



## GUIDANCE

### POOL ELEVATION & GRADING

Master Grading Plans are developed for subdivisions for the purpose of uniformity, aesthetics and stormwater drainage. If a change from the Master Grading Plan is requested by the owner/builder, or if no Master Grading Plan exists for the lot, the application and proposed grading must be reviewed by the City of Brookfield Engineering Division. This review may take up to 10 business days to complete.

The proposed Grading Plan **MUST** include the following:

1. Existing topography across the site (1' increments) with existing spot grades.
2. Elevation and locations of surrounding buildings in neighboring lots (minimum of 25' beyond the proposed site's property lines).
3. Existing topography of neighboring lots (minimum of 25' beyond the proposed site's property lines) sufficient enough to demonstrate how proposed grading will blend/drain.
4. Wetland, floodplain, waterway, easements, swales, ditches and other features of significance on the property or within 50 feet of the property lines.
5. Proposed Pool: Footprint on Plan displaying requested pool, and patio or deck elevations.
6. Proposed Grading: Proposed elevation of patio corners, exposures, yard, and swales. Proposed topographic contour lines shall be at 1' increments.
  - a. Proposed grades within the buildable area must not exceed a 3:1 slope.
  - b. Proposed grades within building setback areas must not exceed a 4:1 slope.
  - c. All proposed grading shall be in accordance with City Ordinances.
7. Landscape Retaining Walls: Top (TOW) and bottom of wall (BOW) spot grade elevations for proposed retaining walls shall be shown at the start, middle and end of the proposed wall.
  - a. Proposed retaining wall(s) need to obtain approval from Building Inspection.
  - b. Proposed retaining wall(s) shall not exceed 5' in height.
    - i. If a wall elevation greater than 5' in height is desired, Plan Commission approval is required.
  - c. Tiered/terraced walls must be separated by a minimum of 5' of landscaping (from face of wall A to back of wall B).
  - d. Curvy walls or walls greater than 20' in length, shall include additional spot grades sufficient enough in quantity to convey proposed plan.
8. Any zoning and subdivision restrictions and requirements (e.g. tree preservation area).
9. Elevations in NGVD 29 or NAVD 88 datum (document shall specifically indicate datum used).
10. Plan submitted in engineering scale (example: 1" = 30') and on standard, legal sized paper (8.5"x14").
11. Document shall be:
  - a. Stamped and signed.
  - b. Clear and readable; proposed items shall be highlighted (boldest) objects on the plan.
12. All requirements outlined in City Ordinance 15.04.330.

## **CHAPTER 15.04.160 PERMITS — SUBMISSION OF ITEMS.**

Applicant shall submit, in the course of applying for a permit under this chapter, such items as are expressly required to be submitted under any provision of this chapter or any other chapter of this code and such other items as the director may determine to be necessary or appropriate under the circumstances, including, without limitation, plans, specifications and a survey, all such items to be part of the permit application; provided, however, that the director may issue a permit without the filing of any such items and may require submission of additional or different items in order to effectuate the purposes of this chapter and the other applicable legal requirements.

### **A. Plan Requirements.**

All plans required to be submitted must be drawn to a scale of no less than one-eighths inch per square foot on paper or by some other process that will not fade or obliterate. Plans must disclose, as applicable, the existing and proposed provisions for water supply, sanitary sewer connections, surface water drainage and the grades of the lot upon which the building is to be constructed and of the immediately adjacent lots. Plans shall be of sufficient clarity to indicate the nature and character of the construction or other activity proposed and show that all applicable legal requirements are met. Computations and other data necessary to show the correctness of such plans shall accompany the plans if requested. All plans and additional documents shall follow the City's record retention policy.

### **B. Survey Requirements.**

Surveys shall be prepared and certified by a surveyor registered by the state and shall be dated not more than one year prior to the date of issuance of the building permit except as permitted in §15.04.340(D)(3), 15.04.370(C)(2), 15.04.380(A)(3) and 15.04.420(A)(3). Such survey shall show the following:

1. Date of the survey;
2. Location and dimensions of all buildings on the lot, both existing and proposed;
3. Dimensions of the lot;
4. Dimensions showing all offsets and setbacks to all buildings on the lot;
5. Grade of lot and of road opposite lot;
6. Grade, offsets and setbacks of all other buildings or structures on adjacent lots and, if the lot is vacant, the elevation of the nearest building on same side of the road;
7. Type of monuments at each corner of lot;
8. Watercourses or existing drainage ditches;
9. Any 100 year floodplain inundation line located on the property and proper description of any 100 year floodplain inundation line within 300 feet of the property;
10. Seal and signature of surveyor;
11. Location and depth, if applicable, of any existing or planned sanitary sewers, storm sewers, inverts, laterals, driveways and easements and other matters of record.
12. All elevations shall be in city's required datum.

## **CHAPTER 15.04.170 DRAINAGE REQUIREMENTS FOR PERMIT ISSUANCE.**

### **A. Grading.**

No permit shall be issued if the construction or other work which is the subject of the permit or other work or the proposed grade resulting therefrom will unreasonably obstruct the natural flow of any existing ravine, ditch, drain or stormwater sewer draining neighboring property unless provision is made for such flow by means of a ditch or pipe which is suitable to the city which shall be shown on the plans submitted with the application for such permit and be constructed so as to provide continuous drainage at all times.

### **B. Storm Sewer Drainage.**

No building or structure shall be erected or other work be conducted nor shall existing provisions for conveyance of water from the roof of any building or structure be altered or replaced unless:

1. Provision is made to convey water from the roof of such dwelling in such a manner that it will not, directly or indirectly, pass thence into the sanitary sewer system;
2. All other ordinances, comprehensive management plans and other applicable legal requirements (including, without limitation, the requirement of payment of fees or charges for area-wide or city-wide stormwater or wetlands programs) are complied with. No stormwater or surface water drains may be connected with the sanitary sewer system, whether installed above or below the surface of the ground.

#### **15.12.090 DRAINAGE OF YARD AREAS, ROOFS AND SUMP DISCHARGES.**

- A. All clear and stormwater wastes, as defined by SPS 382.36, shall be discharged either by gravity flow or by mechanical means to a storm sewer, to the surface of the ground outside of the building or to other places of disposal as may be authorized by the plumbing inspector.
- B. No sump, or roof discharge whether by hose, trench or in any other manner, shall be installed or maintained to discharge, run or flow into an adjacent property.
- C. Any person responsible for permitting clear water to discharge to a sanitary sewer by any means whatsoever shall be subject to the penalties prescribed for violations of this chapter.

#### **15.20.050 DESIGN CRITERIA, STANDARDS AND SPECIFICATIONS FOR CONTROL MEASURES.**

All control measures required to comply with this chapter shall meet the design criteria, standards and specifications as set forth in the WDNR Stormwater Construction and Post-Construction Technical Standards (in accordance with Chapter NR 151, Wisconsin Administrative Code) or as adopted by the engineering department.

#### **17.104.060 PRESERVATION OF TOPOGRAPHY.**

In order to protect the property owner from possible damage due to change in the existing grade of adjoining lands and to aid in preserving and protecting the natural beauty and character of the landscape, no change in the existing topography of any land shall be made which would result in raising or lowering the elevation at any point by more than one-fourth of the number of feet by which such point is removed from the nearest property line (4:1 slope).

#### **15.04.330 SWIMMING POOLS.**

- A. Permit Required. No person shall construct, install, enlarge or alter any swimming pool described in subsection (B) of this section unless a permit has first been obtained from the director and all other provisions of this section and all other applicable legal requirements are complied with. Application for a permit shall be on forms provided by the director and shall be accompanied by the following:
  1. The fee prescribed in Section 15.04.780;
  2. 2 copies of a manufacturer's brochure and instructions which show the type, style, etc., of the pool to be constructed;
  3. Plans drawn to scale showing the following:
    - a. Type of pool installation, above or below ground;
    - b. Pool height at the highest point of grade, if above ground installation;
    - c. Type and height of fence, if proposed;
    - d. Type and support of decking, if proposed;
    - e. Overall size and locations of the above with regard to existing buildings and lot lines for property survey reference;
    - f. Any change in grade near pool;
    - g. County health department approval for properties using a private septic system, where applicable;
    - h. Site inspection letter from a local wiring utility;
    - i. As to outdoor swimming pools, a landscaping plan;
    - j. A description of how the swimming pool will be filled with water;
  4. Such other items required under Sections 15.04.140 through 15.04.260 as the director may deem applicable.