

LAYOUT & MECHANIZATION SCHEMATIC

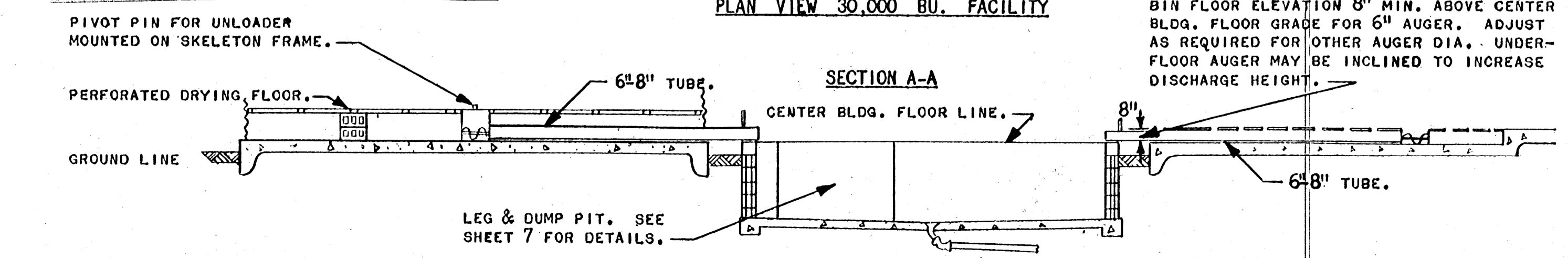
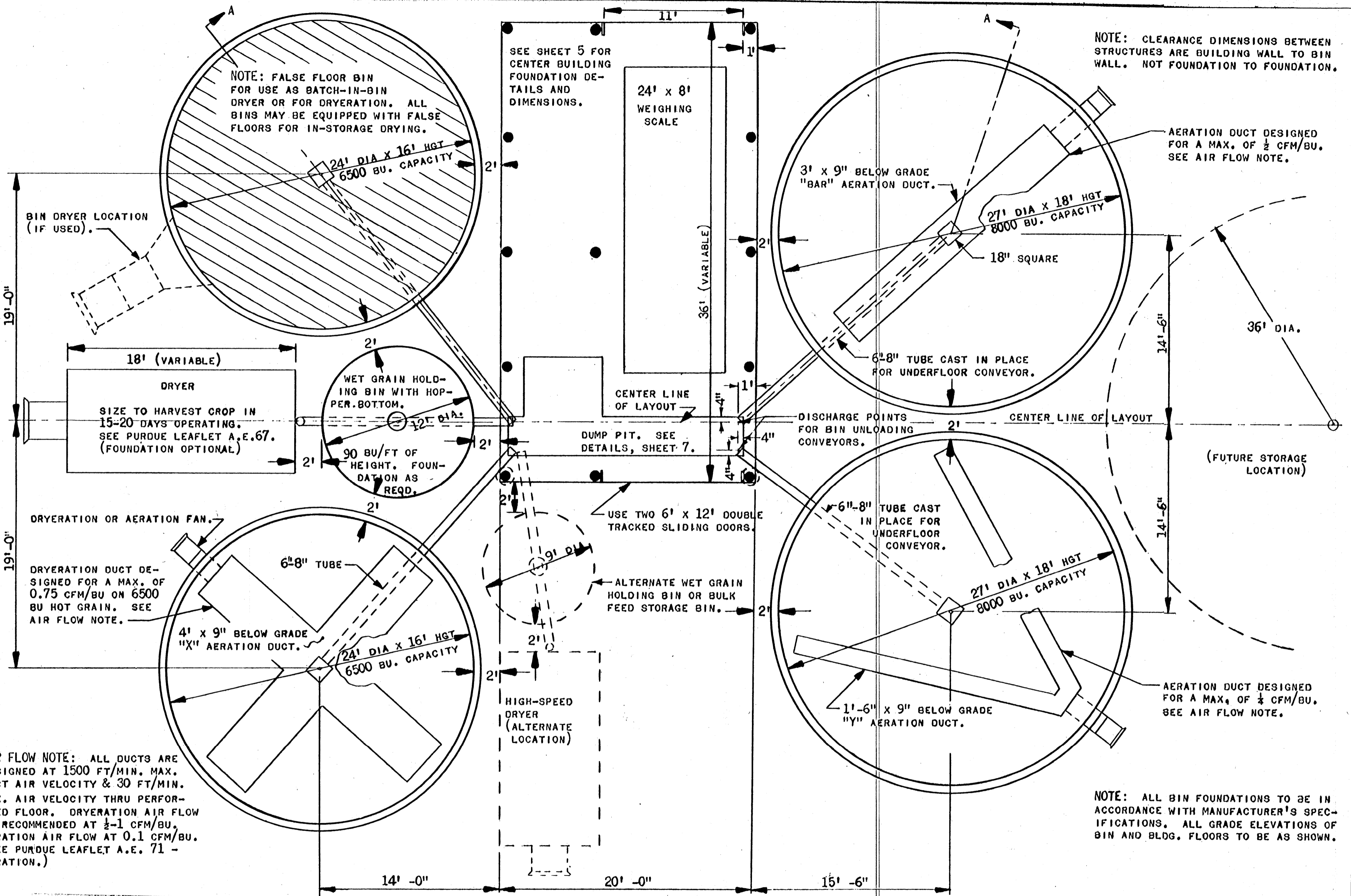
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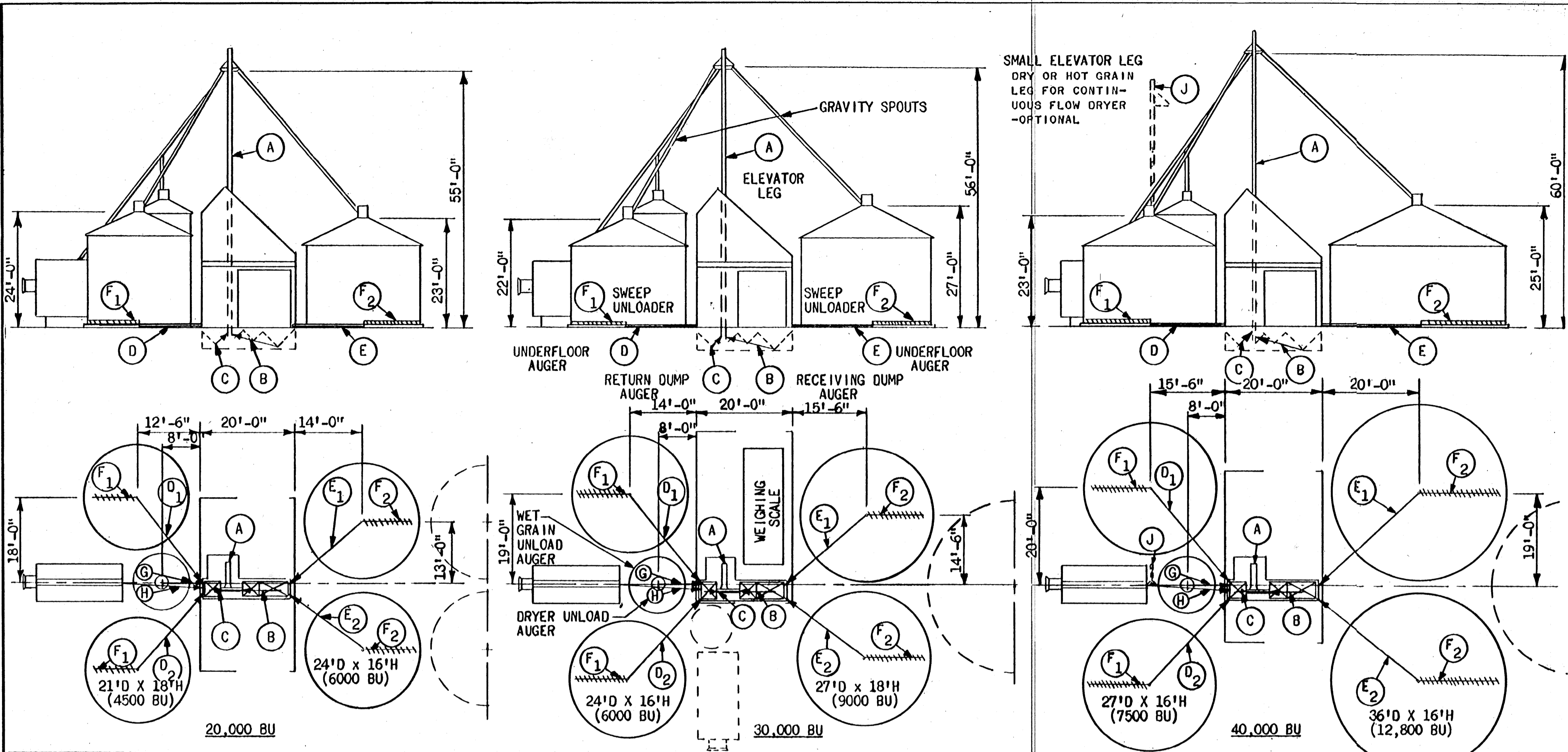
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS		
STATE OF MISSISSIPPI		
MISSISSIPPI STATE UNIVERSITY		
AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
GRAIN-FEED HANDLING CENTER POLE TYPE CONSTRUCTION		
IND. '69	6081	SHEET 1 OF 9



COOPERATIVE EXTENSION WORK IN
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 STATE OF MISSISSIPPI
 MISSISSIPPI STATE UNIVERSITY
 AND
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**GRAIN-FEED HANDLING CENTER
 POLE TYPE CONSTRUCTION**

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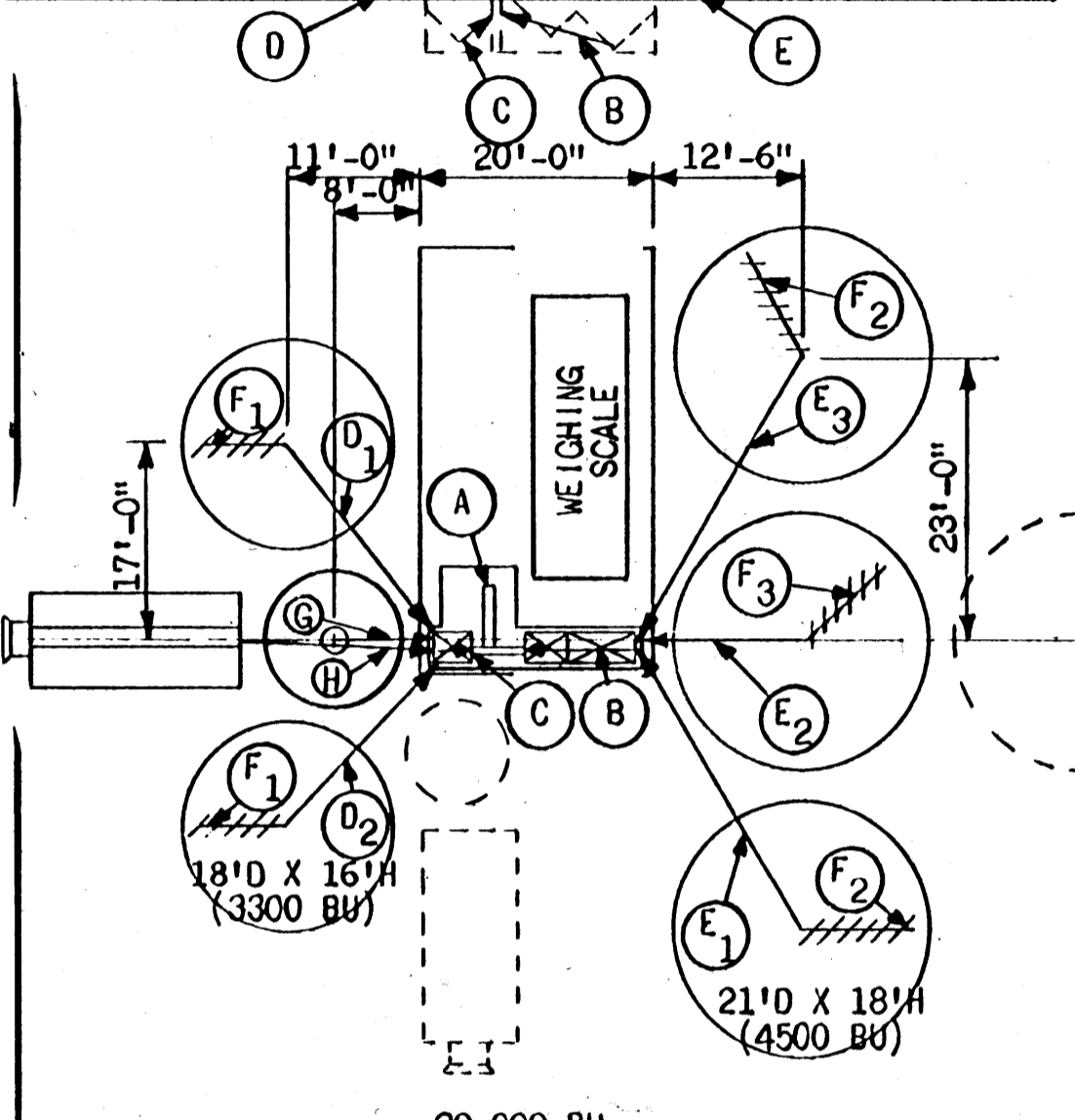
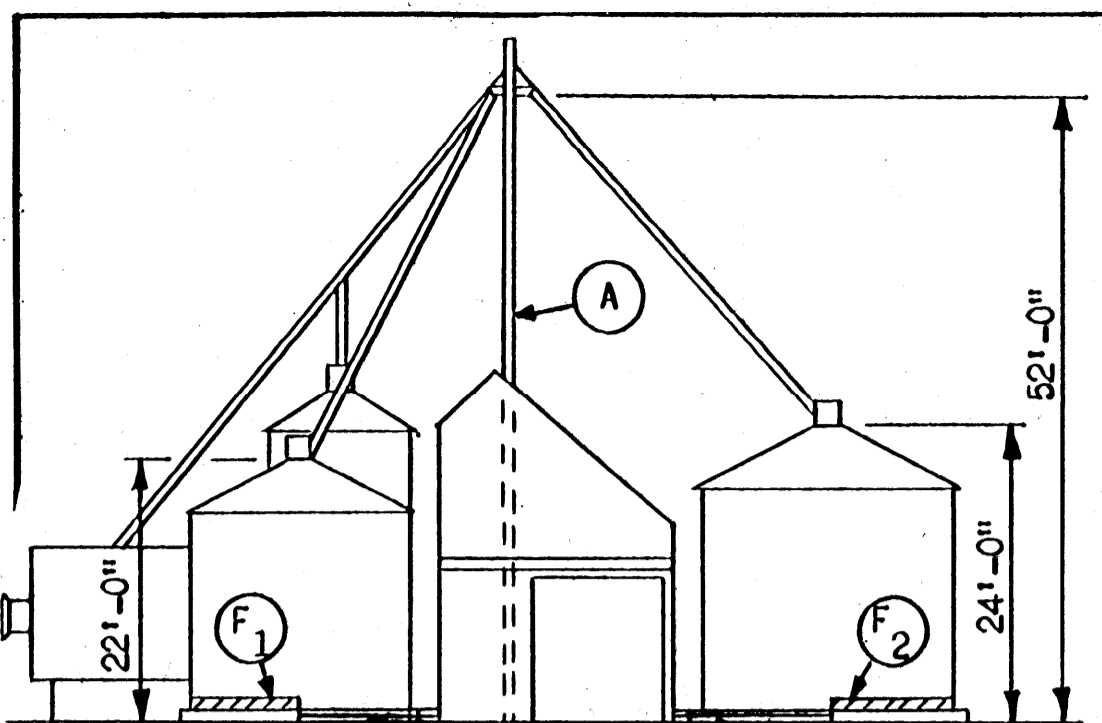
APPROXIMATE TOTAL CAPACITY -- ALTERNATIVE HANDLING RATES --	20,000 BU 1000-1200 BU/HR FLOW RATE					30,000 BU 1500-2000 BU/HR FLOW RATE					40,000 BU 2500-3000 BU/HR FLOW RATE				
GRAIN HANDLING EQUIPMENT	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP
ELEVATOR LEG	A	55'	7x5"	1000-1200	2-3	A	56'	8x5" OR 9x5" 6"	1500-2000	3-5	A	60'	9x6"	2500-3000	7½
GRAVITY SPOUTS			6"										8"		
RECEIVING DUMP AUGER	B	11'	8"	1200(WET)	2-3	B	11'	10"		3-5	B	11'	12" OR 14"		3-5
RETURN DUMP AUGER	C	4'	8"	1200(WET)	1	C	4'	10"		1	C	4'	12"		1½
UNDERFLOOR AUGER	D ₁	23'	6"	1000-1200	2	D ₁	24'	6"	1500	3	D ₁	26'	8"	2500	5
UNDERFLOOR AUGER	D ₂	21'	6"	1000-1200	2	D ₂	22'	6"	1500	3	D ₂	24'	8"	2500	5
UNDERFLOOR AUGER	E ₁	20'	6"	1000-1200	2	E ₁	22'	6"	1500	3	E ₁	30'	8"	2500	5
UNDERFLOOR AUGER	E ₂	18'	6"	1000-1200	2	E ₂	20'	6"	1500	3	E ₂	28'	8"	2500	5
SWEEP UNLOADERS	F ₁	10½'	4" OR 6"	1000	¾	F ₁	11½'	6"	1000-1200	1	F ₁	13'	6"	1000-1200	1½
SWEEP UNLOADERS	F ₂	11½'	4" OR 6"	1000	¾	F ₂	13'	6"	1000-1200	1½	F ₂	17½'	6"	1000-1200	2
WET GRAIN UNLOAD AUGER	G	10'	8"	1000-1200	1½	G	10'	10"	1500-2000 (WET)	2-3	G	10'	12"		2
DRYER UNLOAD AUGER	H	18'	6"	1000-1200	1½-2	H	18'	6" OR 8"	1500 2000	2 3	H	18'	8"	2500	3
SMALL ELEVATOR LEG (FOR CONT. FLOW DRYER)	J	45'	(SEE RIGHT)			J	44'	(SEE RIGHT)			J	48'	4x6"	500-700	1

- HANDLING FLOW RATES ILLUSTRATED ARE WORKABLE COMBINATIONS AND NOT LIMITED TO EACH SPECIFIC FACILITY.
- AUGER INTAKE EXPOSURE MATCHED TO CAPACITY--MINIMUM EXPOSURE = AUGER DIA.; MAXIMUM EXPOSURE 2'±. ADDITIONAL EXPOSURE INCREASES HORSEPOWER NOT CAPACITY.
- SWEEP UNLOADER CAPACITIES GIVEN FOR UNITS WITH GRAIN SHIELDS BEHIND AUGER.
- FLAT STORAGE STRUCTURES CAN BE SUBSTITUTED FOR BIN ON RIGHT SIDE OF LAYOUT. DOTTED BINS SHOWN FOR FUTURE EXPANSION ARE INTERCHANGABLE FOR ALL LAYOUTS.

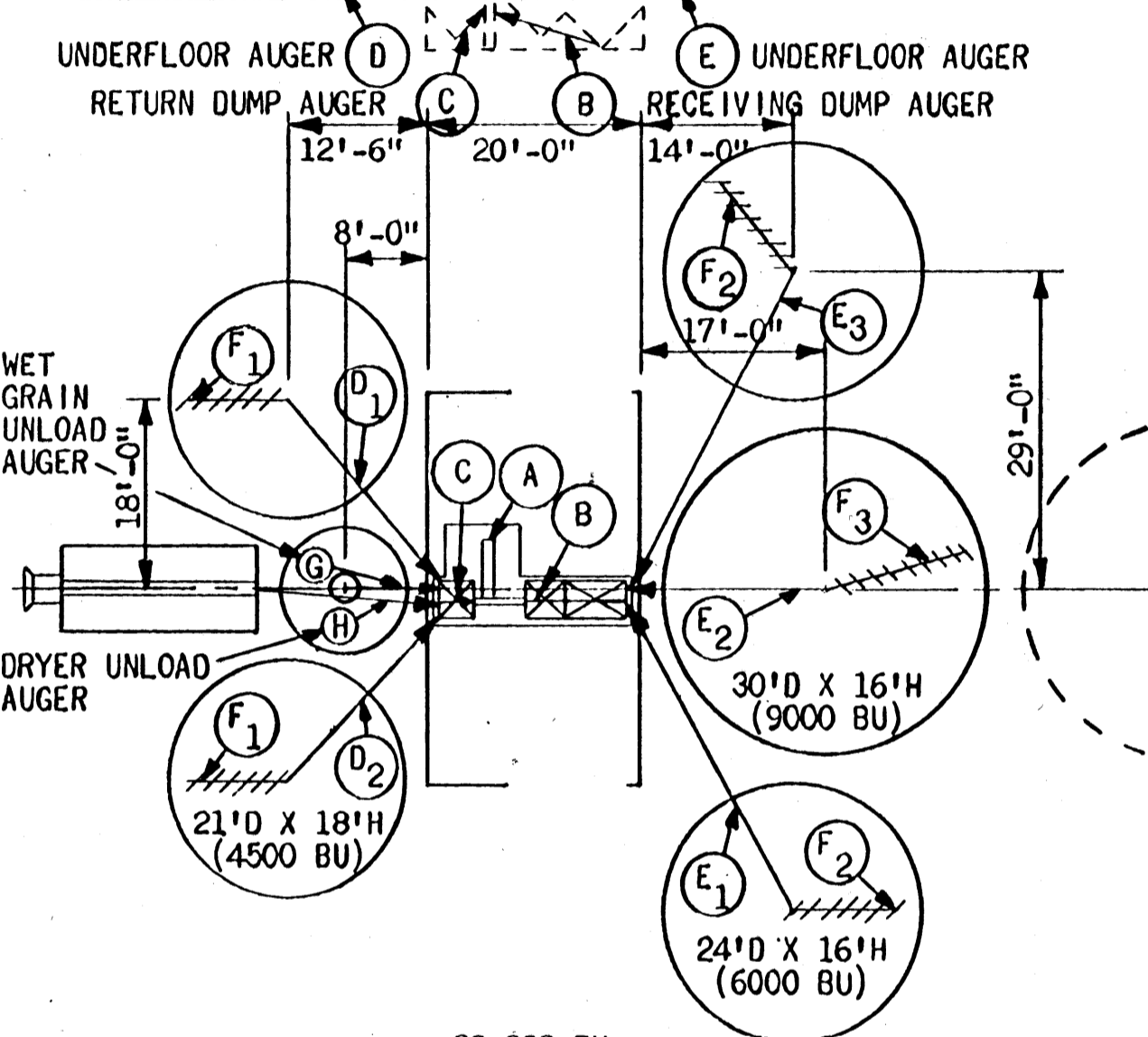
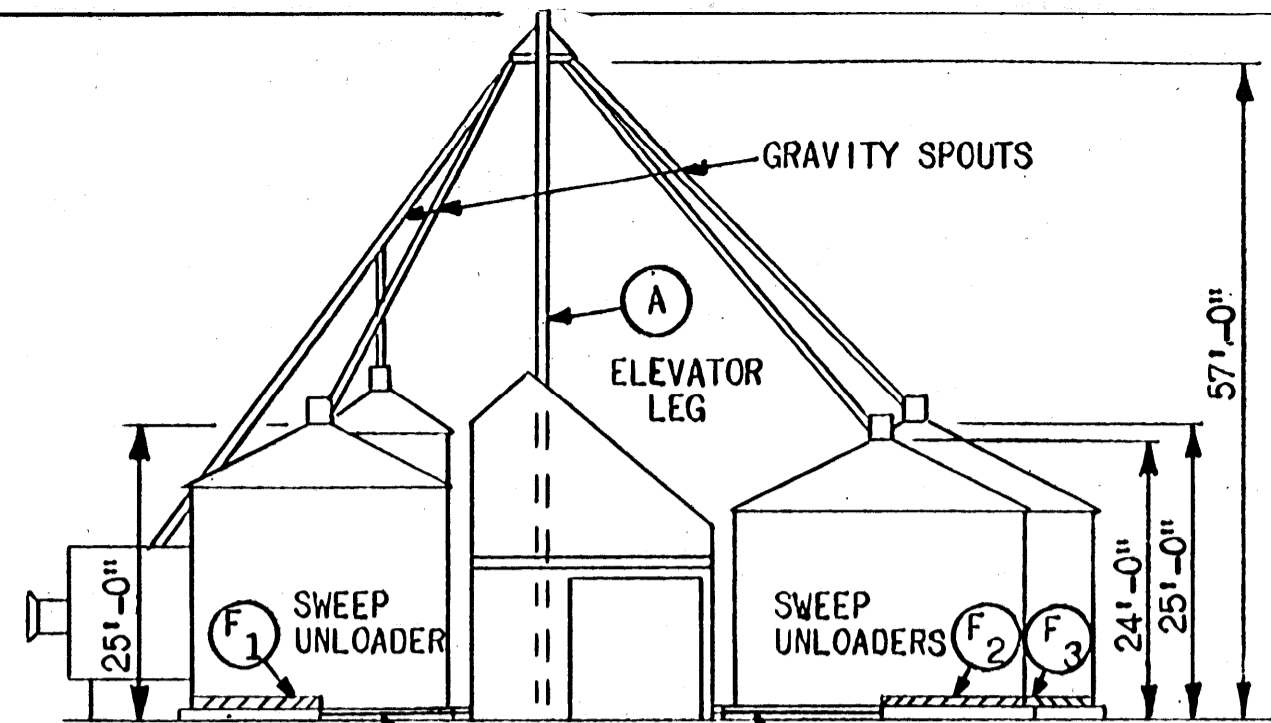
**COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS**
 STATE OF MISSISSIPPI
 MISSISSIPPI STATE UNIVERSITY
 AND
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION**

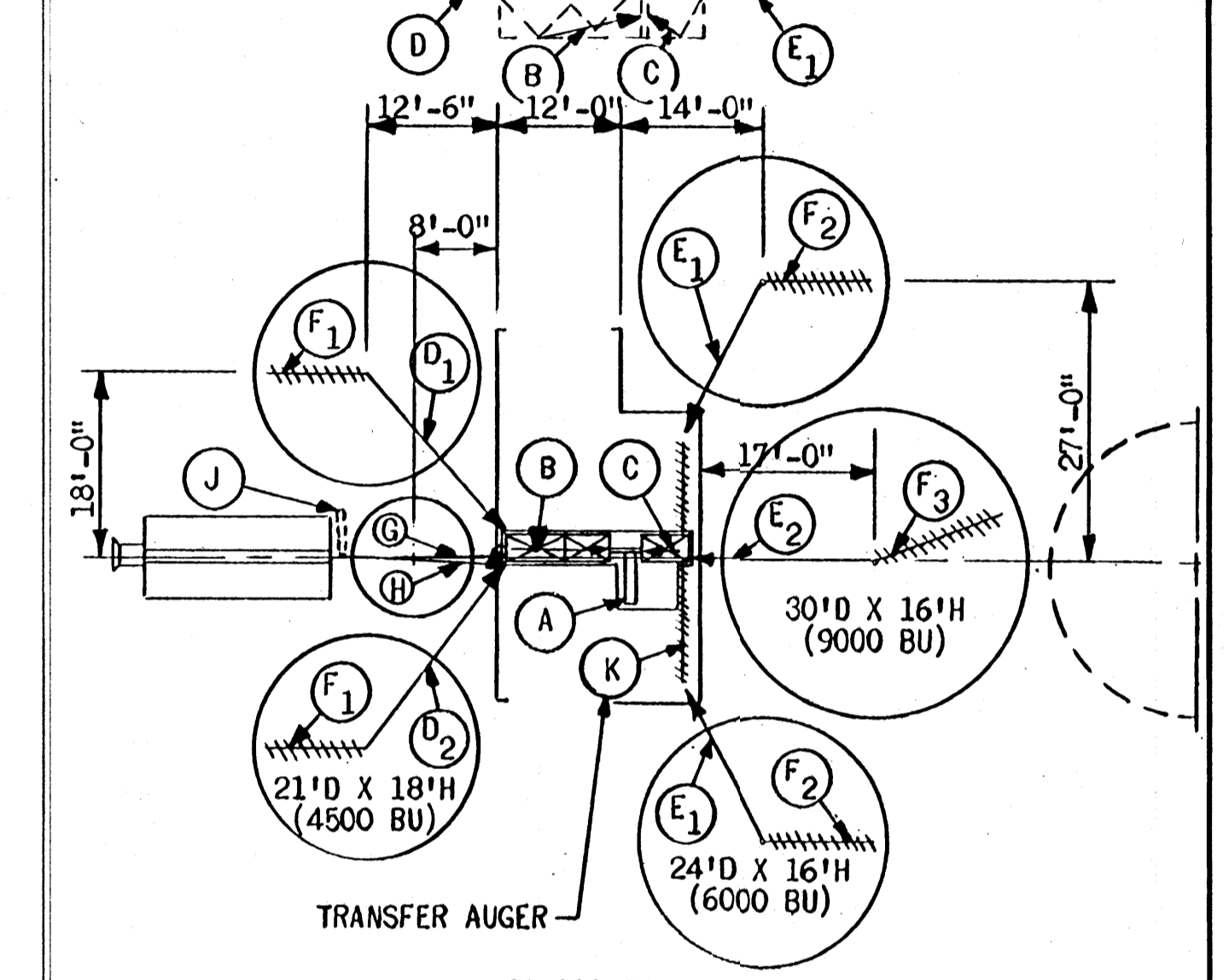
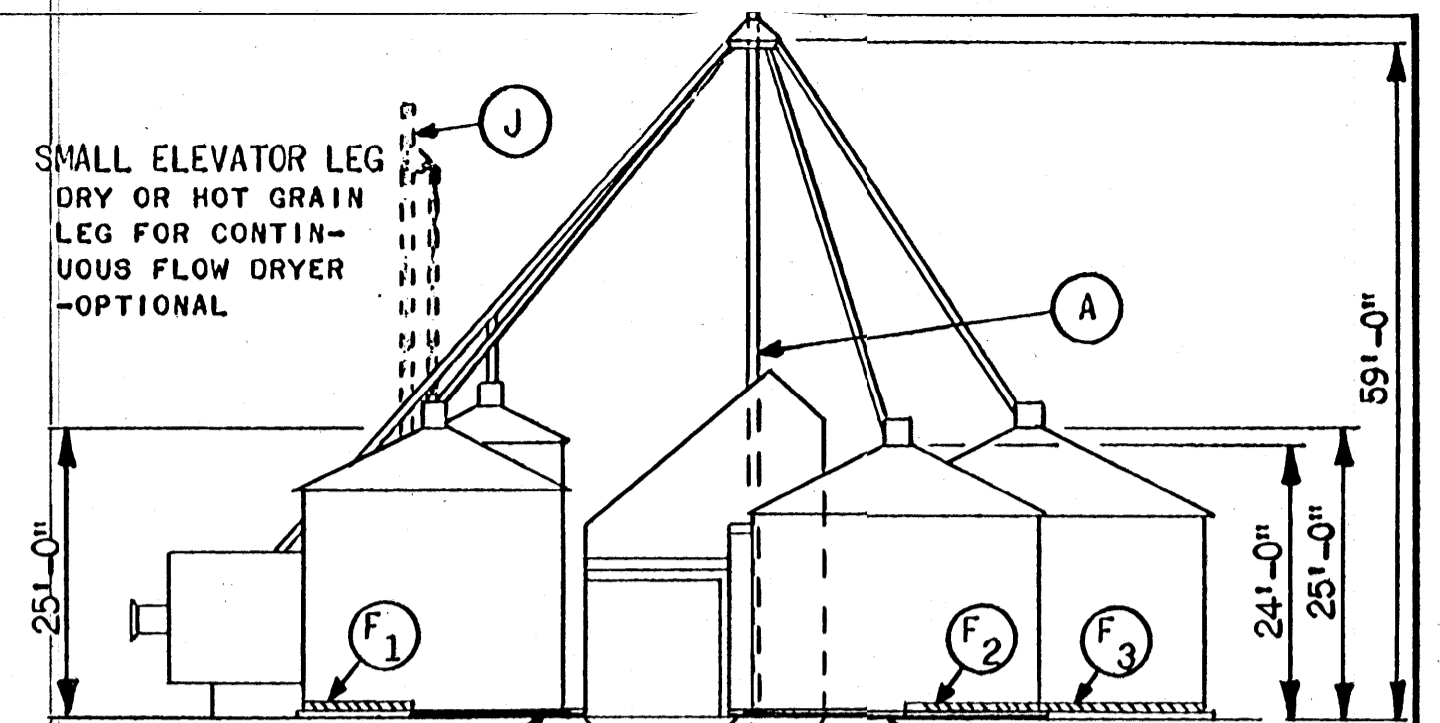
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20,000 BU



30,000 BU



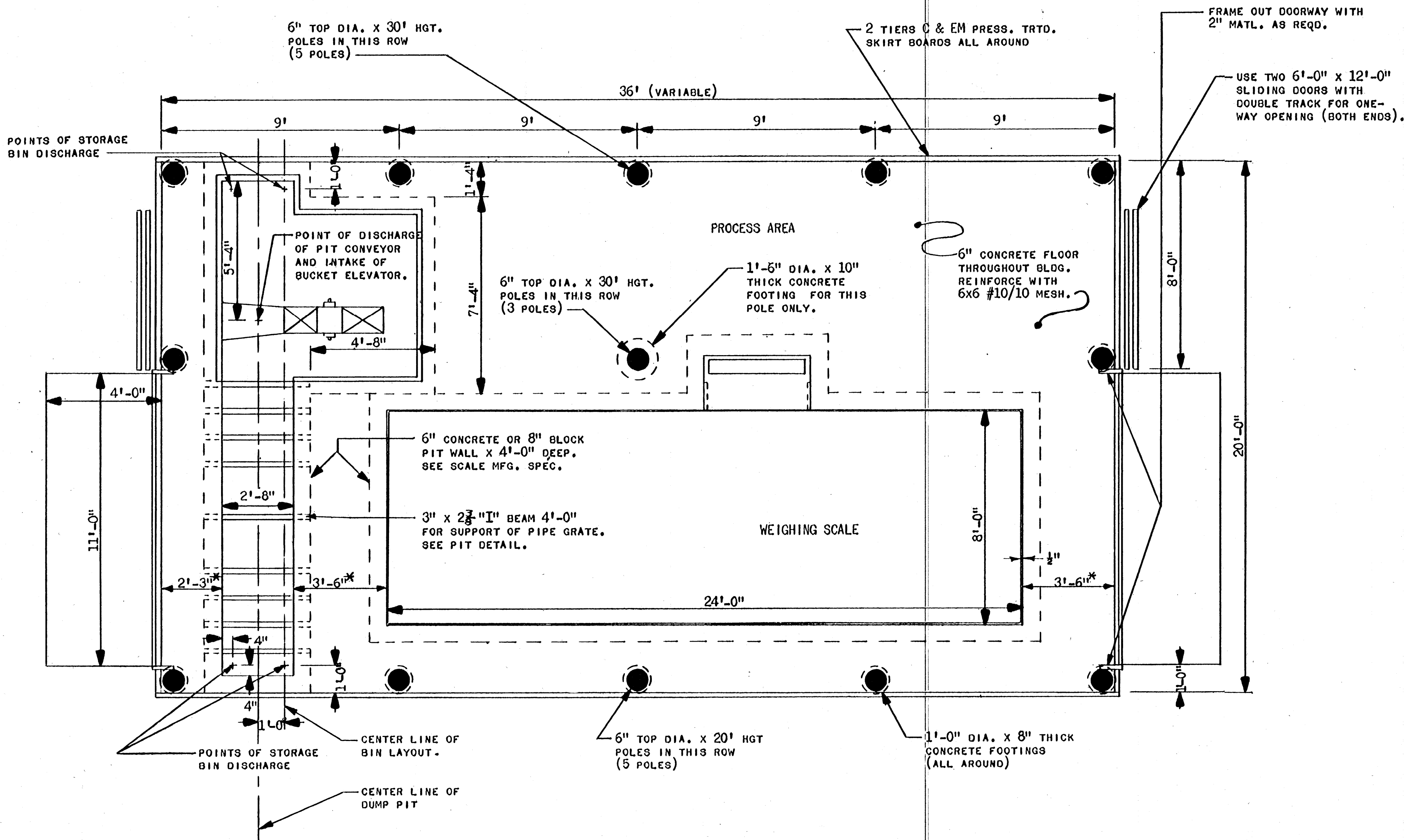
30,000 BU

GRAIN HANDLING EQUIPMENT	20,000 BU 1000-1200 BU/HR FLOW RATE					30,000 BU 2500-3000 BU/HR FLOW RATE					30,000 BU 2500-3000 BU/HR FLOW RATE				
	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP
ELEVATOR LEG	A	52'	7x5"	1000-1200	2-3	A	57'	9x6"	2500-3000	7½	A	59'	9x6"	2500-3000	7½
GRAVITY SPOUTS			6"					8"					8"		
RECEIVING DUMP AUGER	B	11'	8"	1200(WET)	2-3	B	11'	12"OR 14"		3-5	B	11'	12"OR 14"		3-5
RETURN DUMP AUGER	C	4'	8"	1200(WET)	1	C	4'	12"		1½	C	4'	12"		1½
UNDERFLOOR AUGER	D ₁	20'	6"	1000-1200	2	D ₁	22'	8"	2500	3	D ₁	22'	8"	2500	3
UNDERFLOOR AUGER	D ₂	22'	6"	1000-1200	2	D ₂	24'	8"	2500	3	D ₂	24'	8"	2500	3
UNDERFLOOR AUGER	E ₁	29'	6"	1000-1200	3	E ₁	31'	8"	2500	5	E ₁	16'	8"	2500	3
UNDERFLOOR AUGER	E ₂	14'	6"	1000-1200	1½	E ₂	19'	8"	2500	3	E ₂	20'	8"	2500	3
UNDERFLOOR AUGER	E ₃	27'	6"	1000-1200	3	E ₃	29'	8"	2500	5	(K)	14'	8"-10"	2500	2
SWEEP UNLOADERS	F ₁	8½'	4"		¾	F ₁	10'	6"	1000-1200	1	F ₁	10'	6"	1000-1200	1
SWEEP UNLOADERS	F ₂	10'	6"	1000	1	F ₂	11½'	6"	1000-1200	1	F ₂	11½'	6"	1000-1200	1
SWEEP UNLOADERS	F ₃	10'	6"	1000	1	F ₃	14½'	6"	1000-1200	1½	F ₃	14½'	6"	1000-1200	1½
WET GRAIN UNLOAD AUGER	G	8'	8"	1200(WET)	1½	G	8'	10"	1500-2000	2-3	G	10'	12"		
DRYER UNLOAD AUGER	H	14'	6"	1000-1200	1½	H	14'	8"	2500	3	H	18'	8"	2500	3
SMALL ELEVATOR LEG (FOR CONT. FLOW DRYER)	J	34'	(SEE RIGHT)			J	38'	(SEE RIGHT)			J	45'	4x6"	500-700	1

- HANDLING FLOW RATES ILLUSTRATED ARE WORKABLE COMBINATIONS AND NOT LIMITED TO EACH SPECIFIC FACILITY.
- AUGER INTAKE EXPOSURE MATCHED TO CAPACITY--MINIMUM EXPOSURE = AUGER DIA; MAXIMUM EXPOSURE 2' ±. ADDITIONAL EXPOSURE INCREASES HORSEPOWER, NOT CAPACITY.
- SWEEP UNLOADER CAPACITIES GIVEN FOR UNITS WITH GRAIN SHIELDS BEHIND AUGER.
- FLAT STORAGE STRUCTURES CAN BE SUBSTITUTED FOR BIN ON RIGHT SIDE OF LAYOUT. DOTTED BINS SHOWN FOR FUTURE EXPANSION ARE INTERCHANGABLE FOR ALL LAYOUTS.

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
 STATE OF MISSISSIPPI
 MISSISSIPPI STATE UNIVERSITY
 AND
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
GRAIN-FEED HANDLING CENTER
 POLE TYPE CONSTRUCTION

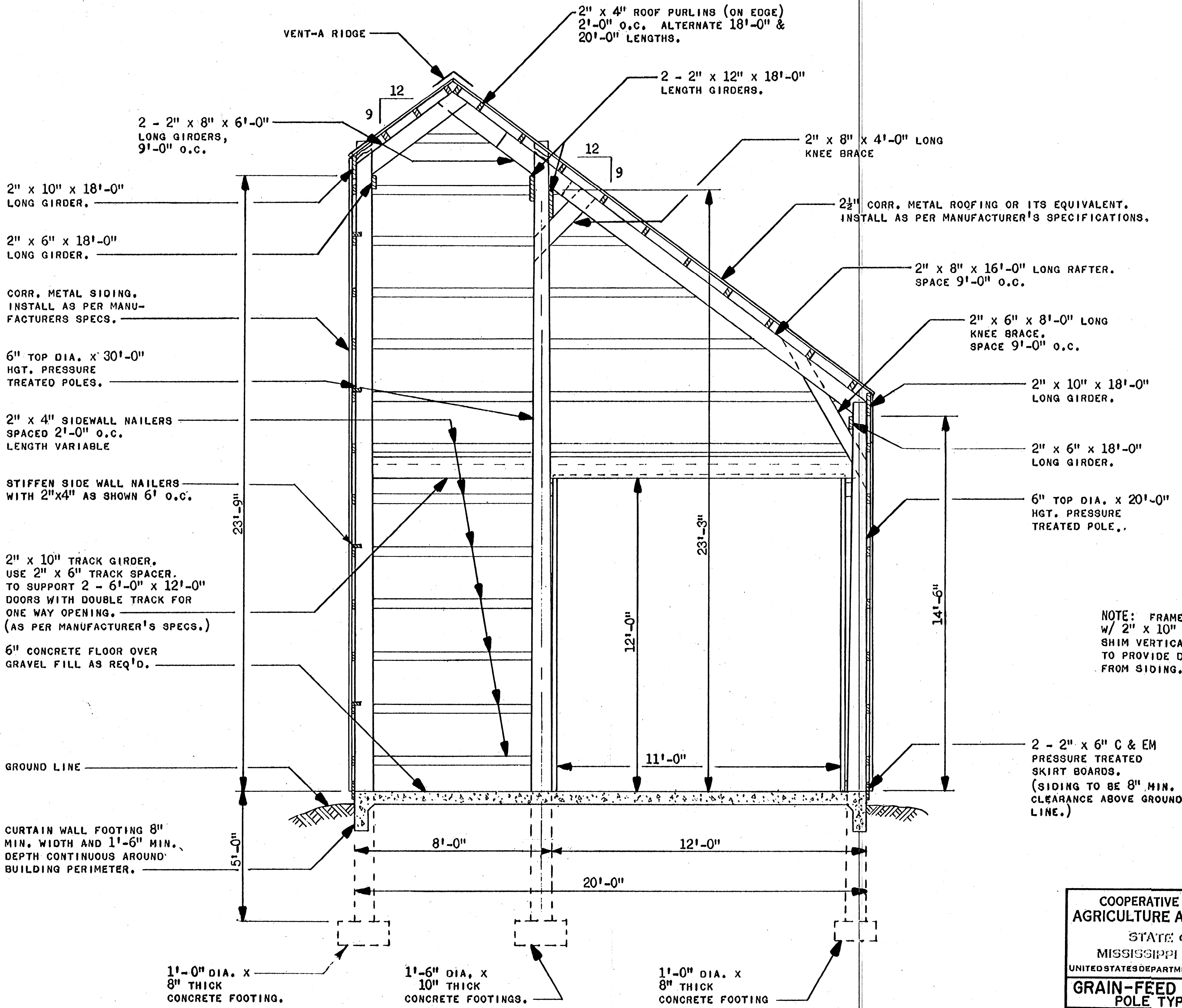
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FLOOR & FOUNDATION PLAN

*NOTE: 4'-0" CLEARANCE IS MORE DESIRABLE TO REDUCE SNOW AND GRAIN FLOW PATTERNS. INCREASE BUILDING LENGTH TO ACCOMPLISH.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS STATE OF MISSISSIPPI MISSISSIPPI STATE UNIVERSITY AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
GRAIN-FEED HANDLING CENTER POLE TYPE CONSTRUCTION		
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VENT-A RIDGE

2" x 4" ROOF PURLINS (ON EDGE)
21'-0" o.c. ALTERNATE 18'-0" &
20'-0" LENGTHS.

2 - 2" x 12" x 18'-0"
LENGTH GIRDERS.

2 - 2" x 8" x 6'-0"
LONG GIRDERS,
9'-0" o.c.

2" x 8" x 4'-0" LONG
KNEE BRACE

2" x 10" x 18'-0"
LONG GIRDER.

2 1/2" CORR. METAL ROOFING OR ITS EQUIVALENT.
INSTALL AS PER MANUFACTURER'S SPECIFICATIONS.

2" x 6" x 18'-0"
LONG GIRDER.

2" x 8" x 16'-0" LONG RAFTER.
SPACE 9'-0" o.c.

CORR. METAL SIDING.
INSTALL AS PER MANU-
FACTURERS SPECS.

2" x 6" x 8'-0" LONG
KNEE BRACE.
SPACE 9'-0" o.c.

6" TOP DIA. x 30'-0"
HGT. PRESSURE
TREATED POLES.

2" x 10" x 18'-0"
LONG GIRDER.

2" x 4" SIDEWALL NAILERS
SPACED 2'-0" o.c.
LENGTH VARIABLE

2" x 6" x 18'-0"
LONG GIRDER.

STIFFEN SIDE WALL NAILERS
WITH 2"x4" AS SHOWN 6' o.c.

6" TOP DIA. x 20'-0"
HGT. PRESSURE
TREATED POLE.

2" x 10" TRACK GIRDER.
USE 2" x 6" TRACK SPACER.
TO SUPPORT 2 - 6'-0" x 12'-0"
DOORS WITH DOUBLE TRACK FOR
ONE WAY OPENING.
(AS PER MANUFACTURER'S SPECS.)

NOTE: FRAME OUT DOOR OPENING
w/ 2" x 10" x 12'-0" LONG BOARDS.
SHIM VERTICAL AS REQ'D. SET
TO PROVIDE DOOR CLEARANCE
FROM SIDING.

6" CONCRETE FLOOR OVER
GRAVEL FILL AS REQ'D.

2 - 2" x 6" C & EM
PRESSURE TREATED
SKIRT BOARDS.
(SIDING TO BE 8" MIN.
CLEARANCE ABOVE GROUND
LINE.)

GROUND LINE

CURTAIN WALL FOOTING 8"
MIN. WIDTH AND 1'-6" MIN.
DEPTH CONTINUOUS AROUND
BUILDING PERIMETER.

1'-0" DIA. x
8" THICK
CONCRETE FOOTING.

1'-6" DIA. x
10" THICK
CONCRETE FOOTINGS.

1'-0" DIA. x
8" THICK
CONCRETE FOOTING

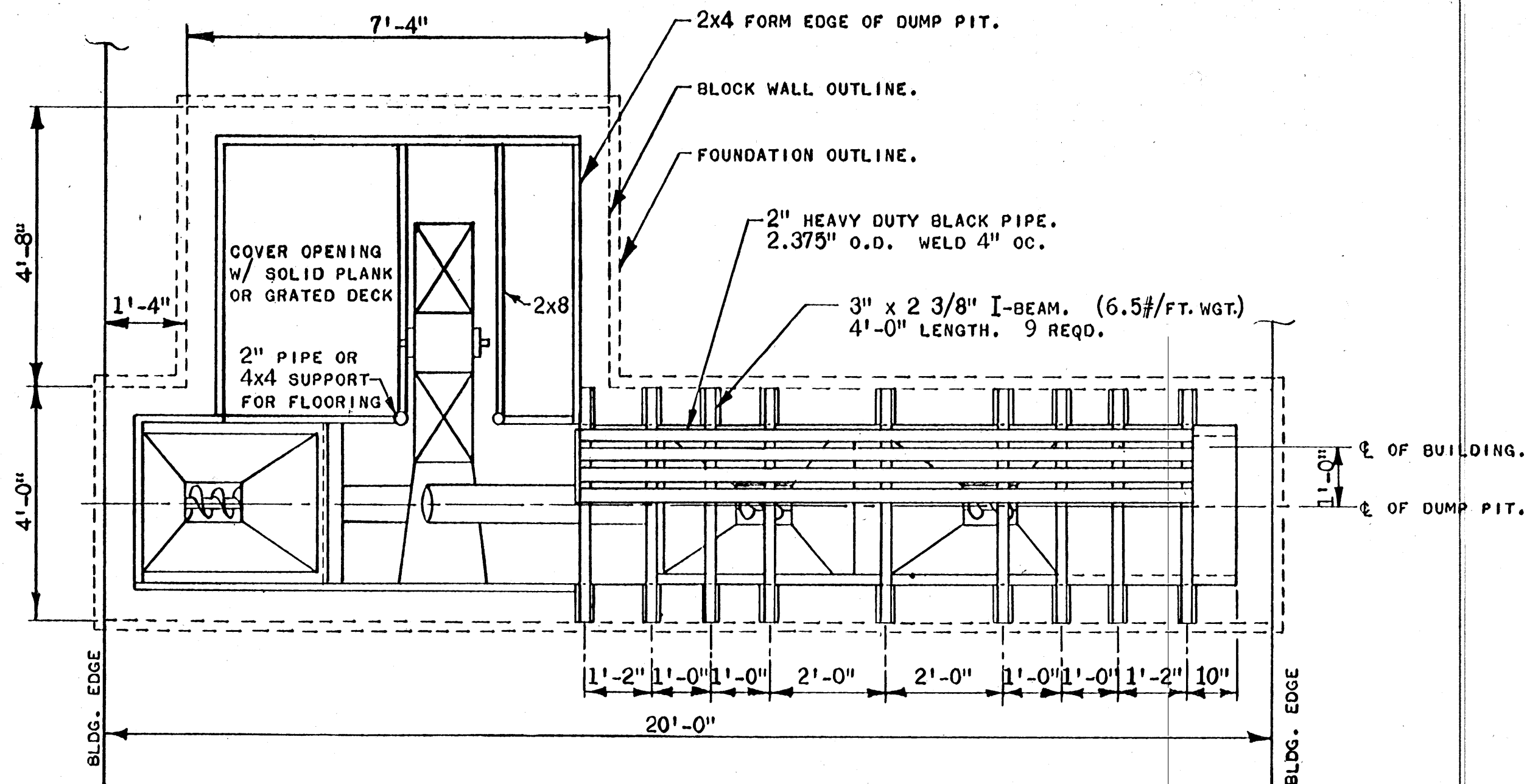
TYPICAL SECTION VIEW

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

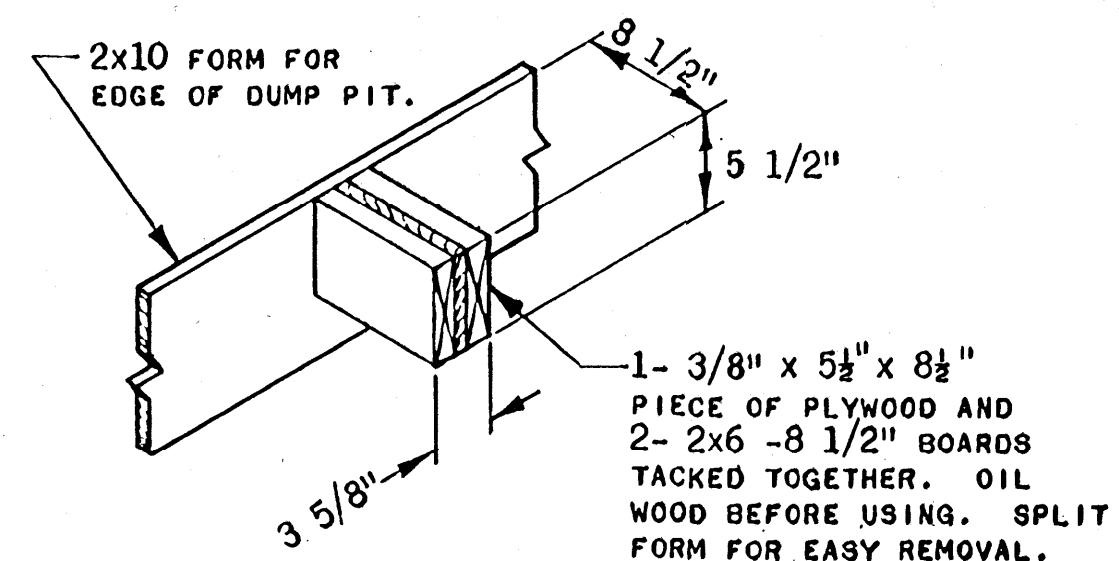
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POLE TYPE CONSTRUCTION**

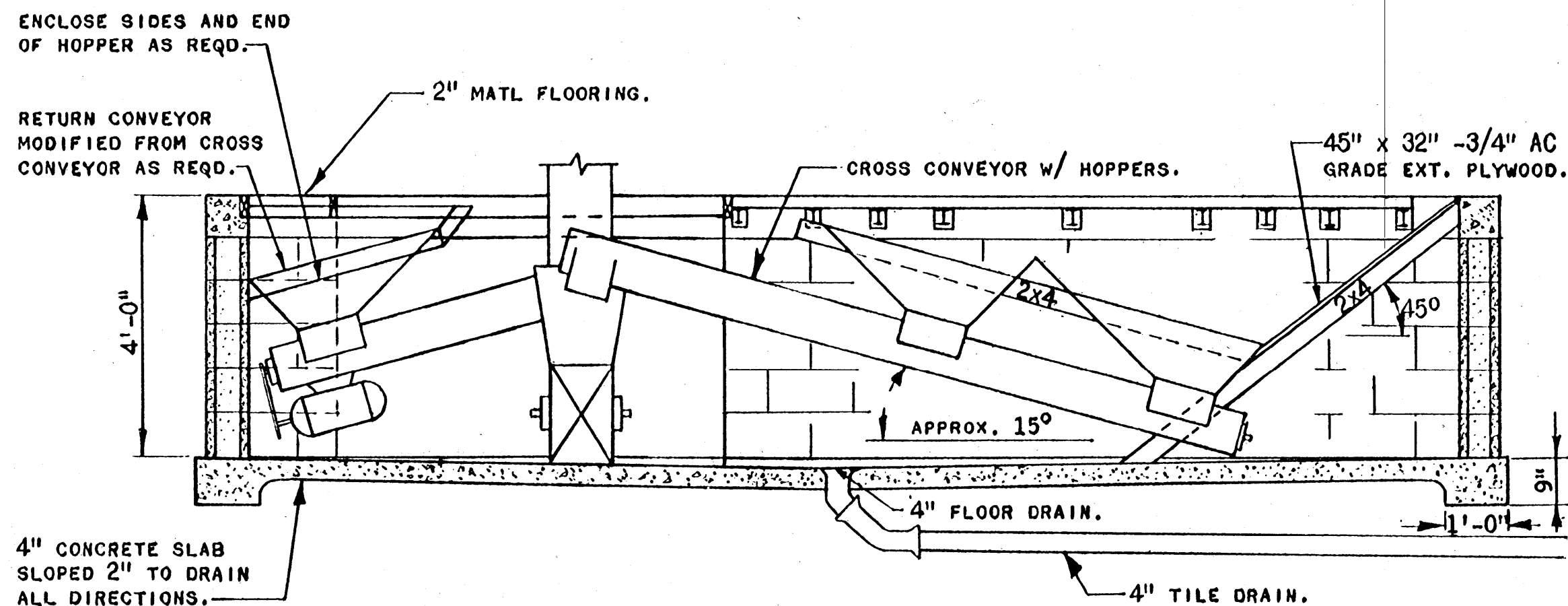
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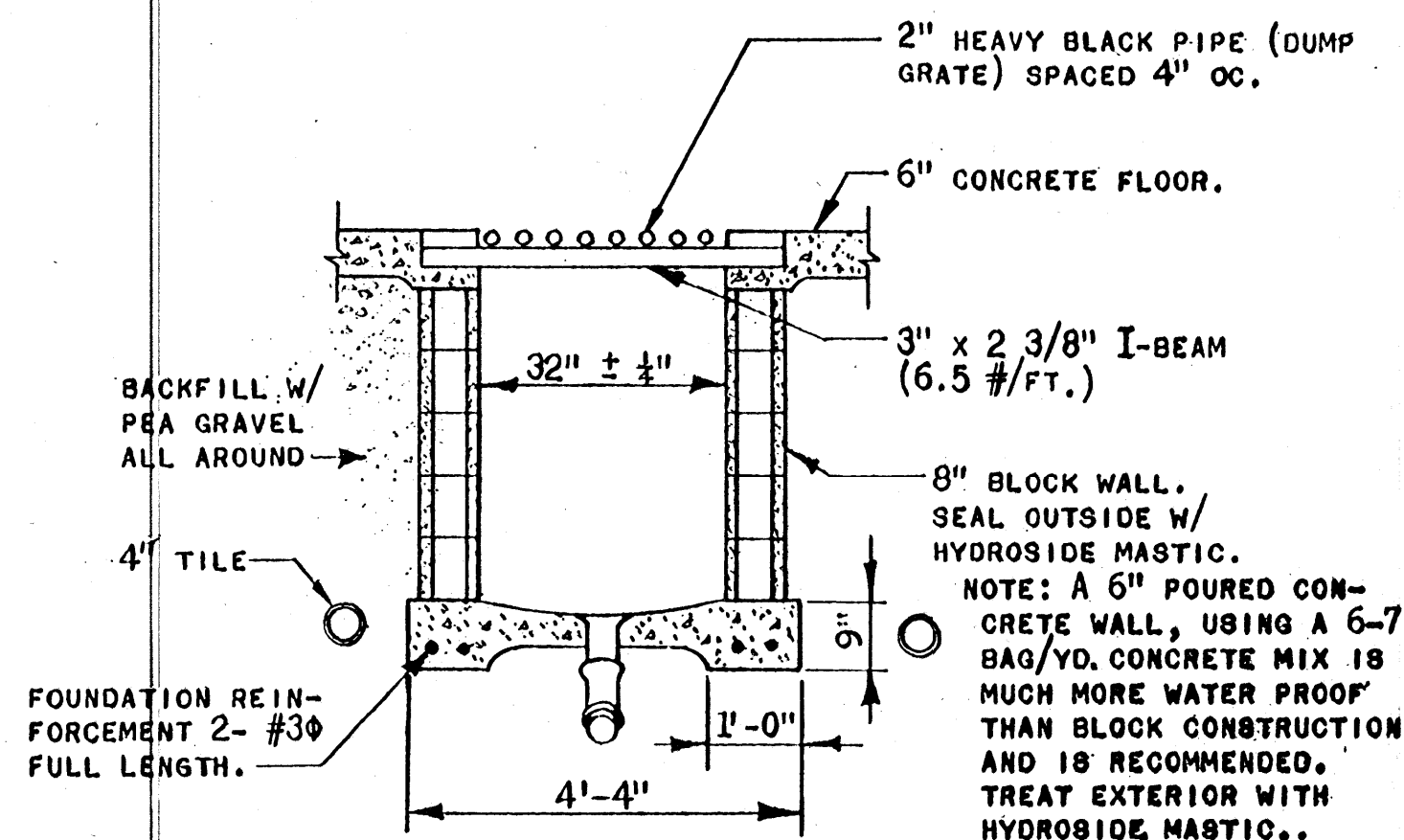
PLAN VIEW



I-BEAM NOTCH FORMING DETAIL



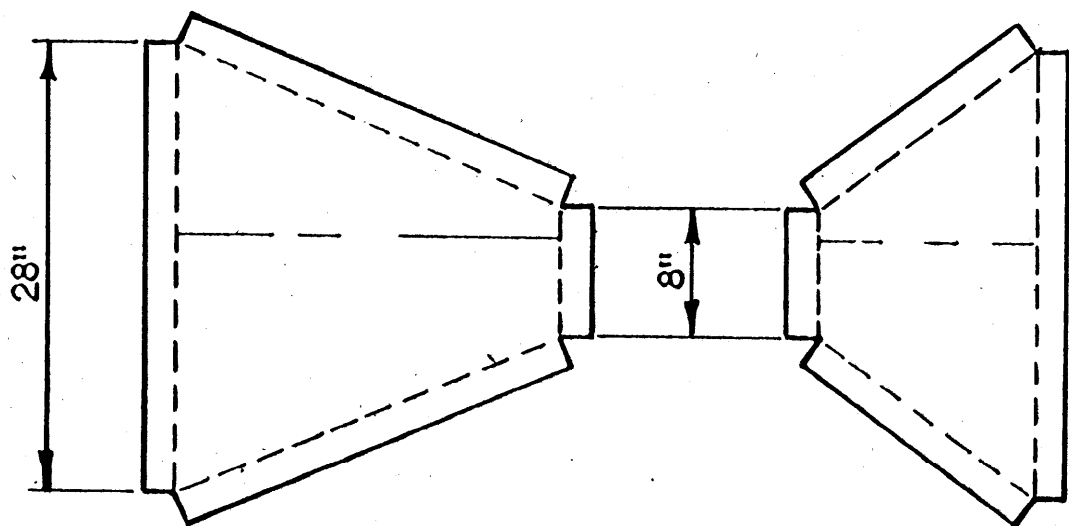
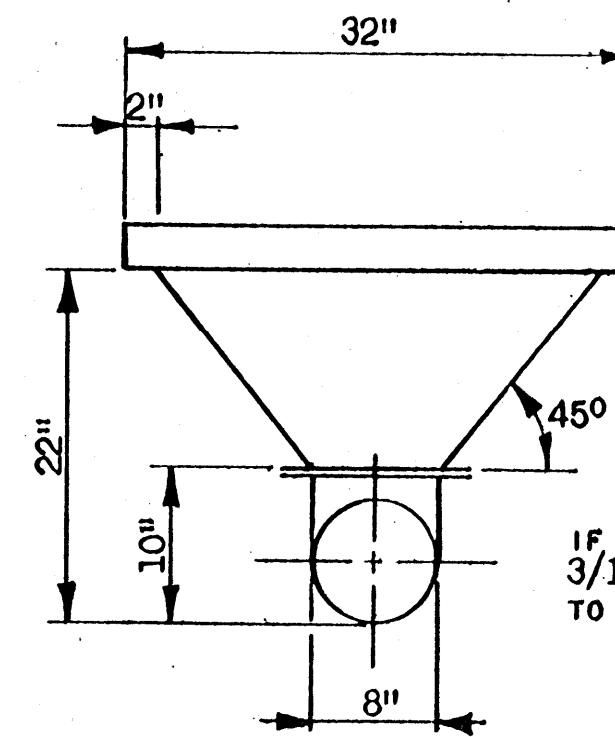
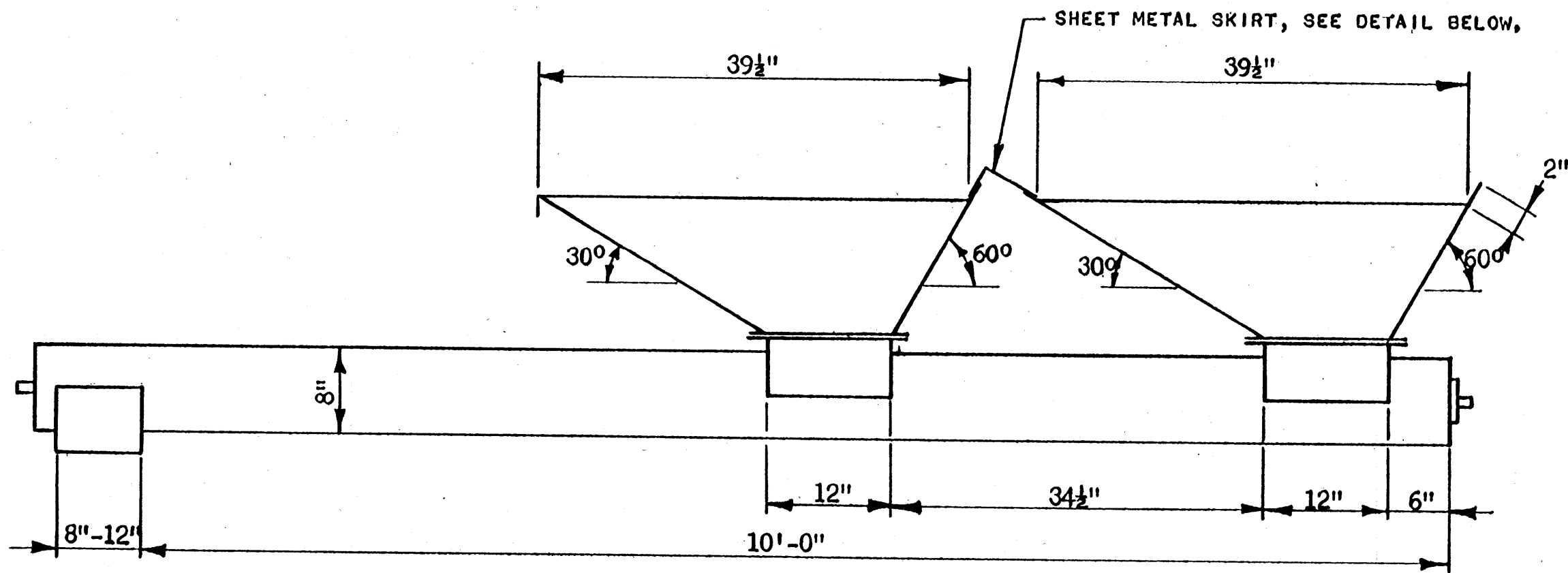
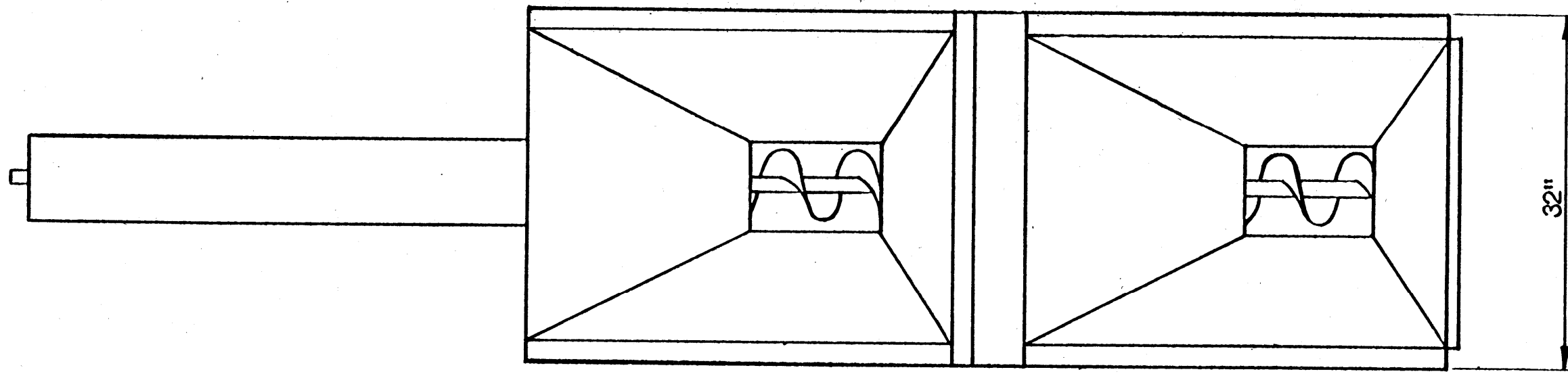
ELEVATION VIEW



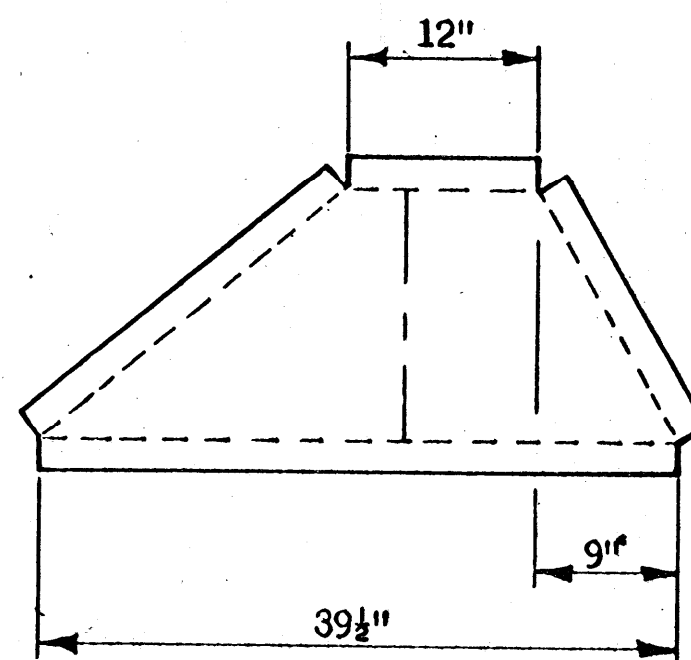
END SECTION OF DUMP PIT

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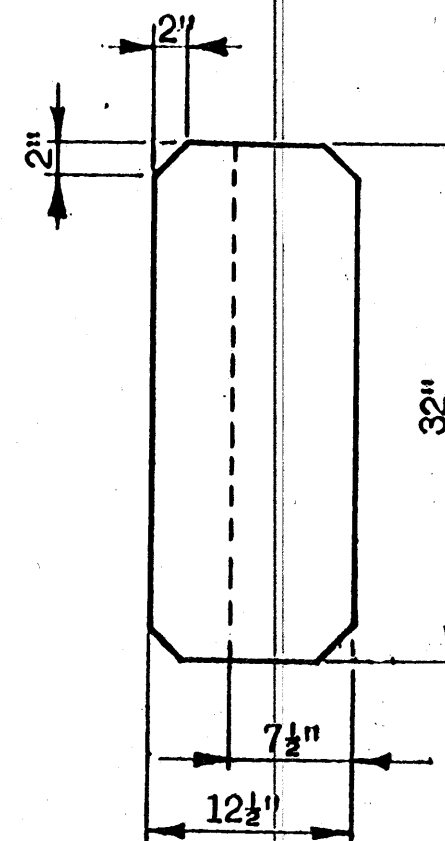
**GRAIN-FEED HANDLING CENTER
 POLE TYPE CONSTRUCTION**



HOPPER END PANELS



HOPPER SIDE PANELS



SKIRT BETWEEN HOPPERS

NOTE: ALL FLANGES ARE DRAWN 2", BUT MAY BE MODIFIED TO EASE FABRICATION. 16 GAGE STEEL IS SUGGESTED. MODIFICATIONS MAY BE NECESSARY TO ADAPT TO A PARTICULAR SCREW CONVEYOR.

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