

Flood Proofing using Compacted Fill

APPENDIX A

Recommended for all development on flood prone land

Level A = Estimated Peak Water Level (a.k.a. Design or Potential Flood Level)

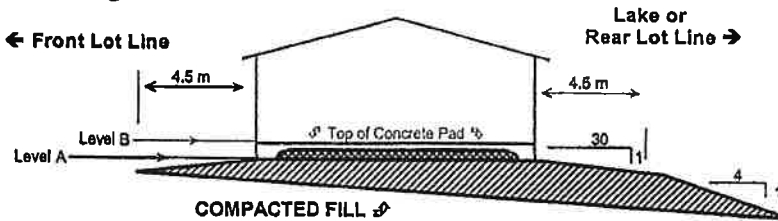
Level B = Safe Building Elevation* (Level A plus a safety factor or freeboard of 0.6 or more metres)

All habitable areas, wood joists and wood supporting beams must be above Level B.

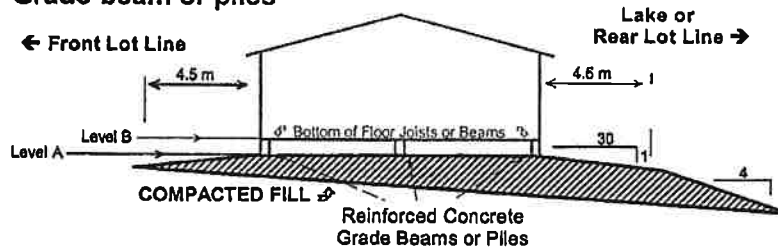
Below Level B, all foundations, plumbing and utility systems must be able to withstand flood conditions including wave and ice run-up due to wind action.

Schematics only - not drawn to scale

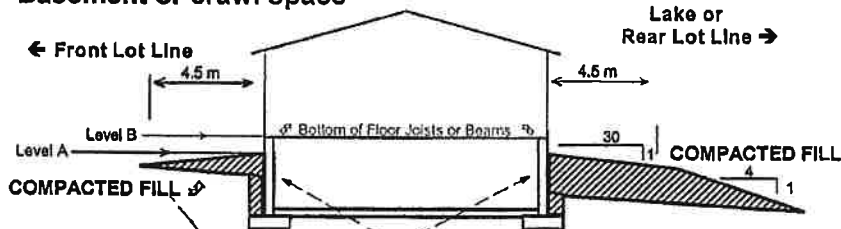
Slab-on-grade or similar construction



Grade-beam or piles



Basement or crawl space



Foundation must be reinforced concrete able to withstand hydraulic pressure and ice action
Windows & other wall openings must be protected as needed unless builder designs for and accepts interior flooding. Sump pumps and other special plumbing may be required.

Notes:

All fill must be rip-rapped or otherwise protected against erosion from water and ice action.

Lots must be graded to prevent any surface water from ponding - See Appendix B.

For construction details, refer to: Sections 41.8 to 41.15 of the *Technical Builders' Bulletin* and Page 6 of *Problem Lands - Building in a Flood-Risk Area* (both are available from the Canada Mortgage and Housing Corporation); *The National Building Code of Canada 1995*; *The Uniform Building and Accessibility Standards Act Chapter U-1.2 S.S., 1983-84*; and any applicable local zoning bylaw, building bylaw and plumbing regulations or guidelines.

Sources:

Canada Mortgage and Housing Corporation Publication # NHA 5701 11/86 entitled *Problem Lands - Building in a Flood-Risk Area* (which lists various flood proofing options)
Sask Water, Basin Operations, 111 Fairford Street East, Moose Jaw, Saskatchewan S6H 7X9

* A safe building elevation (SBE) is based on limited hydrologic, meteorologic and topographical data. Builders should consider a SBE a minimum safe level and must take into account the physiography, geology, orientation and other conditions unique to a building site. Builders must also add horizontal setbacks to allow for slumping and erosion due to wind, wave, ice or other natural actions.

Open basements near flood prone land

APPENDIX B

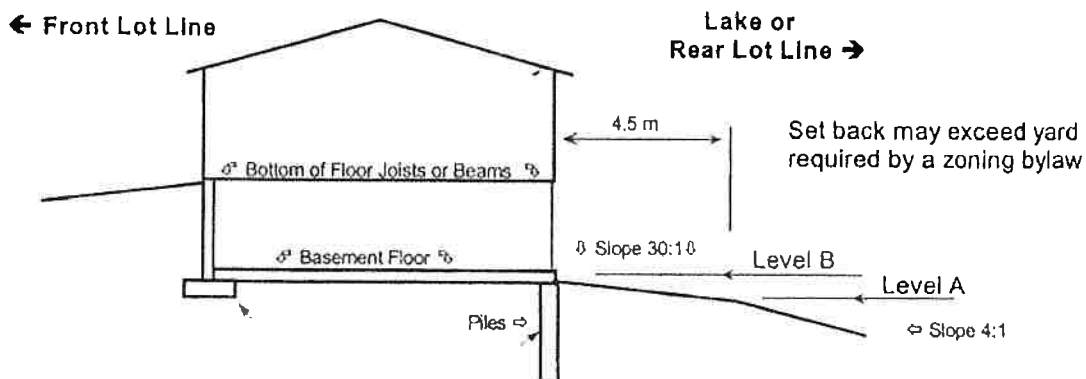
Level A = Estimated Peak Water Level (Design or Potential Flood Level)

Level B = Safe Building Elevation* (Level A plus a safety factor or freeboard of 0.5 or more metres)

All habitable areas, wood joists and wood supporting beams must be above Level B.

Below Level B, all foundations, plumbing and utility systems must be able to withstand flood conditions including wave and ice run-up due to wind action.

Schematic only - not drawn to scale



Foundations must be reinforced concrete able to withstand hydraulic pressure and ice action
Windows & other wall openings must be protected as needed unless builder designs for and accepts interior flooding. Sump pumps and other special plumbing may be required.

Notes:

In order to properly grade the recommended slopes, structures may need to be set back further from lot lines than what is required by local bylaws.

All slopes should be protected against erosion from water and ice action.

Lots must be graded to prevent any surface water from ponding - See Appendix K

For construction details refer to: Sections 41.8 to 41.15 of the *Technical Builders' Bulletin* and Page 6 of *Problem Lands - Building in a Flood-Risk Area* (both available from the Canada Mortgage and Housing Corporation); *The National Building Code of Canada 1995*; *The Uniform Building and Accessibility Standards Act* Chapter U-1.2 S.S. 1983-84; and any applicable local zoning bylaw, building bylaw, and plumbing regulations or guidelines.

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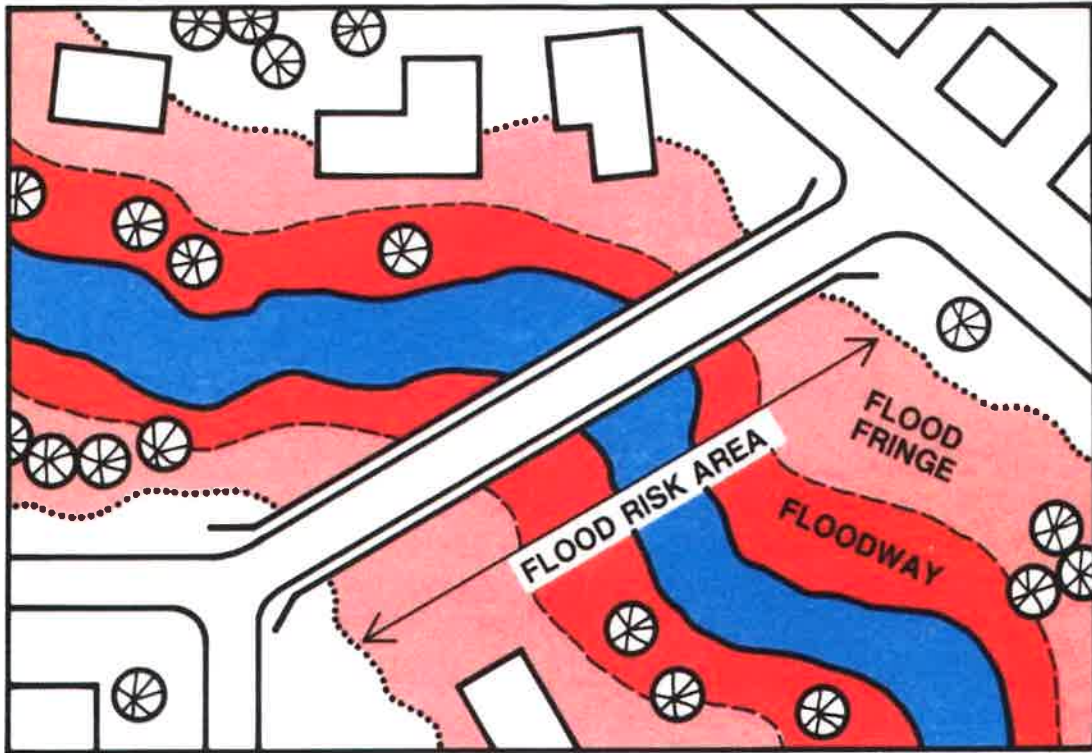


Figure 1: Plan View of Flood Fringe and Floodway (source: Alberta Environment)

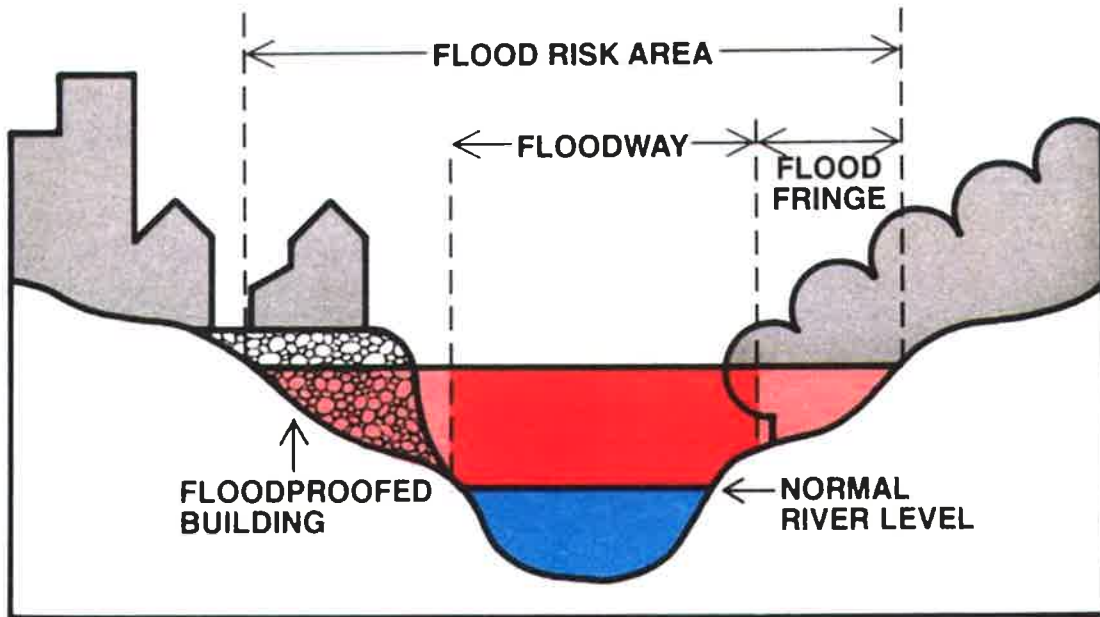


Figure 2: Cross Section View of Flood Fringe and Floodway (source: Alberta Environment)