringe, a designated floodway, or within an SFHA or floodplain for which no floodway has been identified.

1. If the site is within a flood fringe, the village engineer shall require that the minimum requirements of section 4-5-6 of this chapter be met.

2. If the site is within a floodway, the village engineer shall require that the minimum requirements of section 4-5-7 of this chapter be met.

3. If the site is located within an SFHA or floodplain for which no detailed study has been completed and approved, the village engineer shall require that the minimum requirements of section 4-5-8 of this chapter be met.

(D) In addition, the general requirements of section 4-5-9 of this chapter shall be met for all developments meeting the requirements of section 4-5-6, 4-5-7, or 4-5-8 of this chapter.

(E) The village engineer shall assure that all subdivision proposals shall meet the requirements of section 4-5-10 of this chapter.

(F) If a variance is to be granted for a proposal, the village engineer shall review the requirements of section 4-5-11 of this chapter to make sure they are met. In addition, the village engineer shall complete all notification requirements.

(G) In order to assure that property owners obtain permits as required in this chapter, the village engineer may take any and all actions as outlined in section 4-5-13 of this chapter. (Ord. 07-03, 1-22-2007)

4-5-4: DUTIES OF THE VILLAGE ENGINEER:

(A) Determining the Floodplain Designation:

1. Check all new development sites to determine whether they are in a special flood hazard area (SFHA).

2. If they are in an SFHA, determine whether they are in a floodway, flood fringe or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile.

3. Check whether the development is potentially within an extended SFHA (with a drainage area less than 1 square mile), indicating that the development would have adverse impacts regarding storage, conveyance, or inundation which would be the basis for the applicant being required to delineate the floodplain and floodway and be subject to the remaining sections of this chapter.

(B) Professional Engineer Review:

1. If the development site is within a floodway or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile, the permit shall be referred to a registered professional engineer under the employ or contract of the village for review to ensure that the development meets section 4-5-7 or 4-5-8 of this chapter.

2. In the case of an appropriate use, the professional engineer shall state in writing that the development meets the requirements of section 4-5-7 of this chapter.

(C) Dam Safety Requirements:

1. Dams are classified as to their size and their hazard/damage potential in the event of failure.

2. The construction or major modification of all class I (high hazard) and class II (moderate hazard) dams require an IDNR/OWR dam safety permit.

3. Some class III (low hazard) dams require an IDNR/OWR dam safety permit, depending on the drainage area to the dam, the height of the dam and the impounding capacity behind the dam. Most off channel detention basins that have an embankment are nonjurisdictional class III dams. It is not required that IDNR/OWR "sign off" on all nonjurisdictional class III dams.

4. A consulting engineer with dam safety knowledge can estimate a hazard classification and determine if an IDNR/OWR dam safety permit is required.

5. A permit application submittal must be made to IDNR/OWR for the construction or major modification of jurisdictional dams.

6. Regulated dams may include weirs, restrictive culverts or impoundment structures.

(D) Other Permit Requirements: Ensure any and all required federal, state and local permits are received prior to the issuance of a floodplain development permit.

(E) Plan Review and Permit Issuance:

1. Ensure that all development activities within the SFHAs of the jurisdiction of the village meet the requirements of this chapter; and

2. Issue a floodplain development permit in accordance with the provisions of this chapter and other regulations of this community when the development meets the conditions of this chapter.

(F) Inspection Review:

1. Inspect all development projects before, during and after construction to assure proper elevation of the structure and to ensure compliance with the provisions of this chapter; and

2. Schedule on an annual basis an inspection of the floodplain and document the results of the inspection.

(G) Damage Determinations: Make damage determinations of all damaged buildings in the SFHA after a flood to determine substantially damaged structures which must comply with subsection 4-5-9(C) of this chapter.

(H) Elevation and Floodproofing Certificates: Maintain permit files including:

1. An elevation certificate certifying the elevation of the lowest floor (including basement) of a residential or nonresidential building subject to section 4-5-9 of this chapter; and/or

2. The elevation to which a nonresidential building has been floodproofed, using a floodproofing certificate, for all buildings subject to section 4-5-9 of this chapter.

(I) Records For Public Inspection: Maintain for public inspection and furnish upon request base flood data, SFHA and designated floodway maps, copies of federal or state permit documents, variance documentation, conditional letter of map revision, letter of map revision, letter of map amendment and "as built" elevation and floodproofing and/or elevation certificates for all buildings constructed subject to this chapter.

(J) State Permits: Ensure that construction authorization has been granted by IDNR/OWR, for all development projects subject to sections 4-5-7 and 4-5-8 of this chapter, unless enforcement responsibility has been delegated to the village. However, the following review approvals are not delegated to the village and shall require review or permits from IDNR/OWR:

1. Organizations which are exempt from this chapter, as per the Illinois Compiled Statutes;

2. Dams and all other state, federal or local unit of government projects, including projects of the village and county, except for those projects meeting the requirements of subsection 4-5-7(B)1 of this chapter;

3. An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per subsection 4-5-7(B)3e of this chapter;

4. An engineer's analysis of the flood profile due to subsection 4-5-7(B)3d of this chapter;

5. Alternative transition sections and hydraulically equivalent compensatory storage as indicated in subsection 4-5-7(B)3 of this chapter;

6. Permit issuance of structures within, under, or over publicly navigable rivers, lakes and streams;

7. Any changes in the mapped floodway or published flood profiles.

(K) Cooperation with Other Agencies:

1. Cooperate with state and federal floodplain management agencies to improve base flood or 100-year frequency flood and floodway data and to improve the administration of this chapter;

2. Submit data to IDNR/OWR and FEMA for proposed revisions of a regulatory map within six (6) months whenever a modification of the floodplain may change the base flood elevation or result in a change to the floodplain map;

3. Submit reports as required for the national flood insurance program; and

4. Notify FEMA of any proposed amendments to this chapter.

(L) Promulgate Regulations: Promulgate rules and regulations as necessary to administer and enforce the provisions of this chapter, subject however to the review and approval of IDNR/OWR and FEMA for any chapter changes. (Ord. 07-03, 1-22-2007)

4-5-5: BASE FLOOD ELEVATION:

This chapter's protection standard is based on the flood insurance study for the village. If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available from federal, state or other sources. When a party disagrees with the best available data, they shall submit a detailed engineering study needed to replace existing data with better data and submit it to IDNR/OWR and FEMA for review and consideration prior to any development of the site. (Ord. 07-03, 1-22-2007)

(A) The base flood or 100-year frequency flood elevation for the SFHAs of the Fox River, Flint Creek, and Spring Creek shall be as delineated on the 100-year flood profiles in the flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk, and such amendments to such study and maps as may be prepared from time to time.

(B) The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Cook, Kane, Lake, and McHenry Counties that are within the extraterritorial jurisdiction of the village or that may be annexed into the village shall be as delineated on the 100-year flood profiles in the flood insurance rate map prepared by the federal emergency management agency, in effect from time to time as listed in appendix A attached to the ordinance codified herein, as maintained by the village clerk, and such amendments or revisions to such study and maps as may be prepared from time to time. (Ord. 07-03, 1-22-2007; amd. Ord. 08-12, 7-28-2008)

(C) The base flood or 100-year frequency flood elevation for each SFHA delineated as an "AH zone" or "AO zone" shall be that elevation (or depth) delineated on the countywide flood insurance rate map of Cook, Kane, Lake, and McHenry Counties.

(D) The base flood or 100-year frequency flood elevation for each of the remaining SFHAs delineated as an "A zone" on the countywide flood insurance rate map of Cook, Lake, Kane, and McHenry Counties shall be according to the best existing data available from federal, state or other sources. Should no other data exist, an engineering study must be financed by the applicant to determine base flood elevations.

1. When no base flood or 100-year frequency flood elevation exists, the base flood or 100-year frequency flood elevation for a riverine SFHA shall be determined from a backwater model, such as HEC-II, HEC-RAS, or a dynamic model such as HIP.

2. The flood flows used in the hydraulic models shall be obtained from a hydrologic model, such as HEC-HMS, HEC-1, TR-20, or HIP, or by techniques presented in various publications prepared by the United States geological survey for estimating peak flood discharges.

3. For a nonriverine SFHA, the base flood elevation shall be the historic flood of record plus three feet (3'), unless calculated by a detailed engineering study.

4. For an unmapped extended SFHA (with a drainage area less than 1 square mile) which has been identified by the village engineer pursuant to subsection 4-5-4(A)3 of this chapter, the base flood elevation shall be determined by the applicant utilizing a method as approved in this subsection (D). (Ord. 07-03, 1-22-2007)

4-5-6: OCCUPATION AND USE OF FLOOD FRINGE AREAS:

Development in and/or filling of the flood fringe will be permitted if protection is provided against the base flood or 100-year frequency flood by proper elevation, and compensatory storage, and other applicable provisions of this chapter. No use will be permitted which adversely affects the capacity of drainage facilities or systems. Developments located within the flood fringe shall meet the requirements of this section, along with the requirements of section 4-5-9 of this chapter.

(A) Development Permit:

1. No person, firm, corporation, or governmental body not exempted by law shall commence any development in the SFHA without first obtaining a development permit from the village.

2. Application for a development permit shall be made on a form provided by the village.

   a. The application shall be accompanied by drawings of the site, drawn to scale, showing property line dimensions and legal description for the property and sealed by a licensed engineer, architect or land surveyor; existing grade elevations, using the North American vertical datum of 1988, and all changes in grade resulting from excavation or filling; the location and dimensions of all buildings and additions to buildings.

   b. For all proposed buildings, the elevation of the lowest floor (including basement) and lowest adjacent grade shall be shown on the submitted plans and the development will be subject to the requirements of section 4-5-9 of this chapter.

3. Upon receipt of a development permit application, the village shall compare the elevation of the site to the base flood or 100-year frequency flood elevation.

   a. Any development located on land that can be shown to be higher than the base flood elevation of the current flood insurance rate map and which has not been filled after the date of the site's first flood insurance rate map without a permit as required by this chapter is not in the SFHA and, therefore, not subject to the requirements of this chapter. Conversely, any development located on land shown to be below the base flood elevation and hydraulically connected, but shown on the current flood insurance rate map is subject to the provisions of this chapter.

b. The village shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first flood insurance rate map identification.

4. A soil erosion and sediment control plan for disturbed areas shall be submitted. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure postconstruction maintenance.

5. The applicant shall submit copies of all other federal, state, and local permits, approvals or waivers that may be required for this type of activity to the village. The village shall not issue a permit unless all other federal, state, and local permits have been obtained.

(B) Preventing Increased Damages: No development in the flood fringe shall create a threat to public health and safety.

1. Fill: If fill is being used to elevate the site above the base flood or 100-year frequency flood elevation, the applicant shall submit sufficient data and obtain a letter of map revision (LOMR) from FEMA for the purpose of removing the site from the floodplain.

2. Compensatory Storage:

a. Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation.

b. The excavation volume shall be at least equal to 1.5 times the volume of storage lost due to the fill or structure.

c. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied.

d. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation.

e. All such excavations shall be constructed to drain freely and openly to the watercourse.

(C) Construction Of The Lowest Floor Below The Base Flood Elevation (BFE): A person who has obtained an LOMR based on fill that removes a site in the flood fringe from the floodplain due to the use of fill to elevate the site above the BFE, may apply for a permit from the village to construct the lowest floor of a residential building below the BFE in the flood fringe. The village engineer shall not issue such a permit unless the applicant has complied with all the criteria set forth in the following subsections:

1. Compensatory storage shall be provided per subsection (B) of this section.

2. The elevation of the lowest opening in the basement wall (i.e., window wells, accessways) shall be at or above the flood protection elevation (FPE).

3. The lowest adjacent grade to the foundation shall be at or above the FPE, for a minimum distance of ten feet (10') beyond the outside face of the structure. However, if site conditions are such that this requirement cannot be met, the village may waive the ten foot (10') minimum setback if an Illinois registered professional engineer certifies that an alternative method to protect the building from damage due to hydrostatic pressures has been met. The certifications shall be in the form of a detailed soils and structural design analysis, which shall be submitted to the village engineer for review. The village may require such additional documentation as necessary to prove that the proposed shorter setback distance will keep the structure reasonably safe. In no case shall the setback distance be less than four feet (4').

4. The grade around the perimeter of the structure, measured at a distance of twenty feet (20') from the structure, shall be above the BFE. However, if site conditions are such that this requirement cannot be obtained, the village may waive the twenty foot (20') minimum setback distance if an Illinois registered professional engineer certifies that an alternative method to protect the building from damages due to hydrostatic pressures have been met. A detailed soils analysis and structural design proving that a shorter setback distance will keep the structure reasonably safe from flooding, shall be submitted to the village for review. In no case shall the setback distance be less than four feet (4').

5. The ground around the building shall be compacted fill that meets all requirements of this subsection and is at least five feet (5') thick under the basement floor slab. Nothing in this subsection shall be interpreted to require the removal or replacement of fill that was placed as part of an LOMR-F, if such fill consists of material, including soils of similar classification and degree permeability, such as those classified as CH, CL, SC or ML according to ASTM standard D-2487, classification of soils for engineering purposes.

6. The fill material must be homogeneous and isotropic; that is, the soil must be all of one material, and the engineering priorities must be in the same direction.

7. All fill material and compaction shall be designed, certified and inspected by an Illinois registered professional engineer, as warranted by the site conditions.

8. The basement floor shall be at an elevation that is no more than five (5) below the BFE.

9. There shall be a granular drainage layer beneath the floor slab, and minimum of one-fourth ($^1/_4$) horsepower sump pump with a backup power supply shall be provided to remove seepage flow. The pump shall be rated at four (4) times the estimated seepage rate and shall discharge above the BFE and away from the building in order to prevent flooding of the basement or uplift of the floor under the effect of the seepage pressure.

10. The drainage system shall be equipped with a positive means of preventing backflow.

11. All foundation elements shall be designed to withstand hydrostatic pressure in accordance with accepted engineering practices.

12. If the applicant is unable to meet all of the requirements set forth in the preceding paragraphs of this subsection, the village may allow the construction of a basement below the BFE only if the applicant demonstrates that the proposed fill and structure meet the guidelines and requirements set forth in FEMA technical bulletin 10-01 and are reasonably safe from flooding. In order to

demonstrate that the proposed structure is reasonably safe from flooding, the applicant shall submit a detailed engineering analysis of the proposed fill and foundation wall. The engineered basement study shall be completed in accordance with the latest edition of FEMA technical bulletin 10-01, with the analysis of the fill being prepared by an Illinois registered professional engineer.

13. In order to provide the required compensatory storage on site, in no case shall the depth of excavation in the front and side yards of the lot exceed eighteen inches (18"), as measured from the previously existing natural grade. The rear yard shall be permitted to have a greater depth of excavation, if necessary. All such excavation shall be constructed to drain freely and openly to the watercourse or storm sewer system. The use of mechanical means to drain the compensatory storage area will not be permitted. (Ord. 07-03, 1-22-2007)

4-5-7: OCCUPATION AND USE OF DESIGNATED FLOODWAYS:

This section applies to proposed development, redevelopment, site modification or building modification within a designated floodway. The designated floodway for the Fox River, Flint Creek, and Spring Creek shall be as delineated on the countywide flood insurance rate map of Cook, Lake, Kane, and McHenry Counties. Only those uses and structures will be permitted which meet the criteria in this section. All floodway modifications shall be the minimum necessary to accomplish the purpose of the project. The development shall also meet the requirements of section 4-5-9 of this chapter.

(A) Development Permit: No person, firm, corporation or governmental body not exempted by state law shall commence any development in a floodway without first obtaining a development permit from the village and IDNR/OWR.

1. Application for a development permit shall be made on a form provided by the village. The application shall include the following information:

a. Name and address of applicant;

b. Site location (including legal description) of the property, drawn to scale, on the designated floodway map, indicating whether it is proposed to be in an incorporated or unincorporated area;

c. Name of stream or body of water affected;

d. Description of proposed activity;

e. Statement of purpose of proposed activity;

f. Anticipated dates of initiation and completion of activity;

g. Name and mailing address of the owner of the subject property if different from the applicant;

h. Signature of the applicant or the applicant's agent;

i. If the applicant is a corporation, the president or other authorized officer shall sign the application form;

j. If the applicant is a partnership, each partner shall sign the application form; and

k. If the applicant is a land trust, the trust officer shall sign the name of the trustee by him (her) as trust officer. A disclosure affidavit shall be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interests therein.

l. Plans of the proposed activity shall be provided which include as a minimum:

(1) A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;

(2) A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations, using the North American vertical datum of 1988, adjacent property lines and ownership, drainage and flood control easements, location of any channels and any existing or future access roads, distance between proposed activity and navigation channel (when the proposed construction is near a commercially navigable body of water), designated floodway limit, floodplain limit, specifications and dimensions of any proposed channel modifications, location and orientation of cross sections, north arrow, and a graphic or numerical scale;

(3) Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphic or numerical scales (horizontal and vertical);

(4) A soil erosion and sediment control plan for disturbed areas. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure postconstruction maintenance;

(5) A copy of the designated floodway map, marked to reflect any proposed change in the designated floodway location.

m. Any and all other federal, state, and local permits or approval letters that may be required for this type of development.

n. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the permit criteria of this section.

o. If the designated floodway delineation, base flood or 100-year frequency flood elevation will change due to the proposed project, the application will not be considered complete until IDNR/OWR has indicated conditional approval of the designated floodway map change. No structures may be built until a letter of map revision has been approved by FEMA.

p. The application for a structure shall be accompanied by drawings of the site, drawn to scale showing property line dimensions and existing ground elevations and all changes in grade resulting from any proposed excavation or filling, and floodplain and floodway limits; sealed by a registered professional engineer, licensed architect or registered land surveyor; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 4-5-9 of this chapter.

q. If the proposed project involves a channel modification, the applicant shall submit the following information:

(1) A discussion of the purpose of and need for the proposed work;

(2) A discussion of the feasibility of using alternative locations or methods (see 802.3.9) to accomplish the purpose of the proposed work;

(3) An analysis of the extent and permanence of the impacts each feasible alternative identified in subsection (B)3i of this section would have on the physical and biological conditions of the body of water affected; and

(4) An analysis of the impacts of the proposed project, considering cumulative effects on the physical and biological conditions of the body of water affected.

2. The village engineer shall be responsible for obtaining from the applicant copies of all other federal, state, and local permits and approvals that may be required for this type of activity.

a. The village shall not issue the development permit unless all required federal and state permits have been obtained.

b. The village engineer shall review and approve applications reviewed under this section.

(B) Preventing Increased Damages And A List Of Appropriate Uses:

1. The only development in a floodway which will be allowed are appropriate uses, which will not cause a rise in the base flood elevation, and which will not create a damaging or potentially damaging increase in flood heights or velocity or be a threat to public health and safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter. Only those appropriate uses listed in 17 Illinois administrative code part 3708 will be allowed. The approved appropriate uses are as follows:

a. Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion, or water quality or habitat for fish and wildlife;

b. Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements related to recreational boating, commercial shipping and other functionally water dependent uses;

c. Storm and sanitary sewer relief curtails;

d. Underground and overhead utilities;

e. Recreational facilities such as playing fields and trail systems, including any related fencing (at least 50 percent open when viewed from any 1 direction) built parallel to the direction of flood flows, and including open air pavilions and toilet facilities (4 stall maximum) that will not block flood flows nor reduce floodway storage;

f. Detached garages, storage sheds, or other nonhabitable accessory structures that will not block flood flows nor reduce floodway storage;

g. Bridges, culverts, roadways, sidewalks, railways, runways and taxiways and any modification thereto;

h. Parking lots built at or below existing grade where either:

(1) The depth of flooding at the 100-year frequency flood event will not exceed 1.0 foot; or

(2) The applicant of a short term recreational use facility parking lot formally agrees to restrict access during overbank flooding events and accepts liability for all damage caused by vehicular access during all overbank flooding events;

i. Designated floodway regrading, without fill, to create a positive nonerosive slope toward a watercourse;

j. Floodproofing activities to protect previously existing lawful structures including the construction of watertight window wells, elevating structures, or construction of floodwalls around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten feet (10') away from the exterior wall of the existing structure, and, which are not considered substantial improvements to the structure;

k. The replacement, reconstruction, or repair of a damaged building, provided that the outside dimensions are not increased, and if the building was damaged to fifty percent (50%) or more of the market value before the damage occurred, the building will be protected from flooding to the flood protection elevation;

l. Modifications to an existing building that would not increase the enclosed floor area of the building below the 100-year frequency flood elevation, and which will not block flood flows including, but not limited to, fireplaces, bay windows, decks, patios, and second story additions. If the building is improved to fifty percent (50%) or more of the market value before the modification occurred (i.e., a substantial improvement), the building will be protected from flooding to the flood protection elevation.

2. Appropriate uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise nonappropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined above as an appropriate use.

3. Within the designated floodway, the construction of an appropriate use will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data by a registered professional engineer and provided that any structure meets the protection requirements of section 4-5-9 of this chapter:

a. Preservation Of Flood Conveyance, So As Not To Increase Flood Stages Upstream: For appropriate uses other than bridge or culvert crossings, on stream structures or dams, all effective designated floodway conveyance lost due to the project will be replaced for all flood events up to and including the 100-year frequency flood. In calculating effective designated floodway conveyance, the following factors shall be taken into consideration:

(1) Designated floodway conveyance, "K" = (1.486/n)($AR^{2/3}$) where "n" is Manning's roughness factor, "A" is the effective flow area of the cross section, and "R" is the ratio of the area to the wetted perimeter. (See Ven Te Chow, "Open Channel Hydraulics" (McGraw-Hill, New York 1959).)

(2) The same Manning's "n" value shall be used for both existing and proposed conditions unless a recorded maintenance agreement with a federal, state, or local unit of government can assure the proposed conditions will be maintained or the land cover is changing from a vegetative to a nonvegetative land cover.

(3) Transition sections shall be provided and used in calculations of effective designated floodway conveyance. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

A. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length.

B. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length.

C. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used.

D. Transition sections shall be provided between cross sections with rapid expansions and contractions and when meeting the designated floodway delineation on adjacent properties.

E. All cross sections used in the calculations shall be located perpendicular to flood flows.

b. Preservation Of Floodway Storage So As Not To Increase Downstream Flooding:

(1) Compensatory storage shall be provided for any designated floodway storage lost due to the proposed work from the volume of fill or structures placed and the impact of any related flood control projects.

(2) Compensatory storage for fill or structures shall be equal to at least 1.5 times the volume of floodplain storage lost.

(3) Artificially created storage lost due to a reduction in head loss behind a bridge shall not be required to be replaced.

(4) The compensatory designated floodway storage shall be placed between the proposed normal water elevation and the proposed 100-year flood elevation. All designated floodway storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All designated floodway storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

(5) If the compensatory storage will not be placed at the location of the proposed construction, the applicant's engineer shall demonstrate through a determination of flood discharges and water surface elevations that the compensatory storage is hydraulically equivalent.

(6) There shall be no reduction in floodway surface area as a result of a floodway modification, unless such modification is necessary to reduce flooding at existing structure.

c. Preservation of Floodway Velocities So as Not To Increase Stream Erosion or Flood Heights:

(1) For all appropriate uses, except bridges or culverts or on stream structures, the proposed work will not result in an increase in the average channel or designated floodway velocities or stage for all flood events up to and including the 100-year frequency event.

(2) In the case of bridges or culverts or on stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of riprap or other design measures.

d. Construction of New Bridges or Culvert Crossings and Roadway Approaches:

(1) The proposed structure shall not result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the 100-year frequency event; or the upstream flood stage increases will be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or floodwalls or within recorded flood easements.

(2) If the proposed construction will increase upstream flood stages greater than 0.1 foot, the developer must contact IDNR/OWR to obtain a permit for a dam or waiver.

A. The engineering analysis of upstream flood stages must be calculated using the flood study flows, and corresponding flood elevations for tailwater conditions for the flood study specified in section 4-5-5 of this chapter. Bridges and culverts must be analyzed using any commonly accepted FEMA approved hydraulic models.

B. Lost floodway storage must be compensated for per subsection (B)3b of this section.

C. Velocity increases must be mitigated per subsection (B)3c of this section.

D. If the crossing is proposed over a public water that is used for recreational or commercial navigation, an IDNR/OWR permit must be received.

E. The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed regulatory profile must be submitted to IDNR/OWR for concurrence that a CLOMR is not required by this subsection (B).

F. All excavations for the construction of the crossing shall be designed per subsection (B)3h of this section.

e. Reconstruction or Modification of Existing Bridges, Culverts, and Approach Roads:

(1) The bridge or culvert and roadway approach reconstruction or modification shall be constructed with no more than 0.1 foot increase in backwater over the existing flood profile for all flood frequencies up to and including the 100-year event, if the existing structure is not a source of flood damage.

(2) If the existing bridge or culvert and roadway approach is a source of flood damage to buildings or structures in the upstream floodplain, the applicant's engineer shall evaluate the feasibility of redesigning the structure to reduce the existing backwater, taking into consideration the effects on flood stages on upstream and downstream properties.

(3) The determination as to whether or not the existing crossing is a source of flood damage and should be redesigned must be prepared in accordance with 17 Illinois administrative code part 3708 (floodway construction in Northeastern Illinois) and submitted to IDNR/OWR for review and concurrence before a permit is issued.

f. On Stream Structures Built For The Purpose Of Backing Up Water:

(1) Any increase in upstream flood stages greater than 0.0 foot when compared to the existing conditions, for all flood events up to and including the 100-year frequency event shall be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or floodwalls or within recorded flood easements.

(2) A permit or letter indicating a permit is not required must be obtained from IDNR/OWR for any structure built for the purpose of backing up water in the stream during normal or flood flow.

(3) All dams and impoundment structures as defined in section 300.16 shall meet the permitting requirements of 17 Illinois administrative code part 3702 (construction and maintenance of dams). If the proposed activity involves a modification of the channel or floodway to accommodate an impoundment, it shall be demonstrated that:

A. The impoundment is determined to be in the public interest by providing flood control, public recreation, or regional stormwater detention;

B. The impoundment will not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;

C. The impoundment will not cause or contribute to degraded water quality or habitat conditions. Impoundment design should include gradual bank slopes, appropriate bank stabilization measures and a presedimentation basin;

D. A nonpoint source control plan has been implemented in the upstream watershed to control the effects of sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants. If there is more than one municipality in the upstream watershed, the municipality in which the impoundment is constructed should coordinate with upstream municipalities to ensure comprehensive watershed control;

E. The project otherwise complies with the requirements of this section.

g. Floodproofing of Existing Habitable, Residential and Commercial Structures:

(1) If construction is required beyond the outside dimensions of the existing building, the outside perimeter of the floodproofing construction shall be placed no further than ten feet (10') from the outside of the building.

(2) Compensation of lost storage and conveyance will not be required for floodproofing activities.

h. Excavation in the Floodway:

(1) When excavation is proposed in the design of bridges and culvert openings, including the modifications to and replacement of existing bridge and culvert structures, or to compensate for lost conveyance or other appropriate uses, transition sections shall be provided for the excavation.

(2) The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to IDNR/OWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:

A. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length; and

B. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length; and

C. When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used; and

D. Erosion/scour protection shall be provided inland upstream and downstream of the transition sections.

i. Activity Involving A Channel Modification: If the proposed activity involves a channel modification, it shall be demonstrated that:

(1) There are no practicable alternatives to the activity which would accomplish its purpose with less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, floodproofing of existing structures, removal of structures from the floodplain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip or greenbelt. Channel modification is acceptable if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat;

(2) Water quality, habitat, and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values;

(3) The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria:

A. The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross section, slope and sinuosity. If the existing channel has been

previously modified, restoration of more natural physical conditions should be incorporated into channel modification design, where practical.

B. Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.

C. One sided construction of a channel shall be used when feasible. Removal of streamside (riparian) vegetation should be limited to one side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.

D. Clearing of stabilizing vegetation shall be limited to that which is essential for construction of the channel.

E. Channel banks shall be constructed with a side slope no steeper than three to one (3:1) horizontal to vertical, wherever practicable. Native vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the use of alternative stabilization measures, soil bioengineering techniques, natural rock or riprap are preferred approaches. Artificial materials such as concrete, gabions, or construction rubble should be avoided unless there are no practicable alternatives.

F. All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.

G. If the existing channel contains considerable bottom diversity such as deep pools, riffles, and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established, where appropriate.

H. A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.

I. New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.

J. There shall be no increases in stage or velocity as the channel enters or leaves the project site for any frequency flood unless necessitated by a public flood control project or unless such an increase is justified as part of a habitat improvement or erosion control project.

K. Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification; and

(4) The project otherwise complies with the requirements of this section.

j. Seeding And Stabilization Plan: For all activities located in a floodway, a seeding and stabilization plan shall be submitted by the applicant.

k. Soil Erosion and Sedimentation Measures: For all activities in the floodway, including grading, filling, and excavation, in which there is potential for erosion of exposed soil, soil erosion and sedimentation control measures shall be employed consistent with the following criteria:

(1) The construction area shall be minimized to preserve the maximum vegetation possible. Construction shall be scheduled to minimize the time soil is exposed and unprotected. In no case shall the existing natural vegetation be destroyed, removed, or disturbed more than fifteen (15) days prior to the initiation of improvements.

(2) Temporary and/or permanent soil stabilization shall be applied to denuded areas as soon as possible. As a minimum, soil stabilization shall be provided within fifteen (15) days after final grade is reached on any portion of the site, and within fifteen (15) days to denuded areas which may not be at final grade but will remain undisturbed for longer than sixty (60) days.

(3) Sedimentation control measures shall be installed before any significant grading or filling is initiated on the site to prevent the movement of eroded sediments off site or into the channel. Potential sediment control devices include filter fences, straw bale fences, check dams, diversion ditches, and sediment traps and basins.

(4) A vegetated buffer strip of at least twenty five feet (25') in width shall be preserved and/or reestablished, where possible, along existing channels (see 802.3.16). Construction vehicle use of channels shall be minimized. Temporary stream crossings shall be constructed, where necessary, to minimize erosion. Necessary construction in or along channels shall be restabilized immediately.

(5) Soil erosion and sedimentation control measures shall be designed and implemented consistent with "Procedures And Standards For Urban Soil Erosion And Sedimentation Control In Illinois" (1988) also known as the "Green Book" and "The Illinois Urban Manual" (NRCS, 1995).

l. Public Flood Control Projects: For public flood control projects, the permitting requirements of this section will be considered met if the applicant can demonstrate to IDNR/OWR through hydraulic and hydrologic calculations that the proposed project will not singularly or cumulatively result in increased flood heights outside the project right of way or easements for all flood events up to and including the 100-year frequency event.

m. General Criteria For Analysis Of Flood Elevations:

(1) The flood profiles, flows and floodway data in the designated floodway study, referenced in section 4-5-5 of this chapter, must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use.

(2) If the 100-year designated floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet:

A. The requirements of this section for the 100-year frequency flood elevations of the designated floodway conditions; and

B. Conditions with the receiving stream at normal water elevations.

C. If the applicant learns from IDNR/OWR, local governments, or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five (5) years, the proposed construction shall be analyzed and shown to meet the requirements of this

section for both the existing conditions and the expected flood profile conditions when the bridge, culvert or flood control project is built.

n. Conditional Letter of Map Revision:

(1) If the appropriate use would result in a change in the designated floodway location or the 100-year frequency flood elevation, the applicant shall submit to IDNR/OWR and FEMA all information, calculations and documents necessary to be issued a conditional designated floodway map revision and receive from IDNR/OWR a conditional concurrence of the designated floodway change before a permit is issued.

(2) The final designated floodway map will not be changed by FEMA until as built plans or record drawings of initial filling, grading, dredging, or excavating activities are submitted and accepted by FEMA and IDNR/OWR.

(3) In the case of nongovernment projects, the municipality in incorporated areas and the county in unincorporated areas shall concur with the proposed conditional designated floodway map revision before IDNR/OWR approval can be given.

(4) No filling, grading, dredging or excavating shall take place until a conditional approval is issued.

(5) After initial filling, grading, dredging or excavating, no activities shall take place until a final letter of map revision (LOMR) is issued by FEMA with concurrence from IDNR/OWR.

o. Professional Engineer's Supervision: All engineering analyses shall be performed by or under the supervision of a registered professional engineer.

p. Construction within Twenty Five Feet of Channel: For all activities in the floodway involving construction within twenty five feet (25') of the channel, the following criteria shall be met:

(1) A natural vegetation buffer strip shall be preserved within at least twenty five feet (25') of the ordinary high water mark of the channel.

(2) Where it is impossible to protect this buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.

q. After Conditional Approval And Issuance Of Permit: After receipt of conditional approval of the designated floodway change and issuance of a permit and a conditional letter of map revision, construction as necessary to change the floodway designation may proceed but no buildings or structures or other construction that is not an appropriate use may be placed in that area until the designated floodway map is changed and a final letter of map revision is received. The designated floodway map will be revised upon acceptance and concurrence by IDNR/OWR and FEMA of the "as built" plans.

(C) Development Activities In Delegated Communities Requiring State Review: For those projects listed below located in a designated floodway, the following criteria shall be submitted to IDNR/OWR for their review and concurrence and/or permit prior to the issuance of a permit by a community or county delegated state permitting authority in the floodway.

1. An engineer's analysis of the flood profile due to a proposed bridge pursuant to subsection (B)3d of this section.

2. An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, pursuant to subsection (B)3e of this section.

3. Alternative transition sections and hydraulically equivalent storage pursuant to subsection (B)3 of this section.

4. The construction of any IDNR/OWR projects, dams and all other federal, state, or local units of government projects, including projects of the municipality or county.

5. An engineer's determination that a proposed bridge affected by backwater from a downstream receiving stream may be built with a smaller opening.

6. Projects which revise or establish the floodway and/or flood profiles.

7. Projects in public bodies of water.

(D) Other Permit:

1. In addition to the other requirements of this chapter, a development permit for a site located in a floodway shall not be issued unless the applicant first obtains a permit or written documentation that a permit is not required from IDNR/OWR, issued pursuant to 615 Illinois Compiled Statutes 5/5 et seq.

2. No correspondence from IDNR/OWR shall be required if the project meets the requirements of regional permit 3.

3. No permit from IDNR/OWR shall be required if IDNR/OWR has delegated this responsibility to the village.

(E) Permits for Dams:

1. Any work involving the construction, modification or removal of a dam as defined in section 300.16 per 17 Illinois administrative code part 3702 (rules for construction of dams) shall obtain an IDNR/OWR permit prior to the start of construction of a dam.

2. If the village finds a dam that does not have an IDNR/OWR permit, the village shall immediately notify the IDNR/OWR Bartlett office.

3. If the village finds a dam which is believed to be in unsafe condition, the village shall immediately notify the owner of the dam, the IDNR/OWR Bartlett office, and the Illinois emergency management agency (IEMA).

(F) Activities That Do Not Require a Registered Professional Engineer's Review: The following activities may be permitted without a registered professional engineer's review. Such activities shall still meet the other requirements of this chapter, including the mitigation requirements.

1. Regional permit 3 which authorizes, for example, underground and overhead utilities, storm and sanitary sewer outfalls, sidewalks, patios, athletic fields, playground equipment and streambank protection activities. (Ord. 07-03, 1-22-2007)

4-5-8: OCCUPATION AND USE OF SFHA AREAS WHERE FLOODWAYS ARE NOT IDENTIFIED:

In SFHA or floodplains (including AE, AH, AO and unnumbered A zones), where no floodways have been identified and no base flood or 100-year frequency flood elevations have been established by FEMA, and draining more than a square mile, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood or 100-year frequency flood elevation.

(A) Development Permit:

1. No person, firm, corporation, or governmental body, not exempted by state law, shall commence any development in an SFHA or floodplain without first obtaining a development permit issued pursuant to this chapter.

2. Application for a development permit shall be made on a form provided by the village.

a. The application shall be accompanied by drawings of the site, drawn to scale showing property line dimensions; and existing grade elevations and all changes in grade resulting from excavation or filling, sealed by a licensed engineer, architect or surveyor; the location and dimensions of all buildings and additions to buildings; and the elevations of the lowest floor (including basement) of all proposed buildings subject to the requirements of section 4-5-9 of this chapter.

b. The application for a development permit shall also include the following information:

(1) A detailed description of the proposed activity, its purpose, and intended use;

(2) Site location (including legal description) of the property, drawn to scale, on the designated floodway maps, indicating whether it is proposed to be in an incorporated or unincorporated area;

(3) Anticipated dates of initiation and completion of activity;

(4) Plans of the proposed activity shall be provided which include as a minimum:

A. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;

B. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations, using the North American vertical

datum of 1988, adjacent property lines and ownership, drainage and flood control easements, distance between proposed activity and navigation channel (when the proposed construction is in or near a commercially navigable body of water), floodplain limit, location and orientation of cross sections, north arrow, and a graphical or numerical scale;

C. Cross section views of the project perpendicular to the flow of floodwater and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphical or numerical scales (horizontal and vertical); and

D. A soil erosion and sedimentation control plan for disturbed areas. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure postconstruction maintenance.

E. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the criteria of subsection (B) of this section.

F. Any and all other federal, state, and local permits or approvals that may be required for this type of development.

3. Based on the best available existing data according to federal, state or other sources, the village engineer shall compare the elevation of the site to the base flood or 100-year frequency flood elevation.

a. Should no elevation information exist for the site, the developer's engineer shall calculate the elevation according to subsection 4-5-5(D) of this chapter.

b. Any development located on land that can be shown to have been higher than the base flood elevation of the current flood insurance rate map identification is not in the SFHA and, therefore, not subject to the requirements of this chapter.

c. The village engineer shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first flood insurance rate map identification.

d. The village engineer shall be responsible for obtaining from the applicant copies of all other federal, state, and local permits, approvals or waivers that may be required for this type of activity.

The village engineer shall not issue the development permit unless all required federal, state, and local permits have been obtained.

(B) Preventing Increased Damages:

1. Floodway Not Determined: No development in the SFHA where a floodway has not been determined shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health, safety and welfare or impair the natural hydrologic and hydraulic functions of the

floodway or channel, or impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter.

2. Riverine SFHAs: Within all riverine SFHAs where the floodway has not been determined, the following standards shall apply:

a. Engineering Requirements: The developer shall have a registered professional engineer state in writing and show through supporting plans, calculations, and data that the project meets the engineering requirements of subsection 4-5-7(B)3a(1) of this chapter for the entire floodplain as calculated under the provisions of subsection 4-5-5(D) of this chapter.

(1) As an alternative, the developer should have an engineering study performed to determine a floodway and submit that engineering study to IDNR/OWR and FEMA for acceptance as a designated floodway.

(2) Upon acceptance of the floodway by IDNR/OWR and FEMA, the developer shall then demonstrate that the project meets the requirements of section 4-5-8 of this chapter for the designated floodway.

b. IDNR/OWR Permit: A development permit shall not be issued unless the applicant first obtains an IDNR/OWR permit or a determination has been made that an IDNR/OWR permit is not required.

c. Permits for Dams:

(1) Any work involving the construction, modification or removal of a dam shall obtain an IDNR/OWR permit prior to the start of construction of a dam.

(2) If the village finds a dam that does not have an IDNR/OWR permit, the village shall immediately notify the IDNR/OWR Bartlett office.

(3) If the village finds a dam which is believed to be in unsafe condition, the village engineer shall immediately notify the owner of the dam, the IDNR/OWR Bartlett office, and the Illinois emergency management agency (IEMA).

3. Activities Permitted: The following activities may be permitted without a registered professional engineer's review or calculation of base flood elevation and designated floodway. Such activities shall still meet the other requirements of this chapter.

a. Bridge and culvert crossings of streams in rural areas meeting conditions of IDNR/OWR statewide permit 2;

b. Barge fleeting facilities meeting conditions of IDNR/OWR statewide permit 3;

c. Aerial utility crossings meeting conditions of IDNR/OWR statewide permit 4;

d. Minor boat docks meeting conditions of IDNR/OWR statewide permit 5;

e. Minor, nonobstructive activities meeting conditions of IDNR/OWR statewide permit 6; activities (not involving fill or positive change in grade) are covered by this permit;

f. Outfall structures and drainage ditch outlets meeting conditions of IDNR/OWR statewide permit 7;

g. Underground pipeline and utility crossings meeting the conditions of IDNR/OWR statewide permit 8;

h. Bank stabilization projects meeting the conditions of IDNR/OWR statewide permit 9;

i. Accessory structures and additions to existing residential buildings meeting the conditions of IDNR/OWR statewide permit 10;

j. Minor maintenance dredging activities meeting conditions of IDNR/OWR statewide permit 11;

k. Bridge and culvert replacement structures and bridge widenings meeting conditions of IDNR/OWR statewide permit 12;

l. Temporary construction activities meeting conditions of IDNR/OWR statewide permit 13;

m. Special uses of public waters meeting conditions of IDNR/OWR statewide permit 14; and

n. Any development determined by IDNR/OWR to be located entirely within a flood fringe area shall be exempt from state floodway permit requirements.

4. Flood Carrying Capacity: The flood carrying capacity of any altered or relocated watercourse shall be maintained.

5. Compensatory Storage:

a. Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation.

b. The excavation volume shall be at least equal to 1.5 times the volume of storage lost due to the fill or structure.

c. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied.

d. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. (Ord. 07-03, 1-22-2007)

4-5-9: PERMITTING REQUIREMENTS APPLICABLE TO ALL FLOODPLAIN AREAS:

In addition to the requirements found in sections 4-5-6, 4-5-7 and 4-5-8 of this chapter for development in flood fringes, designated floodways, and SFHA or floodplains where no floodways have been identified, the following requirements shall be met.

(A) Public Health Standards:

1. No developments in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials below the flood protection elevation (FPE) unless such materials are stored in a floodproofed and anchored storage tank and certified by a professional engineer or floodproofed building constructed according to the requirements of subsection (C) of this section.

2. Public utilities and facilities such as sewer, gas and electric shall be located and constructed to minimize or eliminate flood damage.

3. Public sanitary sewer systems and water supply systems shall be located and constructed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

4. New and replacement water supply systems, wells, sanitary sewer lines and on site waste disposal systems may be permitted providing all manholes or other aboveground openings located below the FPE are watertight.

5. All other activities defined as "development" shall be designed so as not to alter flood flows or increase potential flood damages.

(B) Carrying Capacity and Notification:

1. For all projects involving channel modification, fill, or stream maintenance (including levees), the flood carrying capacity of the watercourse shall be maintained.

2. In addition, the village shall notify adjacent communities in writing thirty (30) days prior to the issuance of a permit for the alteration or relocation of the watercourse.

(C) Protecting Buildings:

1. All buildings located within a 100-year floodplain, also known as an SFHA, shall be protected from flood damage below the flood protection elevation. This building protection criteria applies to the following situations:

a. Construction or placement of a new building or alteration or addition to an existing building valued at more than one thousand dollars ($1,000.00) or seventy (70) square feet;

b. Substantial improvements or structural alterations made to an existing building that increase the floor area by more than twenty percent (20%) or equal or exceed the market value by fifty percent (50%). Alteration shall be figured cumulatively during the life of the building. If substantially improved, the existing structure and the addition must meet the flood protection standards of this section;

c. Repairs made to a substantially damaged building. These repairs shall be figured cumulatively during the life of the building. If substantially damaged the entire structure must meet the flood protection standards of this section;

d. Installing a manufactured home on a new site or a new manufactured home on an existing site (the building protection requirements do not apply to returning a manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage);

e. Installing a travel trailer or recreational vehicle on a site for more than one hundred eighty (180) days per year; and

f. Repetitive loss to an existing building.

2. A residential or nonresidential building, when allowed, may be constructed on permanent land fill in accordance with the following:

a. Lowest Floor: The lowest floor (including basement) shall be at or above the flood protection elevation; and

b. Fill Requirements:

(1) The fill shall be placed in layers no greater than six inches (6") deep before compaction and should extend at least ten feet (10') beyond the foundation of the building before sloping below the flood protection elevation;

(2) The top of the fill shall be above the flood protection elevation. However, the ten foot (10') minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures;

(3) The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap or other structural measure;

(4) The fill shall be composed of rock or soil and not incorporate debris or refuse materials; and

(5) The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties, and when necessary, stormwater management techniques such as swales or basins shall be incorporated.

3. A residential or nonresidential building may be elevated in accordance with the following:

a. The building shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to floodwaters and not subject to damage by hydrostatic pressures of the base flood or 100-year frequency flood. Designs must either be certified by a registered professional engineer or architect or the permanent openings, one on each wall, shall be no more than one foot (1') above existing grade, and consists of a minimum of two (2) openings. The openings must have a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding below the base flood elevation;

b. The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris;

c. All areas below the flood protection elevation shall be constructed of materials resistant to flood damage; and

(1) The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation; and

(2) Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation provided they are waterproofed;

d. The areas below the flood protection elevation may only be used for the parking of vehicles, building access or storage in an area other than a basement and not later modified or occupied as habitable space; and

e. In lieu of the above criteria, the design methods to comply with these requirements may be certified by registered professional engineer or architect.

f. Manufactured homes, and travel trailers to be installed on a site for more than one hundred eighty (180) days, shall be elevated to or above the flood protection elevation; and, shall be anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the rules and regulations for the Illinois mobile home tiedown act issued pursuant to 77 Illinois administrative code part 870. In addition, all manufactured homes shall meet the following elevation requirements:

(1) In the case of manufactured homes placed or substantially improved: a) outside of a manufactured home park or subdivision, b) in a new manufactured home park or subdivision, c) in an expansion to an existing manufactured home park or subdivision, or d) in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage from a flood, the top of the lowest floor shall be elevated to or above the flood protection elevation.

(2) In the case of manufactured homes placed or substantially improved in an existing manufactured home park or subdivision, the manufactured home shall be elevated so that either the top of the lowest floor is above the base flood elevation or the chassis is at least thirty six inches (36") in height above grade and supported by reinforced piers or other foundations of equivalent strength, whichever is less.

g. Recreational vehicles or travel trailers shall be required to meet the elevation and anchoring requirements of subsection (C)3f of this section unless:

(1) They are on site for fewer than one hundred eighty (180) consecutive days; and

(2) They are fully licensed, ready for highway use, and used only for recreation, camping, travel or seasonal use rather than as a permanent dwelling. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utility and service devices, and has no permanently attached additions.

4. Only a nonresidential building may be structurally dry floodproofed (in lieu of elevation) provided that:

a. A registered professional engineer or architect shall certify that the building has been structurally dry floodproofed below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood or 100-year frequency flood.

b. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice.

c. Floodproofing measures shall be operable without human intervention and without an outside source of electricity (levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection).

5. A building may be constructed with a crawl space located below the flood protection elevation provided that the following conditions are met:

a. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

b. Any enclosed area below the flood protection elevation shall have openings that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. A minimum of one opening on each wall having a total net area of not less than one square inch per one square foot of enclosed area. The openings shall be no more than one foot (1') above grade;

c. The interior grade of the crawl space below the flood protection elevation must not be more than two feet (2') below the lowest adjacent exterior grade;

d. The interior height of the crawl space measured from the interior grade of the crawl to the top of the foundation wall must not exceed four feet (4') at any point;

e. An adequate drainage system must be installed to remove floodwaters from the interior area of the crawl space within a reasonable period of time after a flood event;

f. Portions of the building below the flood protection elevation must be constructed with materials resistant to flood damage; and

g. Utility systems within the crawl space must be elevated above the flood protection elevation.

6. Construction of new or substantially improved critical facilities shall be located outside the limits of the floodplain. Construction of new critical facilities shall be permissible within the floodplain if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor (including basement) elevated or structurally dry floodproofed to the 500-year flood frequency elevation or three feet (3') above the level of the 100-year flood frequency elevation whichever is greater. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities.

7. Toolsheds, detached garages, and other minor accessory structures on an existing single-family platted lot, may be constructed with the lowest floor below the flood protection elevation in accordance with the following:

a. The building is not used for human habitation;

b. All areas below the base flood or 100-year frequency flood elevation shall be constructed with waterproof material. Structures located in a designated floodway shall be constructed and placed on a building site so as not to block the flow of floodwaters and shall also meet the appropriate use criteria of section 4-5-7 of this chapter. In addition, all other requirements of sections 4-5-6 and 4-5-7 of this chapter must be met;

c. The structure shall be anchored to prevent flotation;

d. Service facilities such as electrical and heating equipment shall be elevated or floodproofed to the flood protection elevation;

e. The building shall be valued at less than ten thousand dollars ($10,000.00) and be less than five hundred (500) square feet in floor size;

f. The building shall be used only for the storage of vehicles or tools and may not contain other rooms, workshops, greenhouses or similar uses and cannot be modified later into another use;

g. The building shall meet the permanent opening criteria of subsection (C)3a of this section;

h. All flammable or toxic materials (gasoline, paint, insecticides, fertilizers, etc.) shall be stored above the flood protection elevation; and

i. The lowest floor elevation should be documented and the owner advised of the flood insurance implications.

8. Existing buildings located within a designated floodway shall also meet the more restrictive appropriate use standards included in section 4-5-7 of this chapter. Nonconforming structures located in a designated floodway may remain in use and may only be enlarged, replaced or structurally altered in accordance with subsection 4-5-7(B) of this chapter. A nonconforming structure damaged by flood, fire, wind or other natural or manmade disaster may be restored unless the damage exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to this chapter. (Ord. 07-03, 1-22-2007)

4-5-10: OTHER DEVELOPMENT REQUIREMENTS:

The village board of trustees shall take into account flood hazards, to the extent that they are known in all official actions related to land management, use and development.

(A) New subdivisions within the SFHA shall be reviewed to assure that the proposed developments are consistent with sections 4-5-6, 4-5-7, 4-5-8 and 4-5-9 of this chapter and the need to minimize flood damage. Plats for new subdivisions shall include a signed statement by a registered professional engineer that the plat accounts for changes in the drainage of surface waters in accordance with the plat act[5].

(B) Proposals for new subdivisions and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations. Where this information is not available from an existing adopted study, the applicant's engineer shall be responsible for calculating the base flood or 100-year frequency flood elevation per subsection 4-5-5(D) of this chapter and the floodway delineation.

(C) Streets, blocks, lots, parks and other public grounds shall be located and laid out in such a manner as to preserve and utilize natural streams and channels. Wherever possible, the floodplains shall be included within parks or other public grounds.

(D) The village board of trustees shall not approve any plat of subdivision located outside the corporate limits unless such agreement or plat is in accordance with the provisions of this chapter.

(E) All other activities defined as "development" shall be designed so as not to alter flood flows or increase potential flood damages. (Ord. 07-03, 1-22-2007)

4-5-11: VARIANCES:

(A) No variances shall be granted to any development located in a designated floodway.

1. Whenever the standards of this chapter place undue hardship on a specific development proposal, the applicant may apply to the zoning board of appeals for a variance.

2. The zoning board of appeals shall review the applicant's request for a variance and shall submit its recommendation to the board of trustees. The village may attach such conditions to granting of a variance, as it deems necessary to further the flood protection intent of this chapter.

(B) No variance shall be granted unless the applicant demonstrates that all of the following conditions are met:

1. The development activity cannot be located outside the SFHA;

2. An exceptional hardship would result if the variance were not granted;

3. The relief requested is the minimum necessary;

4. There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;

5. There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to stream beds and banks, roads, utilities, or other public facilities;

6. The provisions of subsections 4-5-6(B) and 4-5-8(B) of this chapter shall still be met;

7. The activity is not in a designated floodway;

8. The applicant's circumstances are unique and do not establish a pattern inconsistent with the intent of the NFIP;

9. The granting of the variance will not alter the essential character of the area involved including existing stream uses; and

10. All other required state and federal permits or waivers have been obtained.

(C) The village shall notify an applicant in writing that a variance from the requirements of section 4-5-9 of this chapter that would lessen the degree of protection to a building will:

1. Result in increased premium rates for flood insurance up to amounts as high as twenty five dollars ($25.00) per one hundred dollars ($100.00) of insurance coverage;

2. Increase the risks to life and property; and

3. Require that the applicant proceed with knowledge of these risks and that the applicant will acknowledge in writing the assumption of the risk and liability.

(D) Variances requested in connection with restoration of a historic structure as may be granted using criteria more permissive than the requirements of subsection (B) of this section, subject to the conditions that:

1. The repair or rehabilitation is the minimum necessary to preserve the historic character and design of the historic structure; and

2. The repair or rehabilitation will not result in the historic structure being removed as a certified historic structure. (Ord. 07-03, 1-22-2007)

4-5-12: DISCLAIMER OF LIABILITY:

(A) The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on available information derived from engineering and scientific methods of study.

(B) Larger floods may occur or flood heights may be increased by manmade or natural causes.

(C) This chapter does not imply that development, either inside or outside of the SFHA, will be free from flooding or damage.

(D) This chapter does not create liability on the part of the village or any officer or employee thereof for any flood damage that results from reliance on this chapter or any administrative decision made lawfully hereunder. (Ord. 07-03, 1-22-2007)

4-5-13: PENALTY:

(A) If such owner fails after ten (10) days' notice to correct any violation of any provision of this chapter:

1. The village may make application to the circuit court for an injunction requiring conformance with this chapter or make such other order as the court deems necessary to secure compliance with this chapter.

2. Any person who violates this chapter shall, upon conviction thereof, be fined not less than five hundred dollars ($500.00) for each offense.

3. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.

4. The village shall record a notice of violation on the title to the property.

(B) The village shall inform the owner that any such violation is considered a willful act to increase flood damages and, therefore, may cause coverage by a standard flood insurance policy to be suspended.

1. The village engineer is authorized to issue an order requiring the suspension of the subject development. The stop work order shall be in writing, shall indicate the reason for the issuance, and shall order the action, if necessary, to resolve the circumstances requiring the stop work order. The stop work order constitutes a suspension of the permit.

2. Any person aggrieved by any action taken or determination made pursuant to this chapter may appeal to the Barrington Hills plan commission in accordance with the provisions of subsection 4-3-4(D) of this title upon payment of a filing fee of one hundred dollars ($100.00). Within thirty (30) days following the plan commission hearing, the plan commission shall transmit its findings and recommendations in writing to the village president and the board of trustees for final disposition.

(C) Nothing herein shall prevent the village from taking such other lawful action to prevent or remedy any violations. All costs connected therewith shall accrue to the person or persons responsible. (Ord. 07-03, 1-22-2007)

4-5-14: ABROGATION AND GREATER RESTRICTIONS:

(A) This chapter is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions.

(B) Where this chapter and other ordinance, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(C) This chapter is intended to repeal the original ordinance or resolution which was adopted to meet the national flood insurance program regulations, but is not intended to repeal the resolution which the village passed in order to establish initial eligibility for the program. (Ord. 07-03, 1-22-2007)

CHAPTER 6
TREE PRESERVATION

4-6-1: INTENT AND PURPOSE:

The intent of this chapter is to ensure the presence and continuation of heritage trees, a special resource throughout the village of Barrington Hills by requiring sound forestry practices and preventing storm water runoff and topsoil erosion. It is also the intent of this chapter to promote and educate our residents as to the importance, protection and existence of heritage trees. Residents of the village will then continue to enjoy all the benefits of living in the unique environment of Barrington Hills, because the village strives to protect the health, safety and welfare of its residents from situations which may substantially alter the environment. This will be accomplished by regulating how such trees may be removed and replaced, whether as a result of building construction or as a result of landscaping activity only. (Ord. 07-24, 12-17-2007)

4-6-2: DEFINITIONS:

For the purpose of the regulations contained in this chapter, the definitions contained in this section shall be observed and applied, except when the context clearly indicates otherwise. Words used in the present tense shall include the future, and words used in the singular shall include the plural, and the plural the singular; the word "shall" is mandatory and not discretionary; the word "may" is permissive; the masculine gender includes the feminine and neuter. Whenever a word or term defined herein appears in the text of this chapter, its meaning shall be construed as set forth in the definition thereof and any word appearing in parenthesis directly thereafter shall be construed in the same manner.

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA): The national trade association of the nursery and landscape industry. ANLA provides education, research, public relations and representation services to ANLA members.

ARBORIST: A person who, based on training and experience, diagnoses the condition of shade or ornamental trees and shrubs and recommends or supervises the treatment of any such trees, or in any manner treats any such trees, by feeding or fertilizing, or by pruning, trimming, bracing, treating cavities or other methods and is a member in good standing in a reputable nationally recognized professional arborist association such as the American Nursery and Landscape Association or is so licensed.

BUILDING OFFICER: The building and zoning enforcement officer as defined in section 1-6-9 of this code.

CONDITION RATING: The condition of a heritage tree based on a six (6) point scale set forth in table B of this chapter with 1 being the best and 6 being the worst, for purposes of determining the health of a heritage tree and whether the tree is subject to regulations contained in this chapter.

DIAMETER BREAST HEIGHT (dbh): The diameter of the trunk of the tree measured in inches at a point of four and one-half feet ($4^1/_2$') above grade.

GOOD CONDITION: A tree having a condition rating of 1, 2, or 3 as set forth in table B of this chapter. Only trees of those ratings will be considered heritage trees.

HERITAGE TREES: Trees, as set forth in table A of this chapter, that are of a genus and species indigenous to this region and determined to be of significant historical value to the village of

Barrington Hills. Such trees shall be above the minimum specified dbh and of good condition.

MINIMUM ROOT ZONE: The area beneath a tree having as its center point the center of the trunk of the tree and a radius equal to one foot (1') for every inch of dbh. Also noted under the criteria as "critical root zone."

SITE: A lot, or contiguous lots, under the control of a common owner, for which a tree removal permit was sought and obtained.

SURROUNDING AREA: Shall not include any area which is not on the same site as that for which the tree removal permit was sought and obtained.

TREE: Any self-supporting, woody plant together with its root system, growing upon the earth usually with one trunk, or a multistemmed trunk system, supporting definitely formed crown.

TREE REMOVAL PERMIT (TRP): The permit required by this chapter in order to remove any heritage tree within a protected woodland.

WOODLAND: Eight (8) or more heritage trees on a site within circular area having a radius not to exceed 117.8 feet and shall include all such trees within the woodland regardless of the number of such trees. A site may encompass more than one woodland. (Ord. 07-24, 12-17-2007)

4-6-3: ADMINISTRATION AND ENFORCEMENT:

(A) Tree Removal Permit Required: A tree removal permit ("TRP")shall be required for the destruction or removal of any heritage tree in any woodland. No person shall, directly or indirectly, remove, damage or destroy a woodland without having secured a TRP.

(B) Exemption:

1. This chapter shall not apply to the removal of woodlands pursuant to a forestry management or nursery stock plan that is approved and administered by a proper governmental agency with jurisdiction over such matters.

2. This chapter shall not apply to the removal of woodlands on property owned by a common owner, either singularly, collectively or institutionally, which exceeds one hundred (100) acres of contiguous land in the village so long as the property is subject to a tree preservation plan acceptable to the village. Such a plan, which shall have been written under the oversight of an arborist or endorsed by such, may be accepted by either or both of the village's zoning board of appeals or board of trustees and shall, at a minimum, include the intent through sound forest management to preserve and protect heritage trees.

(C) Application and Fee: A TRP application on the prescribed form shall be submitted to the village building officer with the permit fee established by the village.

(D) Application Procedure:

1. New Construction Permit: The applicant shall submit a tree preservation plan ("TPP") to the village building officer with his application for a TRP in conjunction with new construction (when a building permit is required), which shall consist of at least two (2) legible reproducible site plans, drawn to scale, which in addition to the general submittal requirements of this chapter shall include a tree survey overlaid directly upon the site plan indicating the location, species, condition rating and dbh of all heritage trees. The survey shall distinguish among trees to be preserved, transplanted, and/or destroyed. Groups of trees which are less than three feet (3') apart may be designed by clumps, provided that all heritage trees and all other trees with a dbh of twelve inches (12") or greater must be individually depicted. The building officer may permit the application to exclude areas of the site from the tree survey if he determines that the proposed construction or other activity will not impact those areas. The survey shall include a maintenance plan for all heritage trees, consistent with sound forestry practices, to ensure the protection of the trees for a period of at least three (3) years from the conclusion of construction or activity and the issuance of an occupancy permit, if one is required.

2. Nonconstruction Permit: The applicant shall submit the following with his application for tree removal permit with existing structure and use (when no building permit is required):

a. Site plan that depicts the area of the tree removal, the heritage trees to be removed, and all other heritage trees in proximity to the removal. All heritage trees shall be identified by location, species, condition rating and dbh.

b. Reasons for removing the trees.

c. Reports or studies, if any, indicating that the trees should be removed.

3. Application Review: Upon receipt of a completed application with the required fee, the building officer shall review the application, which, if deemed necessary, may include a site inspection by village staff and professional review by an arborist or other professional.

(E) Granting A TRP:

1. The building officer shall grant a TRP only if:

a. All reasonable efforts have been undertaken in the architectural layout and design of the proposed construction or other activity to preserve woodlands and to otherwise enhance the aesthetic appearance of the site by the incorporation of trees in the design process and the transplanting of the woodlands is not feasible.

b. The removal of the heritage trees is consistent with sound forestry practice or will result in the woodland enhancement.

2. As a condition to granting a TRP, the applicant may be required to replace the heritage trees that will be destroyed and other trees of the species identified in table A of this chapter. Replacement trees shall conform to the minimum standards of the American Nursery and Landscape Association. In determining the necessity of transplanting or replacement of trees, the building officer shall consider the following:

a. Existing tree coverage on the site and in the immediate surrounding area.

b. Number of trees to be preserved on the entire site.

c. The species, dbh, and condition rating of the tree(s) to be removed.

d. The feasibility of transplanting the particular tree or trees.

e. Topography and drainage of the site.

f. The extent to which the protected tree(s) contributes to the historic, economic and environmental integrity of the surrounding area.

g. The nature of the existing and intended use of the property, including adjoining rights of way, scenic easements, conservancy district or conservancy areas or other open spaces on the site or within a distance of two hundred fifty feet (250') of the site.

3. A TRP shall expire and become null and void if work authorized by the TRP is not commenced within one year from the date of issuance of the TRP or if such work, when commenced, is suspended or abandoned at any time for a period of ninety (90) days. Upon good cause shown, the TRP may be extended six (6) months by the building officer.

4. No occupancy certificate shall be issued until any required replacement of heritage trees, as required by the TRP or TPP, has been completed and the final tree inspection approval has been given by the building officer.

(F) Tree Protection:

1. During construction, the TPP must be followed to prevent the destruction or damaging of heritage trees. Heritage trees that are destroyed or receive major damage must be replaced by heritage trees of equal dbh in the aggregate, as determined by the building officer and/or a professional arborist retained by the village, except when clearly impractical.

2. During construction, unless otherwise authorized by the TPP, a fence shall be erected and maintained so that no excess soil, additional fill, equipment, liquids, or construction debris shall be placed within the minimum root zone of any protected tree, unless the addition of excess soil or fill is required in order to comply with either the flood criteria requirements and/or federal flood regulations in high flood hazard location.

3. No attachments or wires other than those of a protective or nondamaging nature shall be attached to any heritage tree(s) during construction.

4. Unless otherwise authorized by a TPP, no soil is to be removed from within the minimum root zone of any protected tree.

5. All woodlands which are planted or transplanted pursuant to this chapter shall be maintained alive and healthy on the site. Any of such tree(s) which die within three (3) planting seasons, shall be promptly replaced by the applicant. (Ord. 07-24, 12-17-2007)

4-6-4: APPEALS:

Any person aggrieved by any action taken, order issued, or determination made pursuant to this chapter, other than a stop work order issued pursuant to subsection 4-1-7(C) of this title, may appeal to the Barrington Hills plan commission in accordance with the notice and appeal provisions of subsection 4-3-4(D) of this title, upon payment of a filing fee of one hundred dollars ($100.00). (Ord. 14-10, 7-28-2014)

4-6-5: REPLACEMENT:

In the event that a person shall remove, damage or destroy a woodland without having secured a TRP, in addition to the general penalty provided in this code, he shall plant a replacement tree or trees on the site within ninety (90) days of written notice from the village. Such replacement tree(s) shall be a species listed in section 4-6-6, table A of this chapter and shall be minimum three inch (3") dbh trees with the aggregate plantings equaling the dbh of the damaged or destroyed protected tree. The failure to plant the replacement trees shall constitute a violation of this chapter and each day that the replacement tree is not planted shall constitute a separate offense. These replacement trees shall conform to the minimum standards of the American Nursery And Landscape Association. Any of such trees which die within three (3) planting seasons shall be promptly replaced upon written notice from the village. (Ord. 07-24, 12-17-2007)

4-6-6: TABLES:

(A) Table A:

TABLE A
HERITAGE TREES

Species	**Diameter At Breast Height**	
Basswood/linden (Tilia americana)	10	inches or greater
Black walnut (Juglans nigra)	8	inches or greater
Hackberry (Celtis occidentalis)	8	inches or greater
Hickory:	8	inches or greater
Bitternut hickory (Carya cordiformis)		
Pignut hickory (Carya glabra)		
Shagbark hickory (Carya ovata)		

Ironwood (Ostrya virginiana)	6	inches or greater
Oak:	10	inches or greater
Black oak (Quercus veluntina)		
Bur oak (Quercus macrocarpa)		
Hill's oak (Quercus ellipsoidalis)		
Red oak (Quercus rubra)		
Swamp white oak (Quercus bicolor)		
White oak (Quercus alba)		
Sugar maple (Acer saccharum)	10	inches or greater
Wild black cherry (Prunus serotina)	8	inches or greater

(B) Table B:

TABLE B
CONDITION RATING

Rating	**Description**	**General Criteria**
1	Excellent	The tree is typical of the species, has less than 10 percent deadwood in the crown that is attributable to normal causes, has no other observed problems, and requires no remedial action.
2	Good	The tree is typical of the species and/or has less than 20 percent deadwood in the crown, only 1 or 2 minor problems that are easily corrected with normal care.

3		Fair		The tree is typical of the species and/or has less than 30 percent deadwood in the crown, 1 or 2 minor problems that are not imminently lethal to the tree and no significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to ensure continued health.
4		Fair to poor		The tree is not typical of the species and/or has significant problems such as 30 to 50 percent deadwood in the crown, serious decay or structural defect, insects, disease or other problems that can be imminently lethal to the tree or create a hazardous tree if not corrected in a short period of time or if the tree is subjected to additional stress.
5		Poor		The tree is not typical of the species and/or has over 50 percent deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corrected would not result in the long term survival of the tree.
6		Dead		Less than 10 percent of the tree shows signs of life.

(C) Table C:

TABLE C
PICTURES AND ILLUSTRATIONS

(Documents on file in the building department)

(Ord. 07-24, 12-17-2007)