

**FOUNDATION LAYOUT  
FOR  
CMS-650M, CF-1300M & CF-2000M GRAIN DRYERS**

The attached material shows the recommended foundation layout and various other details for installing the CMS-650M, CF-1300M and CF-2000M dryers. We suggest these same foundation plans be used for the smaller CMS-650M model, to allow for future expansion as the need for increased drying capacity arises.

**NOTE:** Dryers which are to be later equipped with a heat reclaimer require 32" high foundation pedestals. Refer to Bulletin M/FL-02-2 for foundation details concerning heat reclaimer equipped M-Series Dryers.

The foundation is described on the drawings located on pages 2 and 3. These drawings contain important key information which will greatly assist your general contractor in planning and constructing the required type foundation. In addition to the layout, the drawings contain other valuable notes and information concerning various subjects, including design criteria, soil requirements and material required. **MAKE SURE TO THOROUGHLY STUDY THESE DRAWINGS AND FOLLOW THE INFORMATION AND SPECIFICATIONS LISTED.**

The foundation illustrated is designed to be constructed in two stages. The slab, as shown in the drawing on page 2 is the first pour. The slab has reinforcing and anchor loops left extended, as shown, for the triangular shaped pedestals which are formed and poured in the second stage; normally one or two days later. It is important to properly locate the pedestal reinforcing rods and anchor loops during the first pour so they will be correctly positioned within the form dimensions of the pedestals.

Two accessory kits are available for use in constructing the foundation. The accessory foundation pedestal package, kit no. CMSM-PFP, contains the necessary parts for constructing the eight 16" high pedestal forms. The eight forms are of a special three-piece metal type construction and are designed to accept the wood type of positioning and cross members. The accessory anchor bolt package, kit no. CMSM-ABP, contains the sixteen 1" dia. X 15" long anchor bolts and nuts required (all models). Refer to drawings 1B-1094, 1C-0720 and 1C-0721.

The drawing on page 3 describes the 16" high pedestals and shows the anchor bolt layout. **CARE SHOULD BE TAKEN IN THIS STAGE TO MAKE CERTAIN THE PEDESTALS ARE POSITIONED CORRECTLY AND THAT THE TOP SURFACES ARE FLAT AND LEVEL WITH EACH OTHER.** The anchor bolts are positioned during the second stage as shown in the drawing.

The wood planks (2 X 6's and 2 X 8's) shown on Dwgs. AD52-049 and 1B-1096 are used to accurately position and hold both the pedestal forms and anchor bolts. Note that the splice plates within the CMSM-PFP kit are required at the middle of each side to connect the cross tie members.

In order to assure fast dryer erection and prevent concentrated loads within the structure, it is extremely important to maintain the pedestal and anchor bolt tolerances specified on the drawings. Before pouring the pedestals, make certain the forms are properly squared and shimmed to provide the exact pedestal height. Use a transit to provide a high degree of accuracy.

Although the standard pedestal height is shown at 16", this dimension could be changed if required. The height indicated is primarily to allow sufficient clearance under the dryer for cleanout and also to allow some vertical fall for the grain discharge.

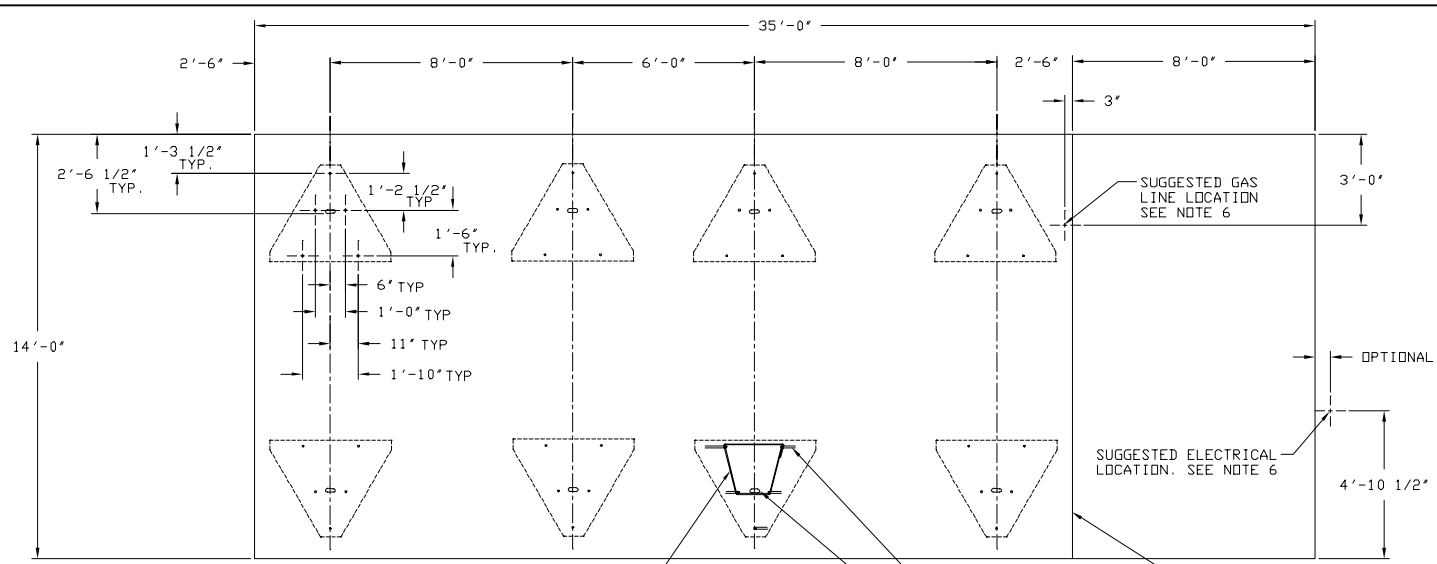


**FARM FANS, INC.**

5900 ELMWOOD AVENUE • INDIANAPOLIS, INDIANA 46203

Printed in U.S.A.

NO.	REVISIONS	BY	DATE
B	REV. 03 FEB 8 4.4 CYS	WDC	8-30-79



**FOUNDATION REQUIREMENTS**

- (A) REINF. BAR NO. 5 (5/8) 26'-0" (14 REQ'D) - BOTTOM
- (B) REINF. BAR NO. 5 (5/8) 13'-6" (27 REQ'D) - BOTTOM
- (C) REINF. BAR NO. 4 (1/2) 26'-0" (14 REQ'D) - TOP
- (D) REINF. BAR NO. 4 (1/2) 13'-6" (27 REQ'D) - TOP
- (E) REINF. BAR NO. 6 (3/4) 4'-0" (40 REQ'D)
- (F) REINF. BAR NO. 3 (3/8) 1'-4" (8 REQ'D) - ANCHOR LOOP
- (G) REINF. BAR NO. 3 (3/8) 7'-6" (16 REQ'D) - PEDESTAL

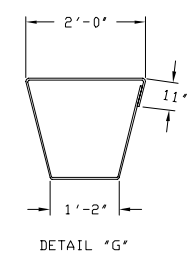
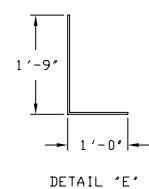
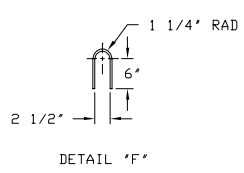
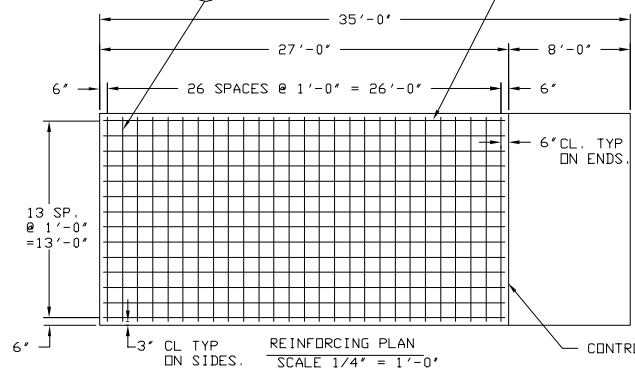
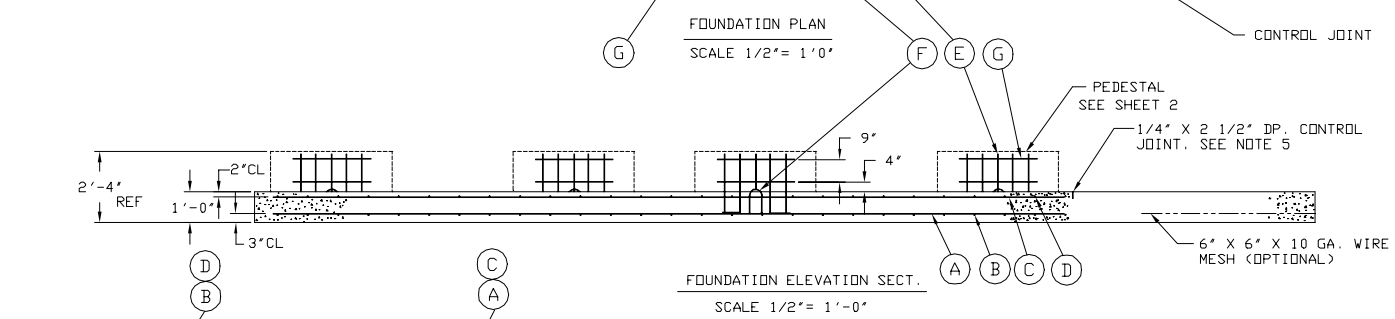
**CONCRETE:**

FOOTING	16.6 CYS
(8) PEDESTALS	3.2 CYS
<b>TOTAL</b>	<b>19.8 CYS</b>

**NOTES:**

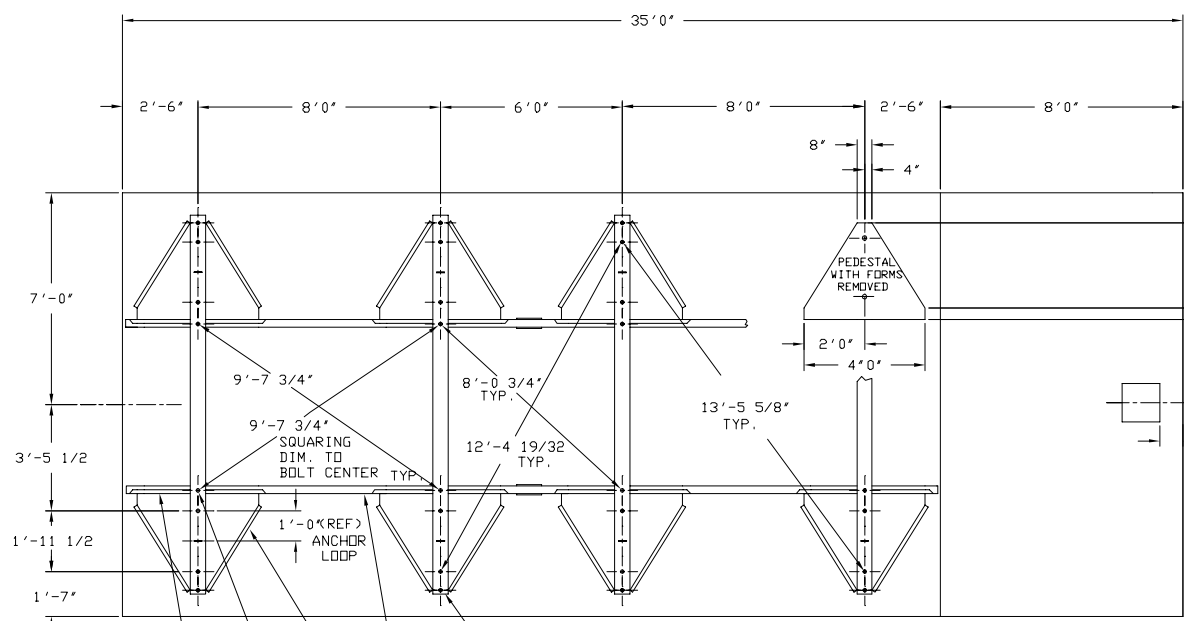
- CONSULT SOILS ENGINEER IF BEARING CAPACITY OF SOIL IS LESS THAN DESIGN PRESSURE OR OTHERWISE QUESTIONABLE.
- SOFT, YEILDING FOUNDATION SOIL AND OTHER UNSUITABLE FOUNDATION MATERIALS SHOULD BE EXCAVATED TO FIRM SOIL AND BACKFILLED WITH GRANULAR MATERIAL.
- SOILS HIGHLY SUSCEPTIBLE TO FROST HEAVE SHOULD BE EXCAVATED TO BELOW DEPTH OF FROST PENETRATION AND BACKFILLED WITH GRANULAR MATERIAL.
- POORLY DRAINED LOCATIONS SHOULD BE PROVIDED WITH SUB-SURFACE TILE DRAINAGE WHERE POSSIBLE.
- CONTROL JOINT MAY BE FORMED WITH 1/4" PLYWOOD STRIP, MANUFACTURED PREFORMED JOINT FILLER, OR METAL STRIP.
- IF UNDERGROUND ELECTRICAL ENTRANCE AND GAS LINE, USE SUGGESTED LOCATION TO AVOID POSSIBLE INTERFERENCE WITH DRYER FRAME OR ADD-ON OPTIONS.

REINFORCED CONCRETE DESIGN BASED ON ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE 318-63  
 $f_c = 1,200$  PSI  
 $f_s = 20,000$  PSI  
 MIN. SOIL BEARING CAPACITY = 1,200 PSF  
 EQUIP. D.L. = 112,536# GRAIN L.L. = 127,400#  
 W.L. = 15 PSF BELOW 30 FT., 20PSF ABOVE 30 FT.



LIMITS UNLESS OTHERWISE SPECIFIED			
FIN.	±.0025	FIN.	±.0012
ANGLES	±.168	ANGLES	±.1
<b>PART NO.</b>			
<b>FARM FANS INC</b>			
5900 ELWOOD AVE. INDIANAPOLIS, IN. 46203			
<b>TITLE</b> FOUNDATION LAYOUT CMS-M DRYERS			
<b>MAT'L. DESC.</b>		<b>P/N</b>	
<b>DRG BY</b> TDA	<b>DATE</b> 8-31-88	<b>DWG NO.</b>	
<b>SCALE</b> AS NOTED	<b>SHEET</b> 1 OF 2	<b>4D-0047</b>	

NO	REVISIONS	BY	DATE
B	REV. QTY & RECD	WDC	8-30-88



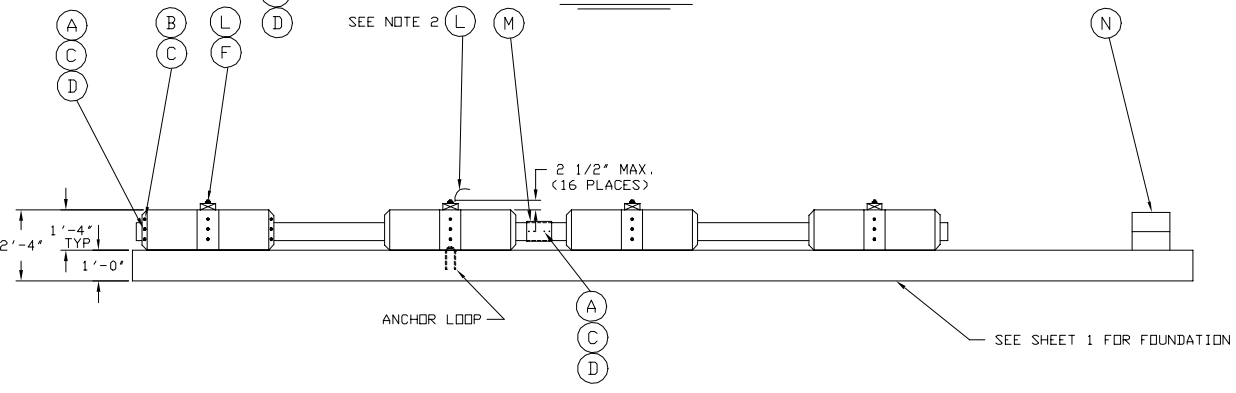
PEDESTAL REQUIREMENTS

- (A) CARRIAGE HEAD BOLT 5/16-18 X 2 1/2 LG. (50 REQ'D)
- (B) CARRIAGE HEAD BOLT 5/16-18 X 3/4 LG. (60 REQ'D)
- (C) HEX NUT 5/16-18 (110 REQ'D)
- (D) FLATWASHER 5/16 (40 REQ'D)
- (E) ANCHOR BOLT 1'-8 X 15' LG. (16 REQ'D)
- (F) HEX NUT 1'-8 (16 REQ'D)
- (G) INNER FORM P/N A25-879, DWG NO. AD72-514 (8 REQ'D)
- (H) OUTER FORM P/N A25-880, DWG NO. AD72-515 (16 REQ'D)
- (J) CROSS TIE MEMBER DWG NO. AD52-049 (4 REQ'D) SEE NOTE 4
- (K) FORM POSITIONING MEMBER DWG NO. 1B-1096 (4 REQ'D) SEE NOTE 4
- (L) STEEL WIRE NO. 9 X 8'-0" LG APPROX (8 REQ'D)
- (M) SPLICE PLATE P/N 401-3439-7, DWG NO. 1B-1094 (4 REQ'D)
- (N) CONCRETE "CAP" BLOCK 8" X 16" (2 REQ'D)

NOTES

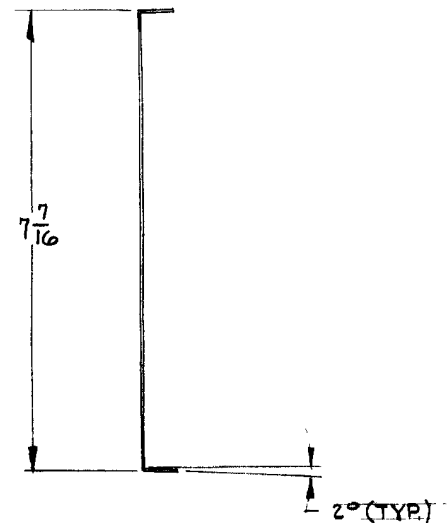
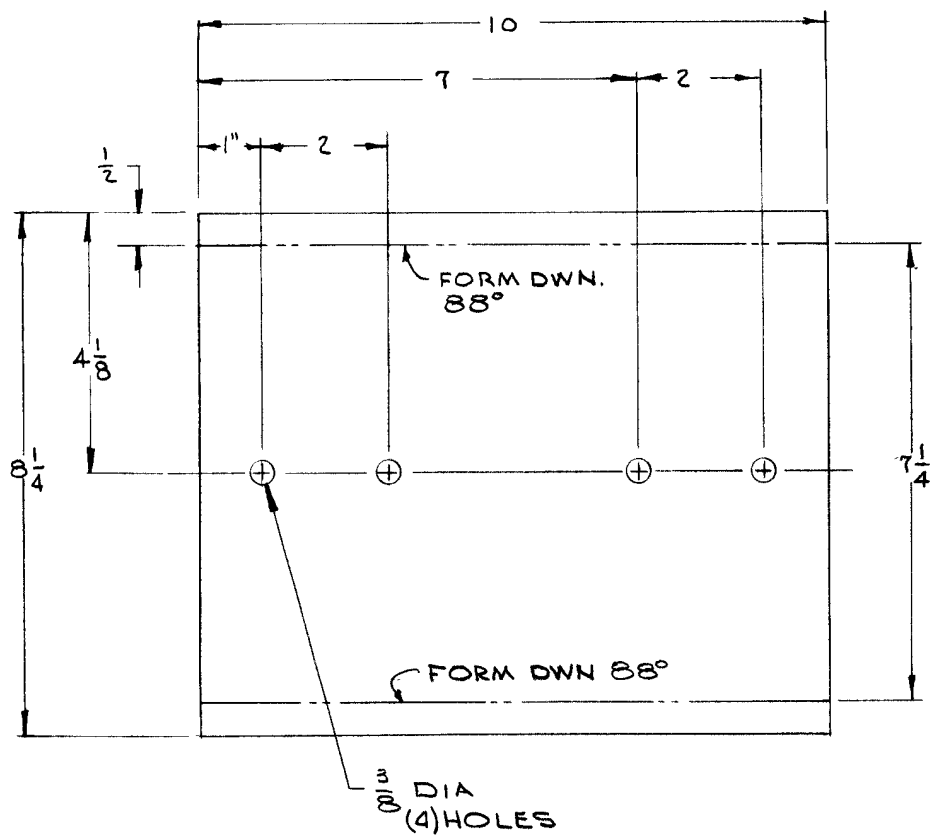
1. ANCHOR LOOP MUST BE CAST IN PLACE WHEN PAD IS POURED. (TYP. 8 PLACES)
2. THREAD NO. 9 WIRE "L" THROUGH ANCHOR LOOP AND AROUND FORM CROSS TIE MEMBER "J" AND SECURE LOOSELY. POSITION, LEVEL, (CHECK WITH TRANSIT) AND SQUARE. (SEE SQ. DIMS) FORM ASSY, THEN INSERT A SHORT ROD BETWEEN WIRES AND TWIST UNTIL ASSY IS DRAWN FIRMLY AGAINST PAD. CAUTION! DO NOT DEFORM CROSS TIE MEMBER.
3. INSTALL ANCHOR BOLTS (16 REQ'D) IN 1" DIA. HOLES IN CROSS TIES AND SECURE.
4. DRAWINGS TO BE FURNISHED BY FARM FANS INC. MATERIAL TO BE ACQUIRED LOCALLY.
5. ALLOWABLE TOLERANCES:  
 SQUARENESS +/- 3/16 IN 10'-0"  
 PEDESTAL HEIGHT +/- 1/8 TOTAL FROM TRUE LEVEL  
 ANCHOR BOLT SPACING +/- 1/16 NOT ACCUMULATIVE.

PEDESTAL PLAN



PEDESTAL ELEVATION

LIMITS UNLESS OTHERWISE SPECIFIED			
PART NO.			
FARM FANS INC			
5900 ELMWOOD AVE. INDIANAPOLIS, IN. 46203			
TITLE FOUNDATION LAYOUT			
CMS-M DRYERS			
MAT'L DESC.	DATE	P/N	
DRG BY TDA	8-31-88	DWG NO.	
SCALE 1/2"=1'-0"	SHEET 2 OF 2	4D-0047	

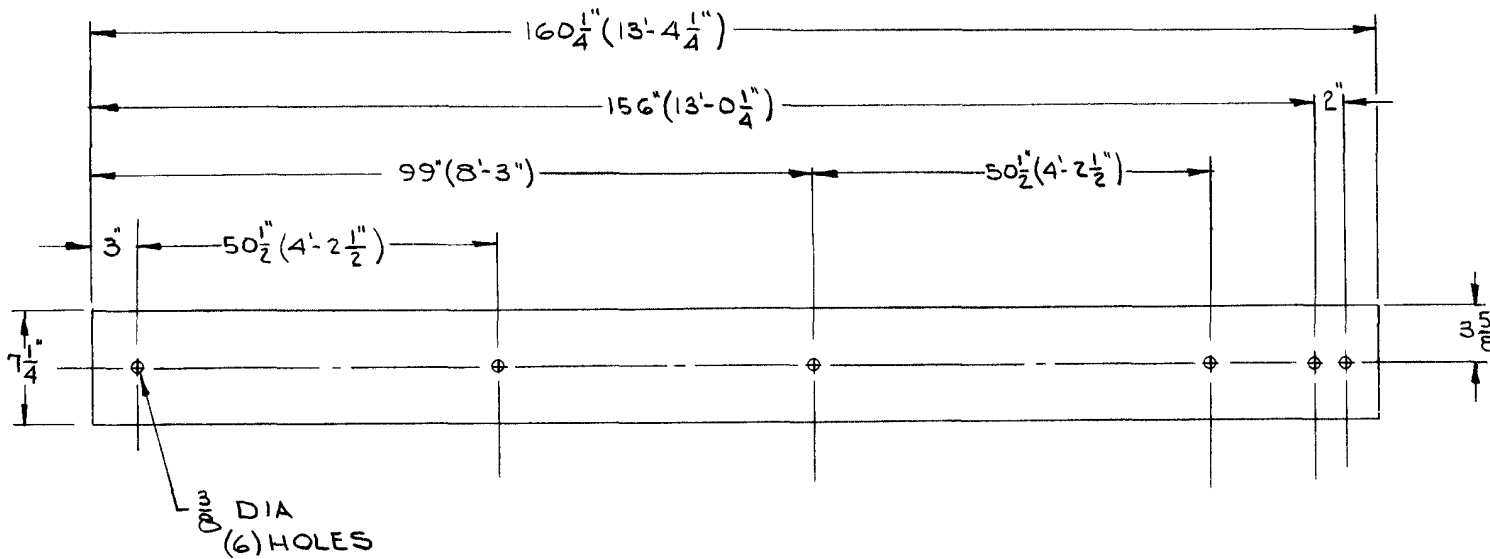


PART NO. 401-3439-7

- (1) SHEAR
- (2) PUNCH
- (3) FORM

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LIMITS UNLESS OTHERWISE NOTED				FOR ASS'Y. SEE DWG.																					
FRACTIONAL : ± 1/64		DECIMAL : ± .010		ANGULAR : ± 1°																					
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				NO.	CHANGES	CHG. BY	DATE																		
TITLE <b>SPLICE - FORM POSITION MEMBER</b>				MATERIAL 10 GA. GALV 101-1004-7																					
SCALE $V_2$		DWG. BY JL		DRAWING NO.																					
SUPERSEDES DRAWING NO. _____ DATED _____		AND ALL PREVIOUSLY DATED PRINTS		CKD. BY _____ APP. BY _____ DATE 5-28-87 <b>1B-1094</b>																					

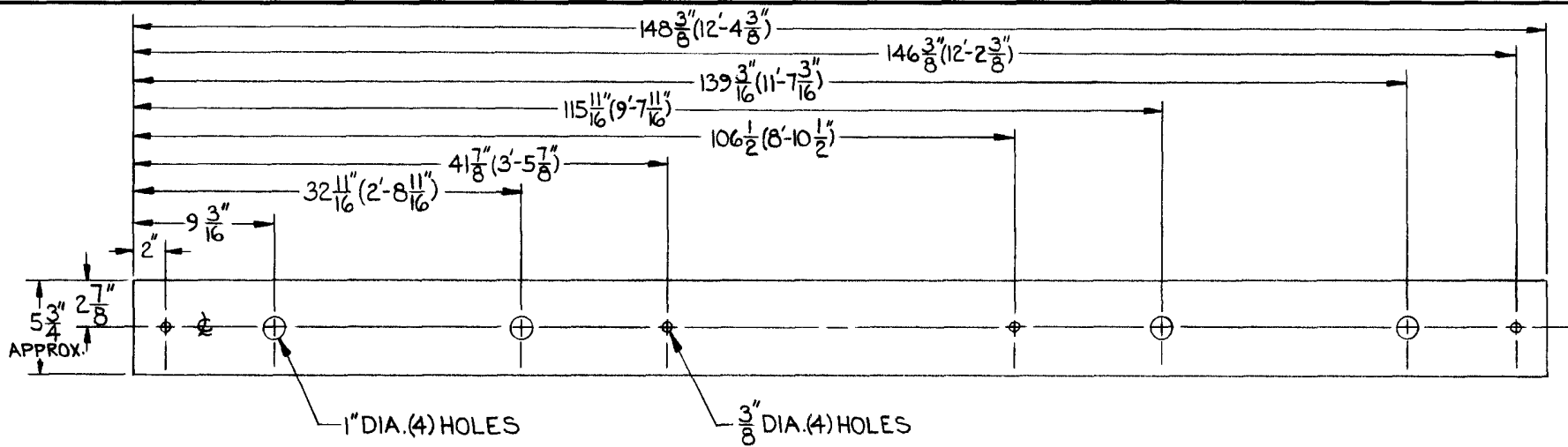


NOTES:

1. SELECT STRIGHT MATERIAL.
2. USE CHALK LINE TO ESTABLISH TRUE STRAIGHT LINE FOR DRILLING HOLES.
3. ALLOWABLE DIMENSION TOLERANCE  $\pm \frac{1}{32}$ .
4. (4) REQ'D. PER SET.

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LIMITS UNLESS OTHERWISE NOTED			FOR ASS'Y. SEE DWG.	
FRACTIONAL : $\pm 1/64$		DECIMAL : $\pm .010$		ANGULAR : $\pm 1^\circ$
<b>FARM FANS, INC.</b>				
5900 ELMWOOD AVENUE • INDIANAPOLIS, INDIANA 46203				
TITLE				
POSITIONING MEMBER PEDESTAL FORM				
MATERIAL DRESSED 2X8 LUMBER (SEE NOTE 1)				
NO.		CHANGES		CHG. BY DATE
SCALE		DWG. BY		DRAWING NO.
NONE		JL		1B-1096
SUPERSEDES		AND ALL PREVIOUSLY		
DRAWING NO. _____		DATED _____ DATED PRINTS		
CKD. BY	APP. BY	DATE		
		5-28-87		



ALLOWABLE DIMENSIONAL TOLERANCE  $\pm \frac{1}{32}$ "  
(3) REQ'D. PER SET

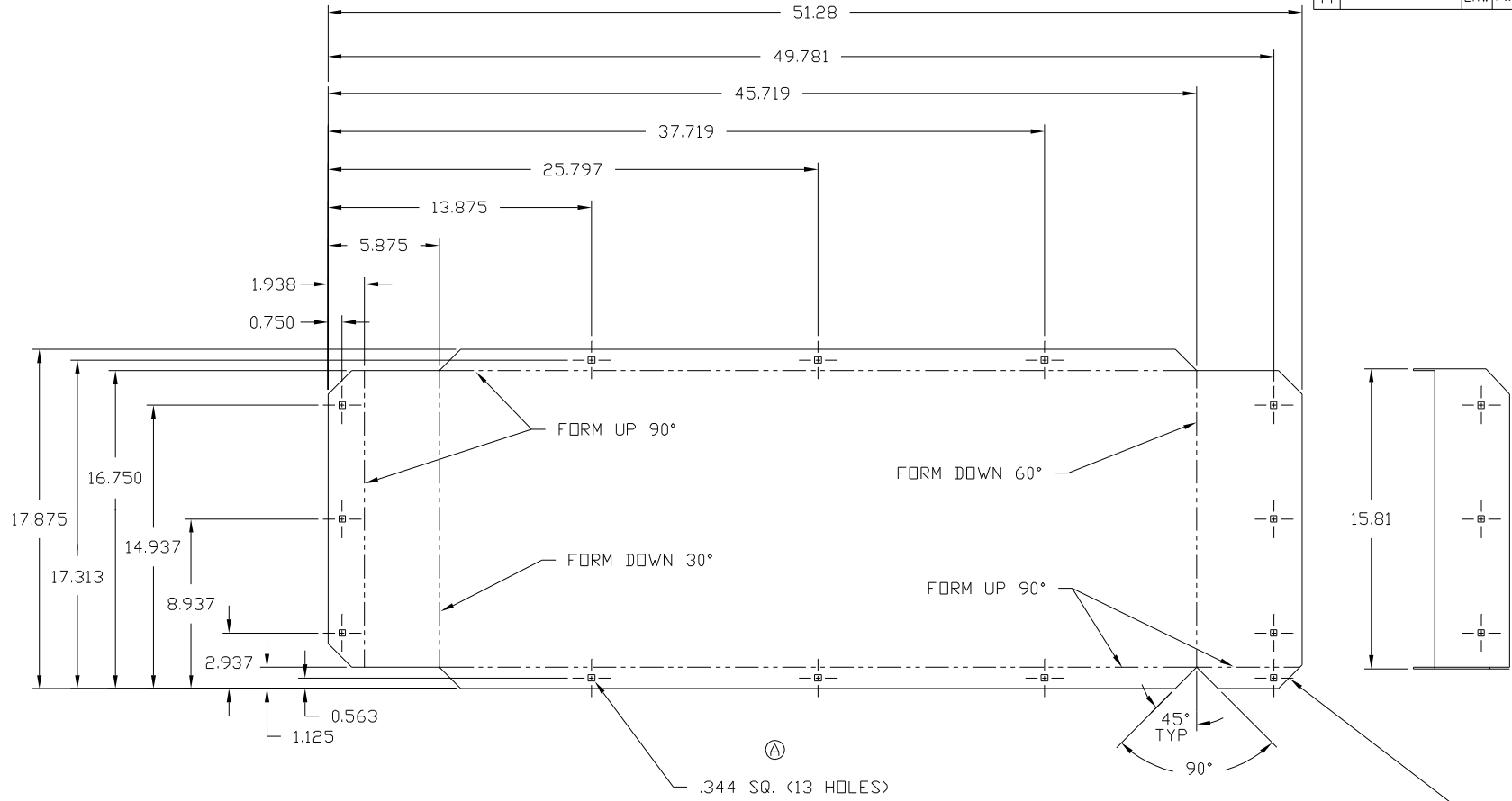
NOTE:

1. \* SELECT STRAIGHT MATERIAL.
2. USE CHALK LINE TO ESTABLISH TRUE STRAIGHT LINE FOR DRILLING HOLES.

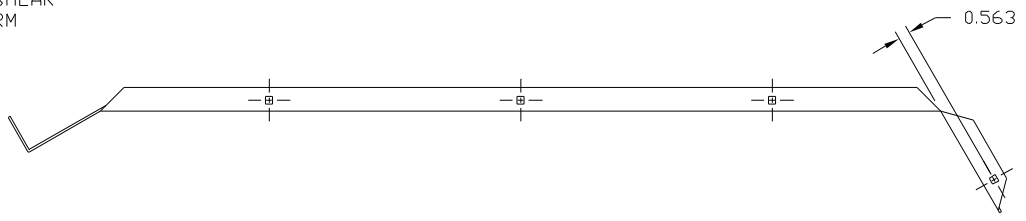
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LIMITS UNLESS OTHERWISE NOTED				FOR ASS'Y. SEE DWG. #		
FRACTIONAL &	DECIMAL &	ANGULAR &				
				<b>Farm Fans, Inc.</b> 5900 ELMWOOD AVENUE BEECH GROVE, INDIANA TITLE: DIMENSIONAL DRAWING FOR PEDESTAL FORM CROSS TIE MEMBER MATERIAL: DRESSED 2X6 LUMBER (SEE NOTE*)		
NO.	CHANGES	CHG. BY	DATE	SCALE: NONE	DWG. BY: COX	DRAWING NO.
SUPERSEDES DRAWING NO. _____ DATED _____ AND ALL PREVIOUS DATED PRINTS				CKD. BY:	APP. BY:	DATE: 2-6-76

NO	REVISIONS	CHK BY	DATE
A	ADD 6 SQUARE HOLES	LMW	9-15-88

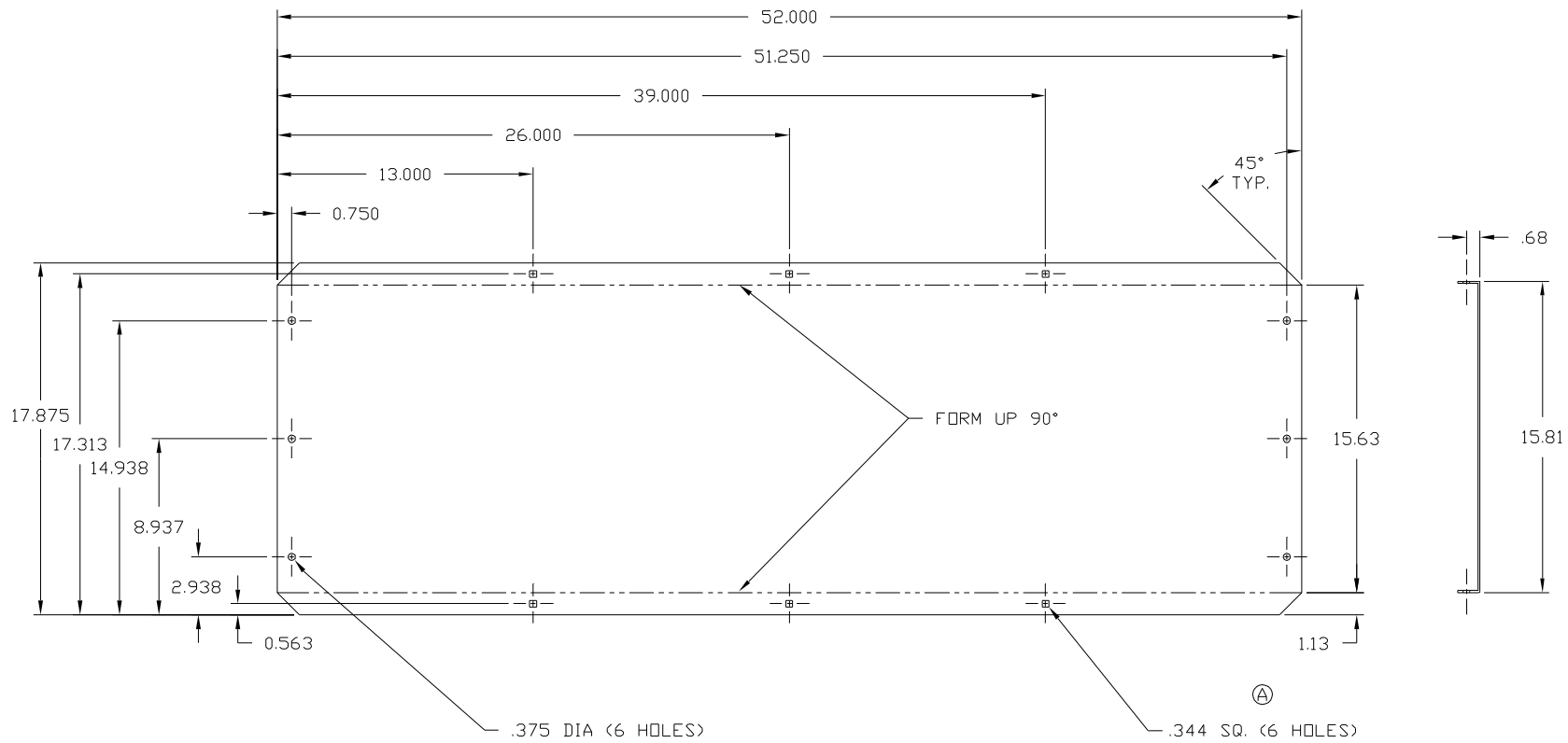


- OPERATIONS:  
 1. SHEAR  
 2. N.C.  
 3. RESHEAR  
 4. FORM



LIMITS UNLESS OTHERWISE SPECIFIED			
.0 = ±.0025	.00 = ±.0012	.000 = ±.0156	ANGLES = ±1°
PART NO. A25-880 (325-2066-0)			
<b>FARM FANS INC</b>			
5900 ELMWOOD AVE. INDIANAPOLIS, IN. 46203			
TITLE PEDESTAL OUTER FORM H & M FOUNDATION			
MAT'L DESC. 12GA GALV		P/N 103-1017-5	
DWG BY LMW	DATE 9-9-88	DWG NO.	
SCALE 1/4	SHEET 1 OF 1	1C-0720	

NO	REVISIONS	CHK BY	DATE
A	ADDED 6 SQUARE HOLES	LMW	9-9-88



- OPERATIONS:  
 1. SHEAR  
 2. N.C.  
 3. RESHEAR  
 4. FORM

LIMITS UNLESS OTHERWISE SPECIFIED			
.0 = ±.0025	.00 = ±.0012	.000 = ±.0156	ANGLES = ±1°
PART NO. A25-879 (325-2065-2)			
<b>FARM FANS INC</b>			
5900 ELMWOOD AVE. INDIANAPOLIS, IN. 46203			
TITLE		PEDESTAL INNER FORM H & M FOUNDATION	
MAT'L DESC. 12GA GALV		P/N 103-1017-5	
DWG BY LMW	DATE 9-9-88	DWG NO. 1C-0721	
SCALE 1/4	SHEET 1 OF 1		