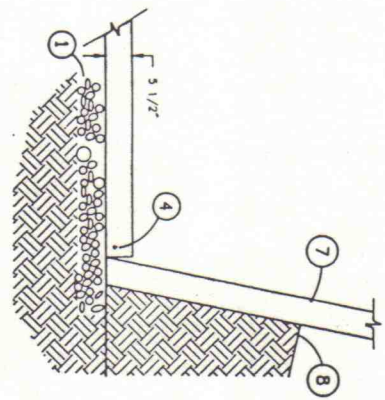
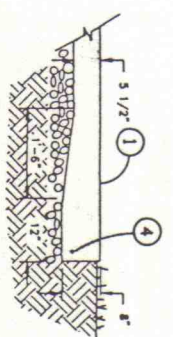


FLOOR PLAN



1 FLOOR EDGE DETAIL



2 FLOOR EDGE DETAIL

NOTES

1. CONCRETE FLOOR SLAB 5 1/2" OVER 6" TO 8" GRAVEL BASE; SLOPE AT LEAST 1/8" PER 1'.
2. FLOOR SLAB, WITH IS ANY MULTIPLE OF 8'-0"; MINIMUM WITH IS 2 TIMES WALL HEIGHT TO ALLOW SPACE FOR CASTING WALL PANELS
3. CRACK CONTROL JOINTS GROOVED OR SAWN 1" INTO FLOOR SLAB 16' OC BOTH WAYS.
4. CONTINUOUS #5 REBAR, STOPS AT 3 LOCATE REBAR 2" IN FROM EDGE AND UP FROM BOTTOM OF SLAB.
5. BUTTRESS ON LEVELLING PADS.
6. BUTTRESS FOOTING.
7. CONCRETE WALL PANELS, TIED TO TOP OF BUTTRESSES.
8. BACKFILL, MINIMUM 3'-6" DEEP.
9. LIGHT SIDES IN PLACE AS SHOWN.

SPECIFICATIONS

UNLESS OTHERWISE SPECIFIED, ALL CAST-IN-PLACE CONCRETE IS TO BE AT LEAST 4000 PSI @ 28 DAYS, 1% AIR ENTRAINED, 4" SLUMP, 3/4" MAX. AGGREGATE SIZE, USE SULPHATE RESISTANT CEMENT WITH ALKALI SOILS.

ALL REINFORCING STEEL TO BE AT LEAST 60,000 PSI YIELD STRENGTH DEFORMED BARS; PROVIDE 2" CONCRETE COVER REINFORCING STEEL.

CONCRETE TO BE CURED IN FORMS, KEEPING EXPOSED SURFACES CONTINUOUSLY DAMP BY FREQUENT SPRINKLING OR COVER THE SURFACE WITH WETTED BURLAP; MINIMUM CURING TIMES AS FOLLOWS:

AVERAGE CURING TEMPERATURE NORMAL PORTLAND CEMENT HIGH EARLY STRENGTH CEMENT

ABOVE 68°F	5 DAYS	3 DAYS
50° - 68°F	7 DAYS	5 DAYS
BELOW 50° F	(SPECIAL PRECAUTIONS REQUIRED)	

ALL EXPOSED STEEL TO BE GALVANIZED OR PAINTED TO RESIST CORROSION.

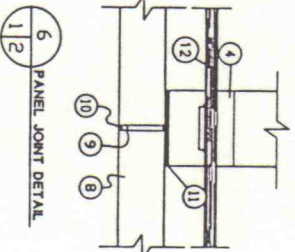
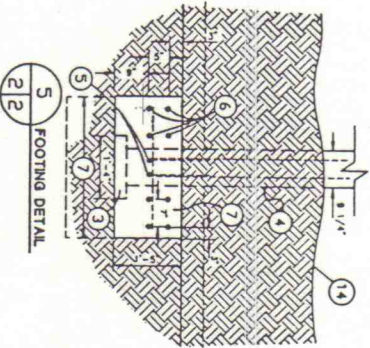
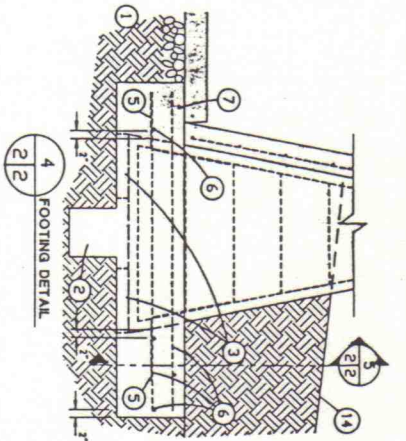
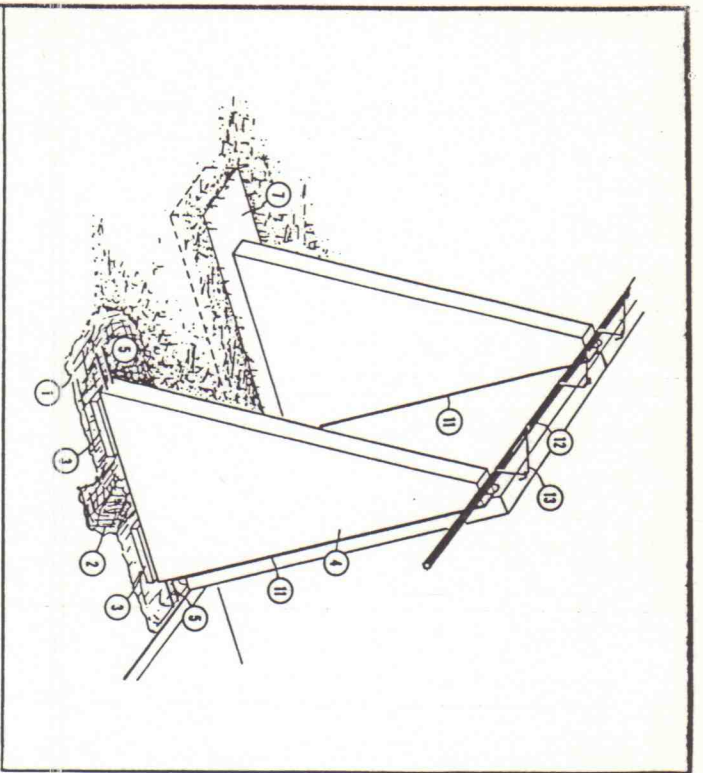
CONCRETE REQUIREMENTS, FC-3

	WALL HEIGHT		
	20 ft	16 ft	12 ft
FOOTING	85.1	58.6	37.5
BUTTRESS	74.8	49.8	30.5
WALL PANEL	74.2	60.4	44.5
			29.6

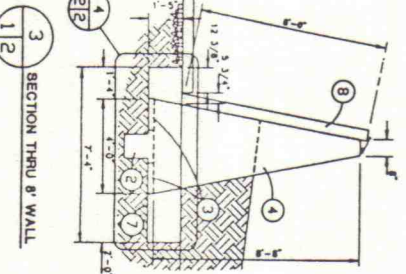
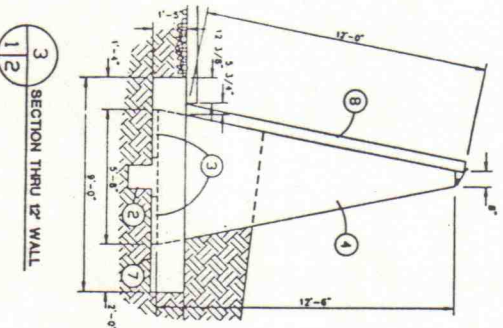
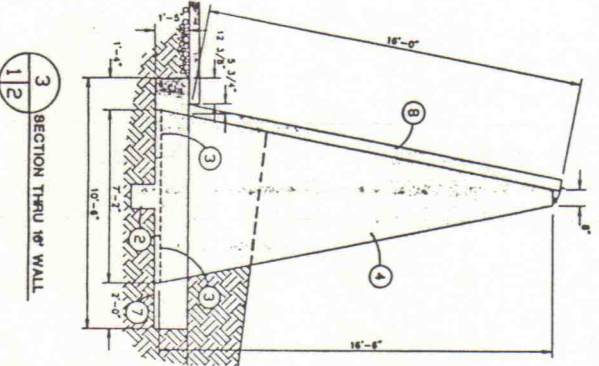
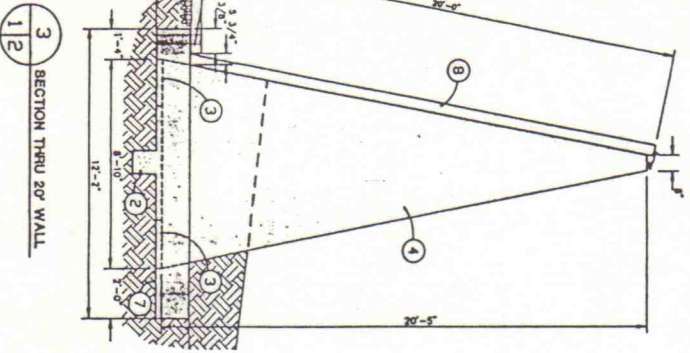
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
STATE OF TENNESSEE
UNIVERSITY OF TENNESSEE
AGRICULTURAL ENGINEERING DEPARTMENT
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

BUTRESSED CONCRETE HORIZONTAL SILO 8-20 ft. HIGH

C.P.S. '88 6408 SHEET 1 OF 3



- 1 undisturbed soil
- 2 footing key 12" x 12"
- 3 buttress leveling pads, 3" thick
- 4 concrete buttress, see reinforcing on sheet 3
- 5 #8 x 3'-0" bent rebar from buttress, see sheet 3
- 6 #5 rebars around buttress (4 sides)
- 7 concrete footing, level under floor, oil edge of floor before placing concrete; footing width is:
 - 5'-0" for 20" wall
 - 4'-0" for 16" wall
 - 3'-0" for 12" wall
 - 3'-0" for 8" wall
- 8 wall panel, see reinforcing on sheet 3, tie to buttress
- 9 1 1/4" foam backing rod
- 10 1/2" deep caulking bead
- 11 1/2" ethafoam gasket (2 layers if base is very rough)
- 12 1 1/2" galv. steel pipe, weld to buttress
- 13 lifting loop as soon as each buttress is plumb
- 14 #4 rebar, through wall panel lifting loop and weld to (12)
- 14 backfill, minimum 3'-4"



6 PANEL JOINT DETAIL

5 FOOTING DETAIL

4 FOOTING DETAIL

3 SECTION THRU 20" WALL

3 SECTION THRU 16" WALL

3 SECTION THRU 12" WALL

3 SECTION THRU 8" WALL

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 AND
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**BUTRESSED CONCRETE HORIZONTAL
 SILO 8-20 II, HIGH**

C.P.S. '88 6408 SHEET 2 OF 3

