

COMMUNITY RING DIKE STUDY

City of Winnipeg

Winnipeg, Manitoba



Project Description

KGS Group completed a conceptual study to identify 27 potential community ring dike sites suitable for construction of permanent secondary dikes to protect to the City flood protection level, consistent with the primary dike system. The study included:

- The review of all in-house/available data
- Site inspections and investigations including topographic surveys and drilling/testing to establish stratigraphic conditions
- Air photo interpretation and preparation of ortho digital topographic maps at 0.2 metre intervals
- Development of design criteria for riverbank dike performance under normal and extreme conditions
- Stability sensitivity analysis of riverbank and dike geometry
- Conceptual design of the optimum dike locations, dike configurations (earthen, segmental walls, structural walls),
- Design of riverbank remediation works such as riprap, rockfill berms, rockfill shear keys and rockfill columns
- Benefit-cost analysis of property/house value and potential damages versus cost of protection works for various flood levels
- Public open house process to obtain input from the affected individuals and refine the proposed dike/bank works
- Functional design of selected ring dike sites is in progress.