APPLICATION AND PERMIT TO CONNECT TO A COUNTY DRAIN

The undersigned being owner of _____
(Description of Property)

does hereby make application to the Kalamazoo County Drain Commissioner for the privilege of tapping and connecting with the _____ Drain in the Township of _____, Kalamazoo County, Michigan.

This connection is for the purpose of connecting storm drainage only in accordance with the Summary of Requirements for Connection to a County Drain (attached).

It is understood that the applicant will leave the connecting trench open until inspection has been made by the Kalamazoo County Drain Commissioner or his agent.

Dated: _____, 20____.

_____
Signed

_____
Print/type

_____

_____
Address

(Office Use Only)

Permission granted _____, 20____.

_____
Kalamazoo County Drain Commissioner

Inspection of this connection has been made and found to be satisfactory, this _____ day of _____ A.D., 20 ___.

The Wye or opening for this connection is located:

_____
Inspector

SUMMARY OF REQUIREMENTS
FOR
CONNECTION TO A COUNTY DRAIN

1. Completed permit application.
2. Permit fee.
3. Adequate outlet evaluation.
4. Discharge requirements:
    a. Storm water connection: Rate and volume requirements.
    b. Footing drain connection: None
    c. Floor drain connection: Pre-treatment (spill containment)
5. Type of connection:
    a. Ditch outlet to an open channel county drain
    b. Pipe outlet to an open channel county drain
    c. Ditch inlet to an enclosed county drain
    d. Pipe connection to an enclosed county drain
6. Layout and design:

a. Ditch Outlet to an Open Channel County Drain

(1) Grassed waterway flow velocities shall be neither siltative nor erosive. The minimum velocity for vegetated channels shall be 1.5 ft/s. The maximum velocity shall be 4 ft/s. Riprap protection or equivalent erosion control measures shall be used where the velocity exceeds 4 ft/s, up to maximum allowable design velocity of 8 ft/s.

(2) Where maximum velocities are exceeded due to channel slope, rock check dams or grade control structures shall be used to reduce overall flow velocities.

(3) Erosion control blankets shall be used to protect bare channels.

(4) Permanent erosion protection will be placed at bends, drain inlets and outlets and other locations as needed in all open ditches.

(5) Outlets into the grassed waterway shall enter at an angle of 90 degrees or less with the direction of flow.

b. Pipe Outlet to an Open Channel County Drain

(1) Outlet protection shall be provided as necessary to prevent erosion, based on the maximum velocities given above.

(2) All outlets will be provided with flared end sections.

(3) Outlet protection shall employ engineered rip rap design. Median rip rap size, dimensions and total quantity in square yards shall be determined based on pipe size, design velocity and discharge. All rip rap shall be underlain with approved geotextile fabric. Other materials used to prevent scour will be reviewed and approved as necessary.

(4) The soils above and around the outlet shall be compacted and stabilized to prevent piping around the structure. Riprap protection shall extend a minimum of 1 foot above the top of the pipe.

(5) Outlets into the grassed waterway shall enter at an angle of 90 degrees or less with the direction of flow.

(6) Outlets to ditches will be placed within 2 feet of the average low water elevation of the water course.

c. Ditch Inlet to an Enclosed County Drain

(1) Grassed waterway flow velocities shall be neither siltative nor erosive. The minimum velocity for vegetated channels shall be 1.5 ft/s. The maximum velocity shall be 4 ft/s. Riprap protection or equivalent erosion control measures shall be used where the velocity exceeds 4 ft/s, up to maximum allowable design velocity of 8 ft/s.

(2) Where maximum velocities are exceeded due to channel slope, rock check dams or grade control structures shall be used to reduce overall flow velocities.

(3) Erosion control blankets shall be used to protect bare channels.

(4) Inlet protection shall employ engineered rip rap design. Median rip rap size, dimensions and total quantity in square yards shall be determined based on pipe size, design velocity and discharge. All rip rap shall be underlain with approved geotextile fabric. Other materials used to prevent scour will be reviewed and approved as necessary.

(4) A flared end section and rodent guard may be required for the inlet pipe.

d. Pipe Connection to an Enclosed County Drain

(4) Connections to manholes shall be made with a resilient connector for pipe diameters 24 inches or less.

(5) Special details will be required for manholes placed on pipe 48 inches in diameter and larger.