

**RONNING HOMES AND NEIGHBORHOODS  
SURFACE DRAINAGE GUIDELINES**

1. **Development Sales Plat:** In addition to these guidelines, you should receive a Development Sales Plat for the lot on which you are building. Please take time to carefully review this document. It contains lot corner elevations and Recommended Minimum Finish Grade Elevations (MGEs), which show how surface water is designed to drain on the lots. The information on the Development Sales Plat is consistent with, but not as extensive as, the master drainage plan approved by and on file with the City of Sioux Falls. A copy of this master drainage plan can be obtained directly from the City or from Ronning Homes and Neighborhoods.
2. **Definition of MGE:** “MGE” refers to the minimum finished ground elevation at the home. *See Exhibit A* for diagrams and definitions that define “MGE.”
3. **Exhibit A:** A summary of MGE and surface drainage requirements is attached to these guidelines as Exhibit A. Please familiarize yourself with the information contained in this Exhibit. You will note that the Exhibit contains a number of references to the International Residential Code (IRC), as adopted and amended by the City of Sioux Falls. We recommend that you familiarize yourself with the referenced IRC sections as well.
4. **Fences and Other Obstructions:** Fences, storage sheds, raised gardens, and landscaping can interfere with, obstruct, and block surface drainage. When installing such features, be sure to leave drainage paths unobstructed so that no surface drainage is blocked. In addition, before installing such features, it is required that you contact Ronning Homes & Neighborhoods to ensure that the proposed location and installation will not interfere with surface drainage and that the Architectural Guidelines for the neighborhood are followed..
5. **Recommended MGE Requirements:** Recommended MGE requirements for individual lots are determined by Ronning’s engineers (Schmitz Kalda), approved by the City, and noted on the Development Sales Plat. It is the builder’s responsibility to meet these requirements. Any deviation from the recommended MGE requirements must be approved by Ronning and Schmitz Kalda and accepted by the City of Sioux Falls.
6. **Grade at Lot Lines:** It is important to maintain the existing grade at lot lines, as any changes might affect the surface water flow pattern for the area and adversely affect building on other lots. Accordingly, the existing grade at lot lines cannot be changed unless such changes are approved by Ronning and Schmitz Kalda and accepted by the City of Sioux Falls.
7. **Garages:** Garages must be on the high side of the lot unless otherwise approved by Ronning.

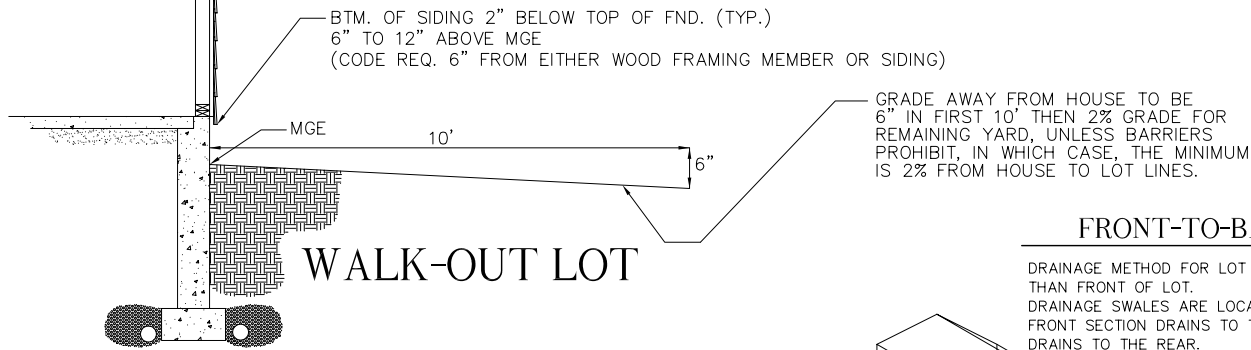
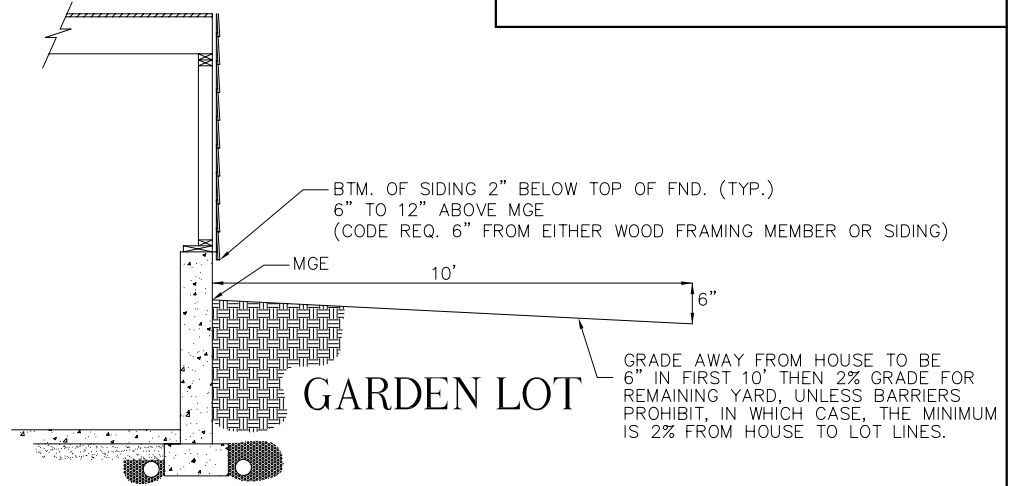
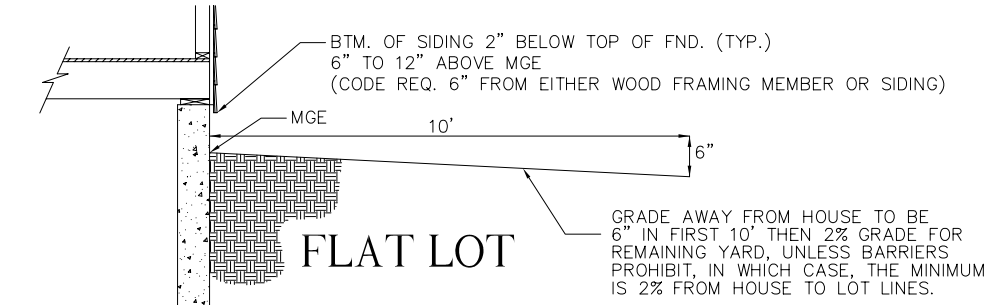
8. **Slope at Side Lot Lines:** Please note that in lots that drain from back to front, Ronning requires a straight and consistent 1 ½ % slope at the side lot lines, which is critical for proper drainage.
9. **Surface Drainage Goals:** The ultimate goal of surface drainage is to ensure that water drains away from the building in all directions. Proper drainage consists of 6 inches of concrete foundation out of the ground, a 6 inch drop in the first 10 feet away from the house, and a 2% grade for the remaining yard. If drainage is done properly, no water ponding should occur on the property.
10. **Surveyors:** It may be necessary to hire a licensed surveyor/land engineer to ensure compliance with any and all drainage requirements. Your Purchase Agreement with Ronning permits Ronning to hire a surveyor at your expense if this becomes necessary.
11. **Window Wells:** Builders should not install window wells on the side of any house where water will drain between the houses, back to front draining lots.



# MGE & SURFACE DRAINAGE SECTIONS

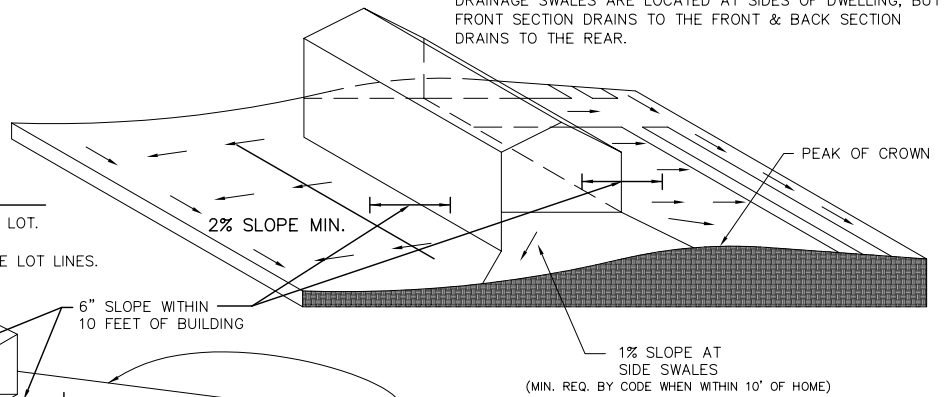
## SPECIAL NOTES:

- MGE DEFINITION:  
MINIMUM FINISHED GROUND ELEVATION AT THE HOME. THIS IS THE TOP OF BLACK DIRT UNDER GRASS, TOP OF LANDSCAPE ROCK OR OTHER LANDSCAPE MATERIAL.
- EXISTING GRADE AT LOT LINES AS BUILT CAN NOT BE CHANGED UNLESS PERMISSION OBTAINED FROM RONNINGS AS APPROVED BY SCHMITZ KALDA, AND ACCEPTED BY THE CITY.
- RECOMMENDED MGE'S FOR INDIVIDUAL LOTS AS APPROVED BY THE CITY ARE NOTED ON DEVELOPMENT SALES PLATS.
- CODE REFERENCES:  
2006 INTERNATIONAL RESIDENTIAL CODE (IRC) SECTIONS R401.3 & R404.1.6 AS AMENDED & ADOPTED BY THE CITY OF SIOUX FALLS & EXPLAINED IN THE 2006 CITY HANDBOOK, PAGES 43, 44 & 53.



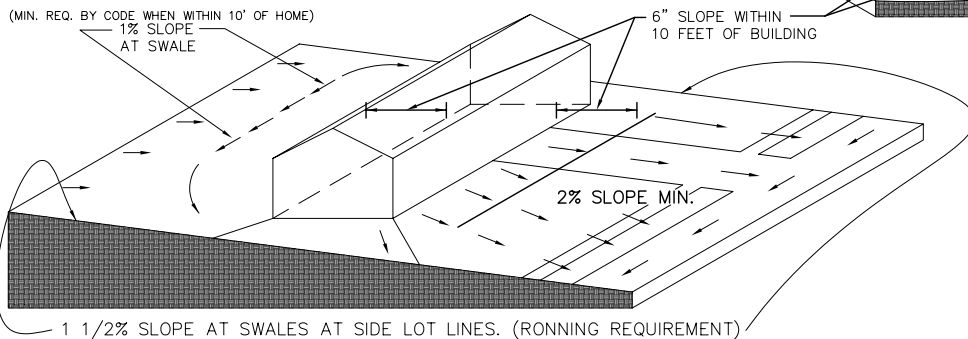
## FRONT-TO-BACK DRAINAGE

DRAINAGE METHOD FOR LOT WHERE REAR OF LOT IS LOWER THAN FRONT OF LOT. DRAINAGE SWALES ARE LOCATED AT SIDES OF DWELLING, BUT FRONT SECTION DRAINS TO THE FRONT & BACK SECTION DRAINS TO THE REAR.



## BACK-TO-FRONT DRAINAGE

GRADING METHOD FOR LOT WHERE SLOPE IS FROM REAR TO FRONT OF LOT. DRAINAGE SWALES ARE LOCATED AT REAR AND SIDES OF DWELLING. FOR NORMAL LOTS, SWALES AT SIDES ARE USUALLY CENTERED ON SIDE LOT LINES.



IT IS CRITICAL TO MAINTAIN A STRAIGHT 1 1/2% GRADE FROM THE BACK TO THE FRONT AT SIDE LOT LINES FOR PROPER DRAINAGE.