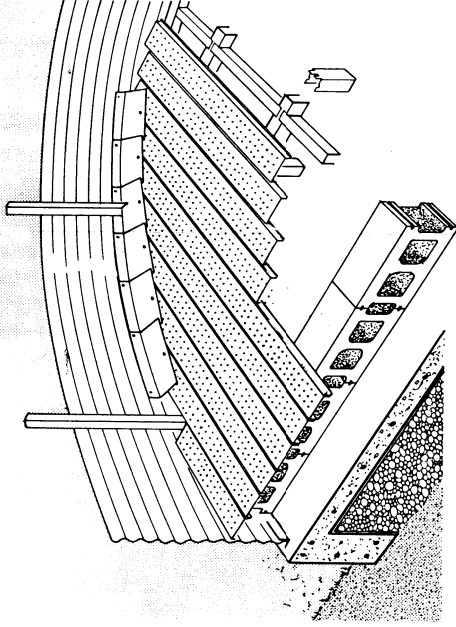
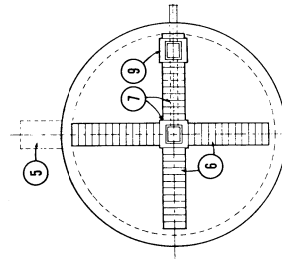


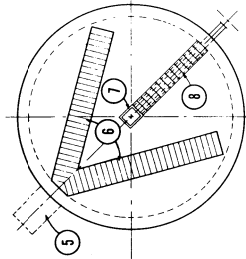
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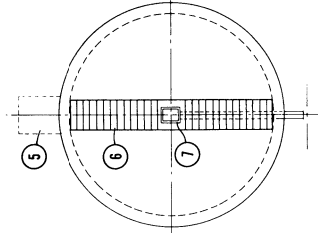
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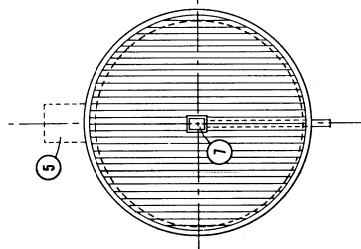
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2



3



4

- 1 reinforced concrete foundation with "X-type" aeration duct
- 2 reinforced concrete foundation with "Y-type" aeration duct
- 3 reinforced concrete foundation with "T-type" aeration duct, for bins not over 18'-0" diam.
- 4 reinforced concrete foundation with "full floor aeration system"; system consists of galv. steel or concrete block supports, perforated plank flooring, and flashing to seal bin; see manufacturer
- 5 aeration duct extension or fan transition
- 6 aeration duct with floor panels or use perforated flooring
- 7 center bin well and unloading auger
- 8 unloading auger trench with removable solid floor
- 9 intermediate bin well (optional); do not use to start emptying a full bin

SPECIFICATIONS

Before constructing foundation consult manufacturer of steel grain bins for details such as: foundation and bin diameter, bin anchorage, under floor and sweep augers, aeration ducts and fan outlets. Also consult local authorities for compliance with codes.

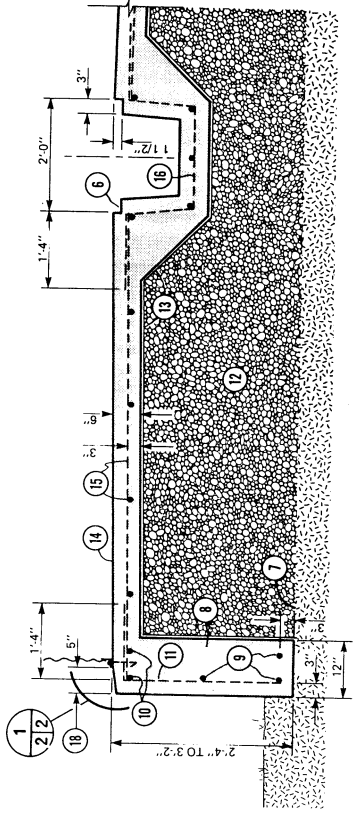
The design of this plan considered a max. bin diameter of 22'-0" with a max. depth of 16'-5" (shallow bin). For greater bin depths and diameters increase the perimeter footing width and circumferential reinforcing.

The minimum soil safe bearing pressure must be larger than 1200 psf. Unless otherwise specified, all cast-in-place concrete is to be min 3000 psi at 28 days, 6% air-entrainment. The plan user must ensure that the foregoing requirements are met. Consult an engineer if you are not familiar with the details required or if your bin and soil do not fall within these limits.

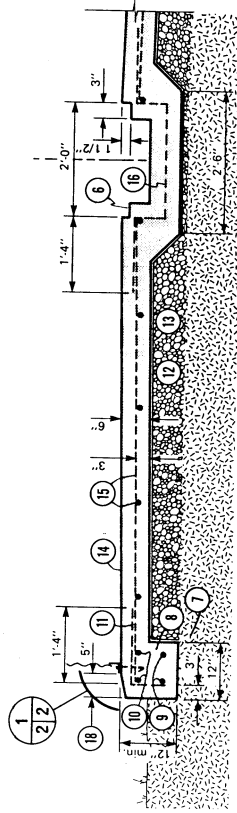
All reinforcing steel to be min. 60,000 psi deformed bars; provide 2" min. concrete cover over reinforcing steel.

All exposed steel to be galvanized or painted to resist corrosion from moisture.

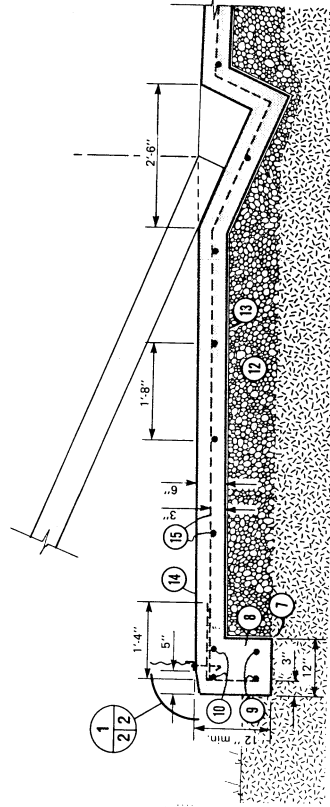
COOPERATIVE EXTENSION SERVICE AGRICULTURE AND HOME ECONOMICS Agricultural Extension Service <small>University of Tennessee Institute of Agriculture Agricultural Engineering Department</small>	
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING FOUNDATIONS FOR CIRCULAR STEEL GRAIN BINS UNDER 22 FT DIAMETER	
CANADA '87	6391
SHEET 1 OF 2	



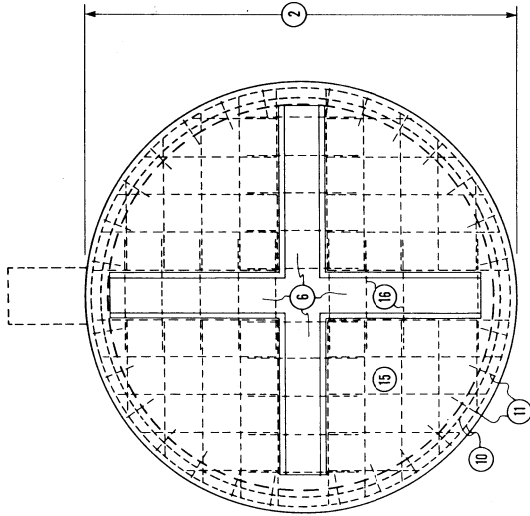
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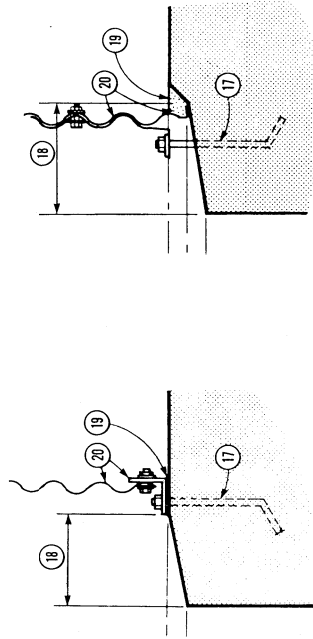
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5



1



1
2/**2**

1 reinforced concrete foundation with "x-type" aeration duct (rebar size and spacing is identical for foundations with "y-type" or "l-type" aeration duct)

2 outside diameter of foundation is bin diameter plus 2 x (13)

3 section with footing depth 2'-4" to 3'-2" for in-floor auger, unloading into second conveyor

4 footing depth 12" minimum for in-floor unloading auger with universal joint drive extension

5 foundation with inclined auger unloading

6 aeration duct, notch floor for perforated flooring

7 remove top soil and compact soil at foundation ring location

8 erect form, place (9), (10), (11) and pour concrete footing

9 5/8" continuous rebar, ends overlapped by 1'-4"; 2 rebar for footing depth of up to 1'-6"; 3 rebar for up to 3'-2"

10 2 - 5/8" continuous rebar, ends overlapped by 1'-4"

11 5/8" temperature L-rebar @ 1'-8" oc

12 compacted granular fill

13 6 mil polyethylene liner

14 6" reinforced concrete floor, slope 2" from center

15 5/8" temperature rebar both ways @ 1'-8" oc

16 5/8" rebar @ 1'-8" oc, bend to suit aeration duct design; overlap with (15) by 1'-4"

17 1/2" x 6" anchor bolt @ 10'-0" oc or as req'd to pull bin onto concrete moisture seal

18 5" minimum (greater for larger bins)

19 sealant

20 protective coating on bin sheets

COOPERATIVE EXTENSION SERVICE
AGRICULTURE AND HOME ECONOMICS
Agricultural Extension Service
University of Tennessee Institute of Agriculture
Agricultural Experiment Station
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

FOUNDATIONS FOR CIRCULAR STEEL GRAIN
BINS UNDER 22 FT DIAMETER

CANADA '87 6391 SHEET 2 OF 2