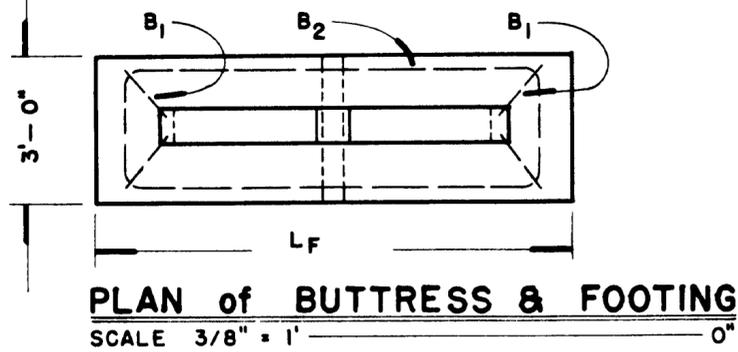
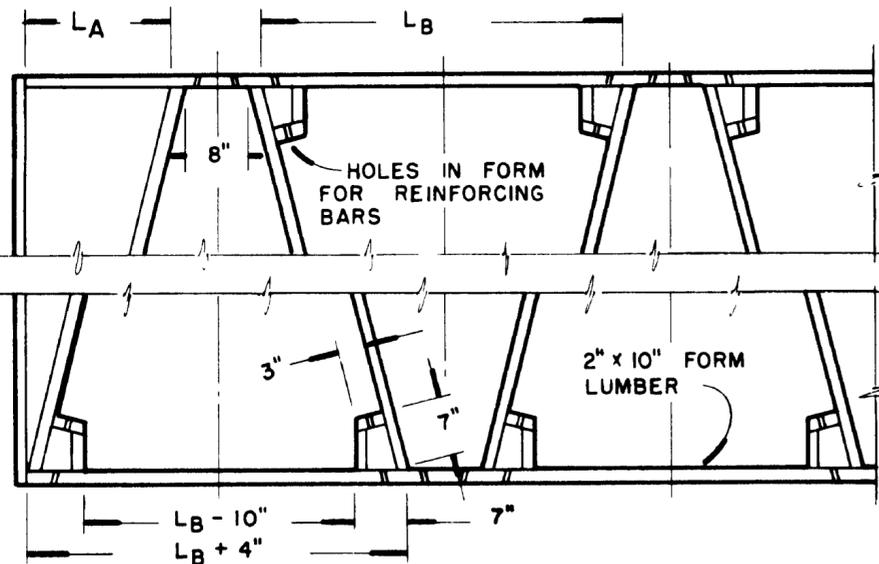


SIDE VIEW of BUTTRESS
SCALE 3/8" = 1' 0"

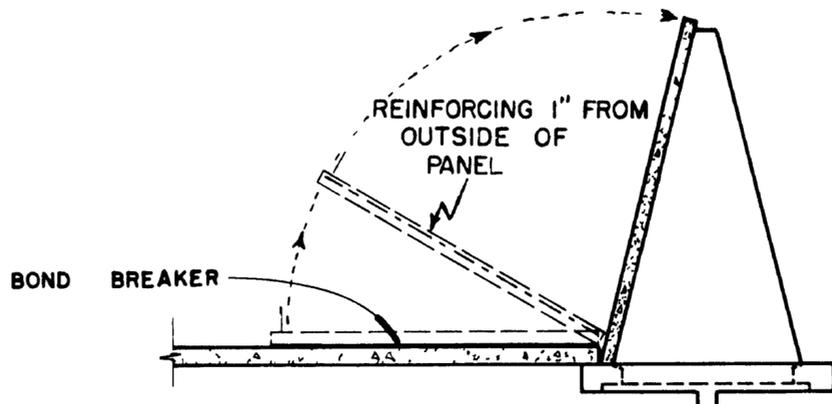
END VIEW of BUTTRESS
SCALE 3/8" = 1' 0"



PLAN of BUTTRESS & FOOTING
SCALE 3/8" = 1' 0"



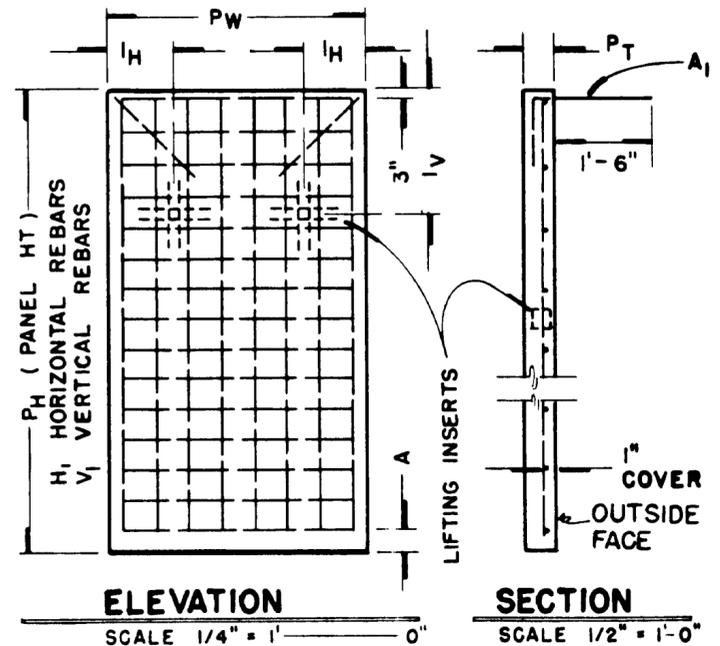
PLAN of BUTTRESS FORMS
SCALE 3/4" = 1' 0"



HALF SECTION of SILO
SCALE 1/4" = 1' 0"

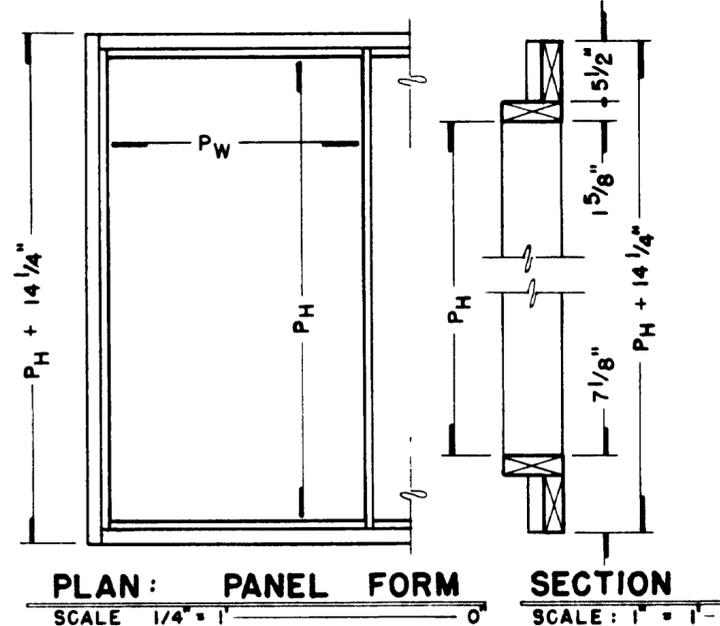
NOTES

- PICK-UP INSERTS SHALL BE SUPERIOR 1/2" TYPE "S", RICHMOND 3/4" TYPE LCBI FOR 10' PANEL, FOR 12' & 14' PANELS USE 1" TYPE LCBI, OR EQUIVALENT.
- USE 2x6 FORM BOARDS FOR 12 & 14 FOOT PANELS
- USE 2x4 FORM BOARDS FOR 10 FOOT PANELS
- SEE SHEET NO 2 FOR LIFTING INSERT DETAILS
- 2 NO 3 BARS REQUIRED ON BOTH SIDES OF SILO FLOOR, RUN BARS FULL LENGTH OF SILO.
- MINIMUM LAP FOR ALL RE-BARS SHALL BE 10"



ELEVATION
SCALE 1/4" = 1' 0"

SECTION
SCALE 1/2" = 1' 0"



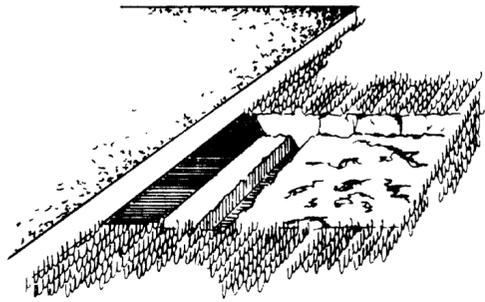
PLAN: PANEL FORM
SCALE 1/4" = 1' 0"

SECTION
SCALE: 1" = 1' 0"

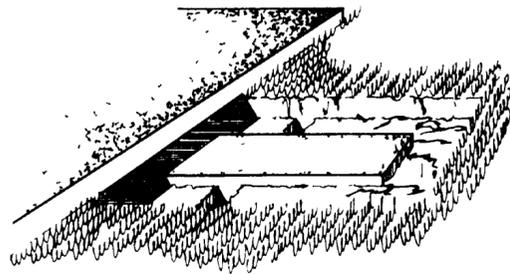
PANEL DIMENSION SCHEDULE						
PANEL HT	PW	PT	A	IH	IV	WT
10'-0"	7'-11"	3 5/8"	3"	1'-6"	3'-0"	3400
12'-0"	7'-11"	5 1/2"	3"	1'-6"	3'-6"	6100
14'-0"	7'-11"	5 1/2"	3"	1'-6"	4'-0"	7200

PANEL REINFORCEMENT SCHEDULE												
	10 FOOT				12 FOOT				14 FOOT			
	SHAPE	NO.	SIZE	LGTH	SHAPE	NO.	SIZE	LGTH	SHAPE	NO.	SIZE	LGTH
H ₁	—	11	4	7'-6"	—	13	4	7'-6"	—	15	4	7'-6"
V ₁	—	8	4	9'-6"	—	8	4	11'-6"	—	8	4	13'-6"
A ₁	—	2	4	2'-6"	—	2	4	2'-6"	—	2	4	2'-6"

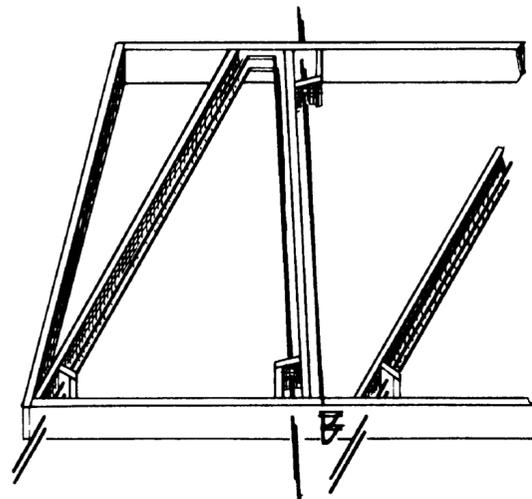
BUTTRESS & FOOTING SCHEDULE									
DIMENSIONS						REINFORCING			
H _B	L _F	L _B	L _A	S _B	WT	B ₁		B ₂	
9'-8"	7'-8"	5'-8"	2'-6"	3 5/8"	3,700	2*4 @24'-0"		2*4 @10'-9"	
11'-8"	8'-8"	6'-8"	3'-0"	5 1/2"	5,200	2*4 @28'-0"		2*4 @11'-9"	
13'-8"	9'-8"	7'-8"	3'-6"	5 1/2"	6,900	2*6 @32'-0"		2*4 @12'-9"	



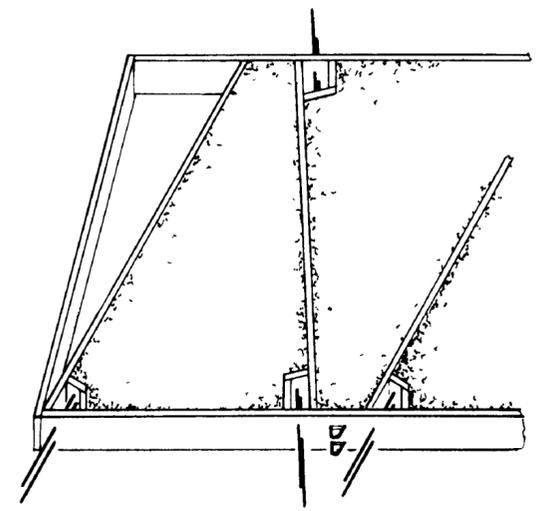
1 EXCAVATION FOR BUTTRESS BASE WITH KEY. DEPTH OF EXCAVATION IS 1'-4" BELOW TOP OF SLAB



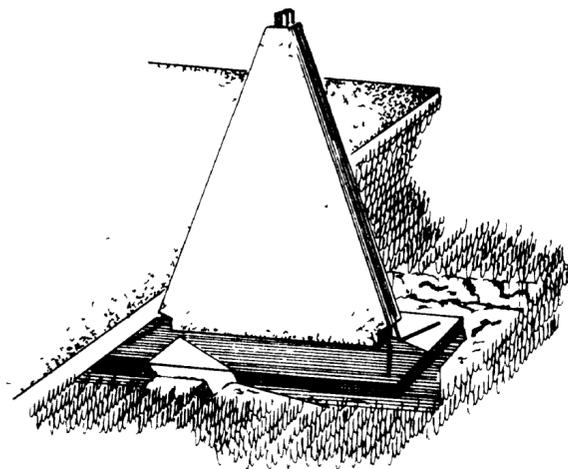
2 CONCRETE PAD 2" THICK, 1'-4" WIDE WITH KEY. DO NOT PLACE CONCRETE IN KEY TRENCH ADJACENT TO PAD



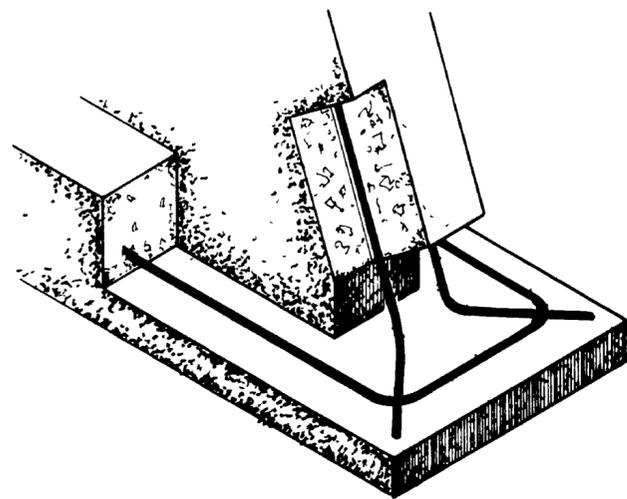
3 VIEW SHOWING BUTTRESS FORMS WITH REINFORCING BARS B IN PLACE



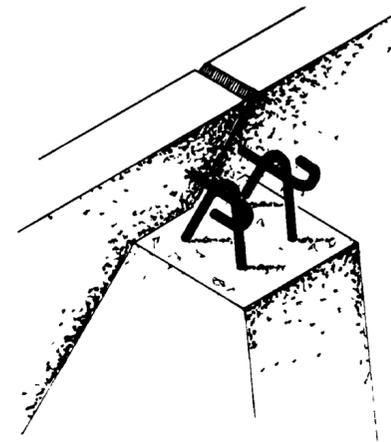
4 CONCRETE FOR BUTTRESS AFTER BEING PLACED IN FORMS



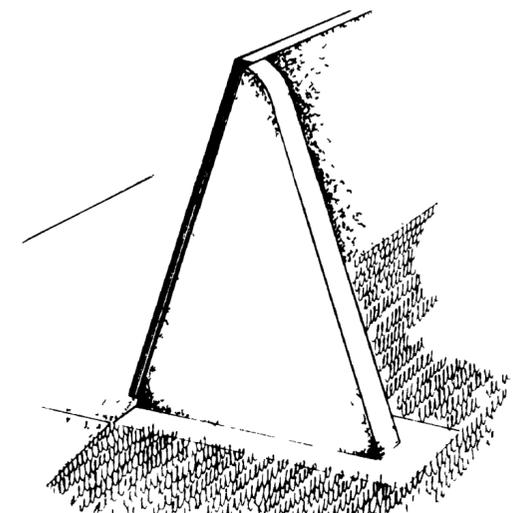
5 PLACE BUTTRESS ON 2" CONCRETE PAD PLUMB AND ALIGN USING WOOD TEMPLATES TO POSITION BUTTRESS



6 CUT-AWAY VIEW OF FOOTING AND BUTTRESS SHOWING POSITION OF REINFORCING BARS



7 TOP OF BUTTRESS SHOWING PANEL TIE BACK RODS BENT AROUND BUTTRESS LOOPS



8 END VIEW OF SILO SHOWING THE CAPPED BUTTRESS AND COMPLETED ASSEMBLY

SPECIFICATIONS FOR T/U SILO

I CONCRETE MIX

- A MINIMUM CEMENT FACTOR = 7 SACKS PER CUBIC YARD OF CONCRETE
- B MAXIMUM TOTAL MIXING WATER PER SACK OF CEMENT = 6 GALLONS
- C USE ENTRAINED AIR

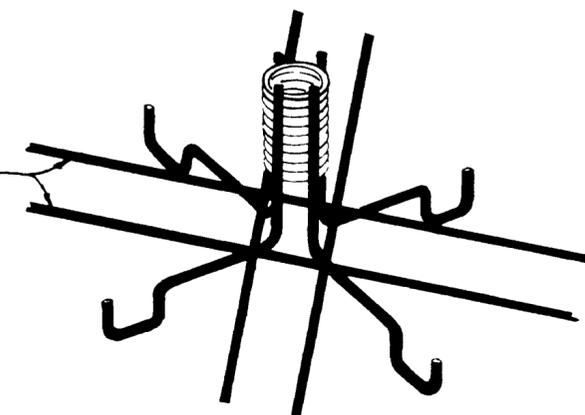
II CURING OF CONCRETE

- A CURE PANELS AND BUTTRESSES 5 TO 7 DAYS AT 50° TO 100° F BEFORE TILTING. USE ONE OF THE FOLLOWING CURING METHODS:
 - 1 PONDING, USE WET SAND OR WET BURLAP
 - 2 WET SURFACE OF CONCRETE THEN COVER PANEL WITH WATERPROOF PAPER OR POLYETHYLENE SHEET
 - 3 SPRAY WITH CURING COMPOUND IMMEDIATELY AFTER SCREEDING
 - 4 IN COLD WEATHER COVER WITH 24" OF STRAW TO PREVENT FREEZING. DO NOT TILT PANEL FOR 10 DAYS IF TEMPERATURES ARE 40° TO 50° TO INSURE INCREASED STRENGTH AND DURABILITY OF THE CONCRETE

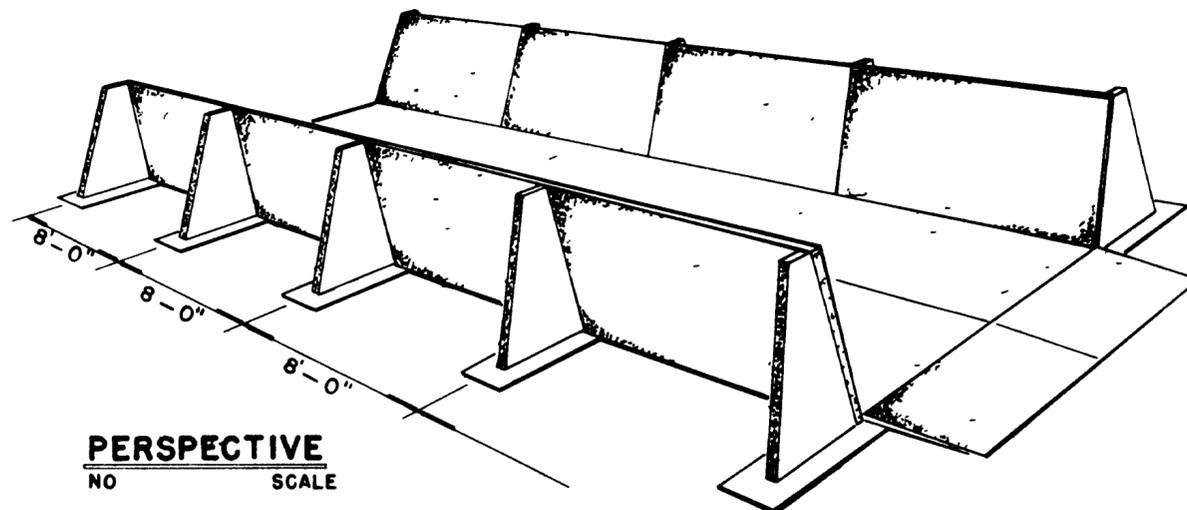
III SILO FLOOR

- A A DESIRABLE UNIFORM SLOPE OF 1" PER 8' OF LENGTH
- B CAST FLOOR IN LENGTHWISE STRIPS 10' TO 12' WIDE (NOTE REBARS ALONG EDGE OF SLAB)
- C UNIFORM THICKNESS OF 5"
- D THICKEN EDGE AT OUTLET TO 8"

*4 BARS 24" LONG



PANEL LIFTING INSERT
NO. _____ SCALE



PERSPECTIVE
NO. _____ SCALE

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURE
UNIVERSITY OF NEBRASKA
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**HORIZONTAL SILO
TILT-UP CONSTRUCTION**

NEBR. '68	EX 6055	SHEET 2 OF 2
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REVISED 1972