

DEPARTMENT OF BUILDING AND  
ZONING  
OF COOK COUNTY, ILLINOIS

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BUILDING AND ZONING OF COOK COUNTY



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<http://www.cookcountyil.gov/building-and-zoning>

## SITE ENGINEERING GUIDANCE

The department of Building and Zoning now requires digital submissions for all applications and supporting documents. Applicants that have digital files 10MB or less are required to email their submittals to: [Intake.bnz@cookcountyil.gov](mailto:Intake.bnz@cookcountyil.gov). If your submittal is larger, we accept an electronic copy on flash drive or CD (PDF format).

### Requirements for Engineering Submittals:

1. For any building permit application that entails:
  - a. Free standing buildings on vacant property;
  - b. Accessory buildings 625 square feet or larger;
  - c. Grade changes of 4 inches or more;
  - d. New pavement areas of 400 square feet or more or in common side yards;
  - e. Additions in common side yards;
  - f. Any work on property which includes a Special Flood Hazard Area (floodplain); or
  - g. Projects requiring permits from other agencies which require County review and approval;the permit submittal must contain one digital copy of fully engineering site development drawings.
2. Fully engineered site development drawings must include:
  - a. A property line survey less than 5 years old, and ground topographic surveying less than 2 years old;
  - b. Existing site elevations including spot elevations and 1-foot contours using NAVD 88 and a local benchmark;
  - c. Existing elevation of all contiguous property within 25 feet of the subject site;
  - d. Existing foundation elevations on the subject site and those adjacent to it;
  - e. Existing ground elevations at all four corners of the proposed building;
  - f. Existing and proposed culverts, storm sewers, and drainage structures including size, slope, material and rim and invert elevation;
  - g. Existing landscape structures, fences, and trees;
  - h. All proposed structures including all accessory structures;
  - i. Proposed foundation elevations, retaining walls and other site improvements;
  - j. All proposed hard surfaces such as sidewalks, driveways and patios;
  - k. Proposed landscape structures, fences and trees;
  - l. Proposed landscaping beds;
  - m. Proposed directions of surface and down spout runoff;
  - n. Proposed drainage piping and structures;
  - o. Proposed location and direction of sump pump discharges;
  - p. Proposed final elevations for lot grading, showing all contour lines and spot elevations;
  - q. Proposed swales including cross-sections and slopes;
  - r. Soil erosion control plan, including maintenance requirements and a timeframe for implementation and removal;
  - s. Applicable construction details and specifications;
  - t. Dates of plan preparation and all revisions;
  - u. Dated signature and seal of the Illinois-licensed Professional Engineer who prepared the plans;
  - v. Drawing scale of 1 inch equals 10 feet, 20 feet, 30 feet or 50 feet;
  - w. North point; and
  - x. Name, address, telephone and email address for owner and design engineer.
3. A note requiring prior notification of the Building and Zoning Department is needed on the cover sheet of the plans.
4. Mapping and calculations of runoff draining onto site, and appropriate designs to accommodate this runoff. Aerial topography may be used for areas beyond those surveyed.
5. The grading plan shall incorporate the following requirements:
  - a. All proposed grading shall be shown to meet existing elevations within the subject site.
  - b. All proposed ground slopes shall be at least one percent and no steeper than 25 percent (4 horizontal to 1 vertical).
  - c. No proposed grading shall block existing drainage patterns or divert runoff to a different area than it presently drains.
  - d. Proposed top of foundation elevations for single-family residences shall be:
    - i. The elevation of the existing foundation on the subject site;

- ii. An average of the existing top of foundation elevations of the houses on both sides of the subject site;
- iii. When there is an existing house on only one side, the proposed top of foundation shall be no more than 1 foot above the existing house or 1 foot above existing grade, whichever is lower;
- iv. When there are no existing houses on either side, the proposed top of foundation shall be no more than 1 foot above existing grade.

Any deviation from this requirement will require written justification by the design engineer and is subject to approval by the County.

- e. All downspouts shall be shown and shall be directed to the front or rear of the property. Erosion shall be mitigated with splash blocks. Where downspouts would otherwise discharge to impervious surfaces, they shall be connected directly to underground piping and the discharge directed to pervious surfaces. All downspout discharges shall be a minimum of 10 feet from property lines.
- f. Sump pumps shall discharge at grade a minimum of 10 feet from property lines unless a connection to a storm sewer is required or permitted by the owner of the storm sewer system. All such discharges shall include temporary and permanent erosion control measures.
- g. Underground drainage piping shall include structures or cleanouts at all bends and junctions.

6. Work on property which includes a Special Flood Hazard Area (floodplain) needs to follow additional design requirements, including those in Chapter 106 of the Code of Ordinances of Cook County, Illinois, the Watershed Management Ordinance of the Metropolitan Water Reclamation District of Greater Chicago, the Illinois Department of Natural Resources – Office of Water Resources, and the Federal Emergency Management Agency.

7. The soil erosion and sediment control plan shall include, at a minimum:
- a. A stabilized construction entrance, silt fence, ditch checks and inlet protection, including appropriate details for these measures.
  - b. A schedule of erosion control implementation tied to growing seasons and the construction schedule.
  - c. A plan and schedule for removal of control measures upon completion of the work and establishment of vegetative cover to at least 75 percent coverage.

8. Permission to remove trees 6 inches in diameter is needed from the County. The application for this approval is a separate process from engineering submittal and review.

9. A Watershed Management Permit is needed from the Metropolitan Water Reclamation District of Greater Chicago for all work which meets the MWRD's permit thresholds. The applicant needs to check the current Watershed Management Ordinance for these thresholds and the applicable requirements.

10. Copies of all outside agency permits are needed, including from water and sewer utilities and roadway agencies. Work in Maine, Northfield, Palos, Schaumburg, Wheeling or Worth Townships require approvals from those agencies prior to submittal of Building and Zoning permit application.

11. A complete response to each prior comment is needed with all resubmittals. Responses such as "noted" or "revised" are considered incomplete and will result in the resubmittal being rejected. Each response needs to describe the change made and the location of the change. If changes have been made pursuant to reviews from other agencies, those changes need to be detailed and explained, and a copy of the relevant review document needs to be included. All current changes need to be clouded and numbered to match the revision number.

12. After the foundation has been installed and prior to the construction of flooring or walls, a **Building Spot Survey** must be submitted to the Chief Plan Examiner of Building & Zoning. The survey must locate the foundation on the lot giving all front, side and rear yard dimensions, each wall segment length and the elevation at the top of foundation. The survey must be sealed and signed by a registered land surveyor or engineer. The contractor **MUST NOT PROCEED WITH CONSTRUCTION** until spot survey is approved, and applicant is authorized by the Building Inspector, electronic submission required.

13. The builder/owner shall submit a **Final Grade Survey** prior to obtaining a Certificate of Occupancy for the lot to the Chief Plan Examiner of Building & Zoning. The Final Grade Survey shall include the following:

- a. All one foot contour lines, all topography, all inlets, catch basins, clean outs and associated piping
- b. All site features such as: swales, retaining walls, drainage infrastructure
- c. The elevation of all drainage break points and drainage arrows within the lot
- d. Stamp and signature of a registered land surveyor or a registered professional engineer, indicating the following statement: *"The grading of the lot and drainage therefrom has been completed and fully complies with the design engineering plans dated \_\_\_\_\_ submitted for the lot."* The date of signature, license number and license expiration date shall also be indicated.
- e. Electronic submission required.

**For digital submission of application and supporting documents, please refer to our web site:**

<http://www.cookcountyil.gov/building-and-zoning>

Important Links:

[Procedures for the New Permitting Processing System](#)

[Cook County Building Permit Application](#)

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