

VILLAGE OF DEERFIELD

Site Grading and Drainage Ordinance

User Guide

PURPOSE

This User Guide has been prepared to assist in the uniform interpretation of the subject ordinance. These requirements and procedures establish a basis for the Village to utilize in the administration of the ordinances of the Village of Deerfield.

GOAL

The goal of this User Guide is to demonstrate the detail and depth of information required by the Village to determine that all goals of the Site Grading and Drainage Ordinance are understood and met by those desiring to make alterations. This is applicable to events related to building and grading changes. There are numerous ways to reduce site grading and drainage impacts including *Floor Area Ratio (FAR)*, *Lot Coverage*, and *Impervious Area Restrictions*. These are described in other sections of the Village's governing documents.

The Village does not desire to prescribe how an owner / developer should design their improvements to meet the Village ordinances. Examples of best management practices utilized to reduce run-off volume and rate include storm vaults, cisterns, oversized piping for detention, rain gardens and natural landscaping. Separate calculations should be utilized to differentiate between run-off generated by the specific site / project and that which enters the site from off-site properties. More information and guidance is available from the Lake County Stormwater Management Commission (SMC) and the Watershed Development Ordinance (WDO) as well as Illinois Drainage Law.

ORGANIZATION OF USER GUIDE

This document is tied to and references the sections of Article 10, Site Grading and Drainage, of Chapter 6, of the Municipal Code of the Village of Deerfield (Ordinance No. 0-03-27). The first portion of the label contains the ordinance references; the second portion in italics contains the Municipal Code reference. The specific language from the ordinance is repeated then followed by the title "**User Guide:**". The necessary clarifications and expectations are in **bold** typeface.

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ARTICLE SECTIONS

Article 6.10-1 Definitions (Sec. 6-60. Definitions)

7.(c) *Grading*: Any excavation, clearing, filling or grading of a site that results in a change in elevation or a change in the volume, rate or direction of stormwater runoff.

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Change in overland flow includes change in volume, rate and direction of stormwater run-off.

7.(g) *Stormwater Drainage Plan* : A plan for containing, routing and releasing stormwater runoff from a site approved by the Village Engineer. A stormwater drainage plan shall be consistent with the final engineering plans and drainage system, if any, approved for the subdivision in which the site is located and shall conform with all applicable laws and best engineering practices. A stormwater drainage plan shall address all portions of the site affected by grading activities, by the construction of impervious surface improvements or any change which affects the rate, volume or direction of run-off.

User Guide: Identify and quantify the following for existing conditions and post construction. Calculations to include a 2, 10 and 100 year design storm:

- **Indicate any run-off changes (volume/ rate/ direction) affected by changes to the structure or site;**
- **Site runoff volume, rate and direction (Any increase must be diverted or detained.);**
- **Overland flow path(s) and emergency overflow route(s);**
- **Downstream capacity of storm sewers (not necessary if zero net discharge from the property).**

7(i) *Work*: Any work on an existing or proposed residential building, structure or site which changes, or proposes to change, the exterior dimensions at grade level of the building or structures on the site or the volume, rate or direction of run-off.

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Work includes proposed changes which impact the volume, rate or direction of run-off.

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Article 6.10-2 Drainage Plans Required With Building Permit Applications (Sec. 6-61. Drainage Plans Required With Building Permit Applications)

No building permit shall be issued for a site until the owner of the site or his authorized agent has submitted a stormwater drainage plan, together with all other submissions required under village ordinances. Required stormwater drainage plans shall be submitted for review and approved prior to the start of construction work or grading activities. Stormwater drainage plans shall be required for all work on any site requiring a building permit except the following:

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Any work involving changes to grading, contouring, and elevation, a change in volume, rate or direction of run-off or increased impervious area must include a drainage plan. A “General, Excavating or Sewer” unit of the building permit application must be completed for all projects requiring drainage plans.

(2)(b) Roof maintenance or repair (as long as the volume, rate and direction of run-off are not altered);

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If there is a change in stormwater discharge (volume/ rate/ direction) all applicable submissions and approvals will be required. (Example: gutter or downspout addition/ change; new roof or roofline) The appropriate unit of the building permit application must be completed and submitted for approval.

(3)(c) Any other work that does not make, or propose to make: any change to the exterior dimensions at grade level of the structures on the site; increase impervious area on the site or change the volume, rate and direction of run-off.

All stormwater plans must reflect conformance with all applicable laws and best engineering practices. Such plans must be approved by the Village Engineer before any demolition or construction work may commence.

The appropriate unit of the building permit application must be completed and approved as provided in section 6-62 of this article for any re-contouring or grading work to be done even if no demolition or construction work is contemplated.

All plans must be prepared and sealed by a licensed engineer.

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If there is a change in stormwater discharge all applicable submissions and approvals will be required. The appropriate unit of the building permit application must be completed and submitted for approval.

Article 6.10-3 Grading Permits Required (Sec. 6-62. Grading Permits Required)

(2)(b) A permit shall not be required for routine and ordinary landscape activities, provided that such grading or landscape activities do not result in a material change in the volume, rate and pattern of stormwater runoff onto or off of the site.

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The appropriate unit of the building permit application and supporting documentation must be provided for grading or landscape activities that cause a material change in the existing stormwater drainage volume, rate or patterns, as determined by the Village Engineer. Examples of “material change” include: obstruction, diversion or re-direction of stormwater flows entering or leaving the property; a change which causes an increase in runoff rate, volume or direction.

6.10-4 Stormwater Drainage Plan Components (Sec. 6-63. Stormwater Drainage Plan Components)

(2)(b) An engineered stormwater drainage plan that shows the proposed drainage patterns during and after construction. Site drainage conditions during and after construction may not be any worse than before construction, or impose a greater burden on downstream or upstream property owners than existed before construction. Site run-off volume, rate and direction must be included in drainage plan for existing and post- construction conditions. Any increase must be diverted or detained. Easements must be identified. A stormwater drainage plan shall include maintenance provisions.

User Guide: Identify and quantify the following for existing and proposed conditions. Calculations to include a 2, 10 and 100 year design storm:

- **Runoff volume, rate and direction (Any increase must be diverted or detained.);**
- **Demonstrate on-going acceptance of upstream drainage without negative impacts;**
- **Overland flow path(s) and emergency overflow route(s) to the point of public stormwater collection/ delivery;**

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- **Capacity analysis of downstream storm sewers (not necessary if zero net discharge from the property).**
- **Existing and/or proposed easements for overland flow path(s) and for emergency access by the Village to repair/ maintain stormwater features.**
- **Maintenance instructions to describe expectations for maintenance of stormwater features, including overland and emergency flow path(s).**
- **No off-site increase in these values will be acceptable except as approved by the Village Engineer.**

(3)(c) Sufficient information to substantiate the stormwater drainage patterns proposed including spotted elevations or topographic lines as necessary indicating:

- (1) The slope of the property;
- (2) The location of any dry wells or storm sewer intakes;
- (3) The grades at the top of, and adjacent to, the foundation;
- (4) The property lines;
- (5) The location of all downspouts (and sump discharges) and their connection to the storm sewer serving the property;
- (6) Downspout discharges and overland flow routes as applicable;
- (7) Overland flow path(s) and emergency overflow route(s); and,
- (8) Base flood elevation and floodplain / floodway information (if applicable).

User Guide: Typical information also to include (as applicable):

- **Run-off volume, rate and direction with supporting calculations for existing and proposed conditions (any increase must be diverted or detained);**
- **All easements, existing and proposed.**

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6.10-7 As-built Grading Survey; Certificate Of Completion (Sec. 6-66. As-Built Grading Survey; Certificate Of Completion)

(1)(g) As a condition of approval of an as-built grading plan, written maintenance instructions are to be submitted for review and approval. The owner must provide a maintenance commitment to the Village.

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- **Written maintenance instructions are to be submitted for review and approval. The owner must provide to the Village a commitment letter that states that they will maintain the stormwater features in accordance with the approved plans and maintenance instructions.**

(i) The Village Engineer shall approve the "as built" grading survey or certificate of completion if the Village Engineer determines that the approved stormwater drainage plan for the site has been implemented as required by this article. No occupancy permit of any kind shall be issued until such survey or certificate has been approved by the Village Engineer and is on file with the Director of Community Development.

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- **A letter of intent may be accepted by the Village Engineer in advance of the as-built survey if weather conditions warrant.**

*** END OF USER GUIDE ***