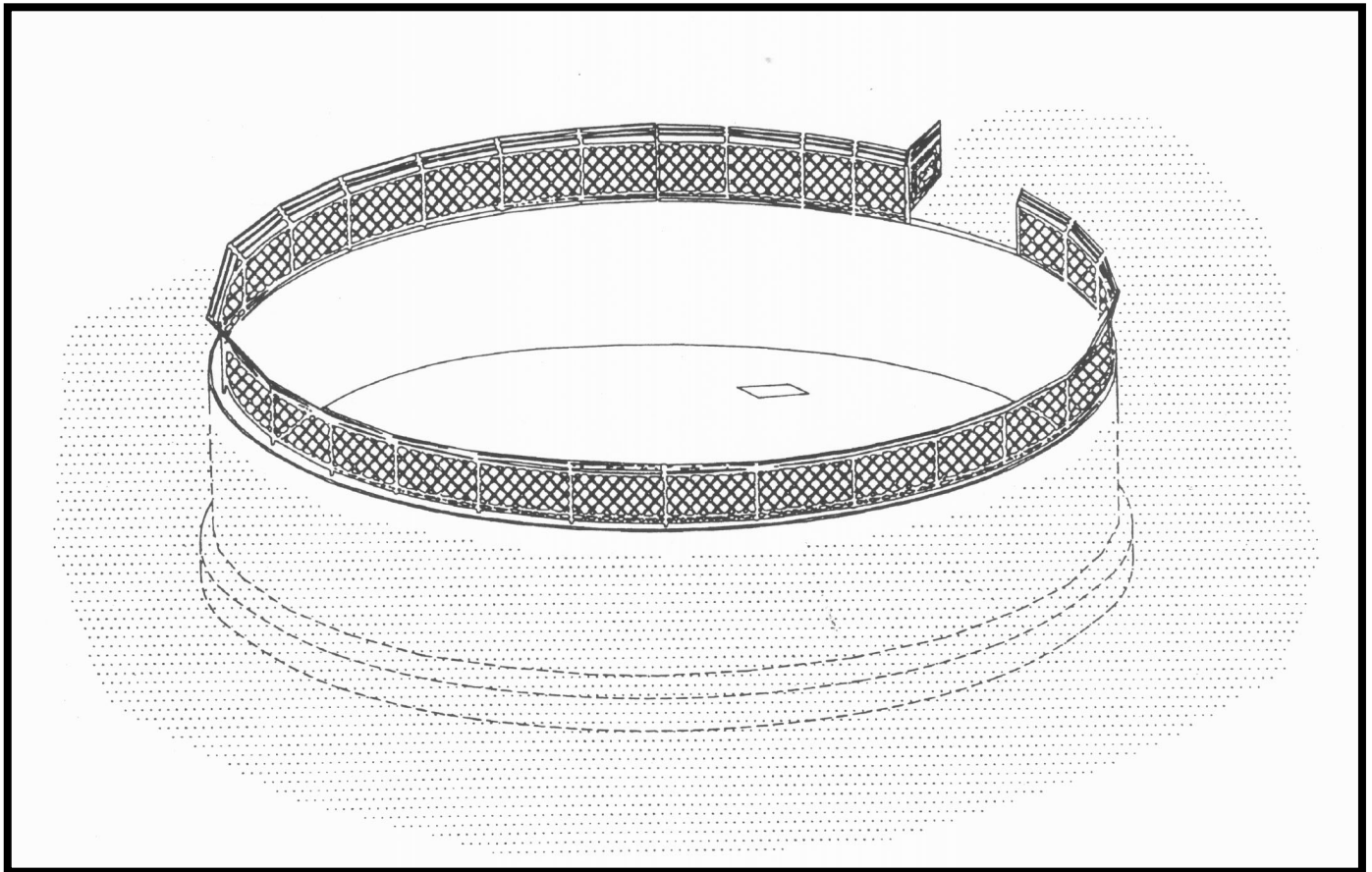


OPEN CIRCULAR STORAGE TANK



DEVELOPED BY CANADA PLAN SERVICE

OPEN CIRCULAR MANURE STORAGE TANK

CPS
PLAN 10730

This leaflet highlights the details of a plan for an open circular liquid manure storage tank.

The plan provides information for tank diameters ranging from 40 feet to 120 feet and wall heights ranging from 8 feet to 14 feet. Structural reinforcing details for walls, footings and floors are shown in **Table 1** on sheet 2 for various tank dimensions and capacities.

In addition to manure and soil loads, walls have been designed to reflect outside uniformly distributed surcharge loads imposed by vehicles. Critical increased reinforcement is necessary near access ramps. Ice loading has not been included in the design of the walls.

If the groundwater table rises above the tank floor, it is possible that the floor slab can fail or the entire tank

can be lifted out of place by the resulting hydrostatic water pressure when the tank is empty or partially empty. Adequate drainage to maintain groundwater levels below the floor slab will prevent uplift. Alternatively, pressure relief plugs can be provided in the slab.

Footing drains must be free draining and discharge from these drains shall be disposed of in such a way as to not pollute the environment.

Uncovered manure storages must be enclosed with a permanent safety fence or wall extending not less than 1.5 meters (5 feet) above adjacent grade or floor level. The plan provides details for construction of a safety fence. The fence should be adequately secured at ground level using gates and latches to prevent access by children and livestock.