Important: Warranty Disclaimer for Plans

For the convenience of our clientele, this website makes available conceptual plans that can be helpful in planning buildings, facilities, or other structures. They were developed over many years by engineers at Land Grant universities through the former USDA Cooperative Farm Buildings Plan Exchange. Regardless of the original intent, these are older plans that provide conceptual information only, and are not to be considered or used as construction plans.

These plans do not claim to represent the most current technology or the most recent construction techniques, standards, or codes. For example, over the years there have been changes in the National Design Specifications for Wood Construction, changes in the strengths and types of building materials, and changes in fasteners, among other things. Those changes, along with variations in climate, building codes, and other factors, make it imperative that professional services be utilized for your specific project. Suggested services include, but are not limited to, structural design, assurance of compliance with codes and regulations, site selection, construction supervision, and provision for utilities, waste management, and access. These plans do not replace the need for competent design assistance in developing safe, legal, and well-functioning agricultural buildings and systems.

Neither the University of Kentucky, the Midwest Plan Service, the United States Department of Agriculture, nor any of the cooperating Land Grant universities, warranty these plans. They are for conceptual use only and are not for use as construction plans.
CROSS SECTION CONCRETE CISTERN

Supply from roof

1 4" screen

Use diverter when tank is full

Manhole with 40° top

6" rain water entry pipe

55 gal. drum

1 4" pipe drain

Ground line

Flexible hose

Suction pipe to pump

4" overflow

12" splash plate

Foot valve must float in vertical position

Water line

Sump for draining and clearing directly below manhole

Water stops

SLOPE FLOOR 1"

13'-4"

CROSS SECTION DETAIL

NOT TO SCALE

VERTICAL REINFORCING STEEL No. 5 Spaced 10.8" O.C.

HORIZONTAL REINFORCING STEEL No. 4 Spaced 10.8" O.C.

18" Dowel - 12" up No. 4 Spaced 7.8" O.C.

6 x 6 x 6" wire mesh reinforcing placed 1 1/2" below surface

AT LEAST 2" of sand

9694 GALLON CONCRETE CISTERN

COOPERATIVE EXTENSION SERVICE
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
COLLEGE OF AGRICULTURE
UNIVERSITY OF KENTUCKY
AND
U.S. DEPARTMENT OF AGRICULTURE COOPERATING

NOTES:

1. ALL CONCRETE AIR-ENTRAINED 3500 PSI MIN. 28 DAY STRENGTH

MAX 3/4" rounded shingle gravel (1:2:3 cement: sand: gravel mix)

2. Tile drain around outside cistern if outlet possible

3. Reinforcing steel conforms to TR-3 HWPS

4. Walls poured in one day for water tightness

5. Concrete needs 7 curing days before backfilling

6. Steel adequate for above or below ground construction

7. Floor to be placed on undisturbed soil specified

TOP VIEW

Scale: 1/2"=1'-0"

Reinforce around the manhole with extra bars shown in dark lines

8" concrete slab top with No. 4 reinforcing steel spaced 8.6" O.C. along width and No. 3 spaced 11.8" O.C. placed 1 1/2" of bottom

The each corner with 24" steel dowel

DOWNSPOUT FROM ROOF

1/4" screen cover

OVER WATER DRIP

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NOTES:

1. ALL CONCRETE AIR-ENTRAINED 3500 PSI MIN. 28 DAY STRENGTH

MAX 3/4" ROUNDED SHINGLE GRAVEL (1:2:3 CEMENT: SAND: GRAVEL MIX)

2. TILE DRAIN AROUND OUTSIDE CISTERN IF OUTLET POSSIBLE

3. REINFORCING STEEL CONFORMS TO TR-3 HWPS

4. WALLS Poured IN ONE DAY FOR WATER TIGHTNESS

5. CONCRETE NEEDS 7 CURING DAYS BEFORE BACKFILLING

6. STEEL ADEQUATE FOR ABOVE OR BELOW GROUND CONSTRUCTION

7. FLOOR TO BE PLACED ON UNDISTURBED SOIL SPECIFIED

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