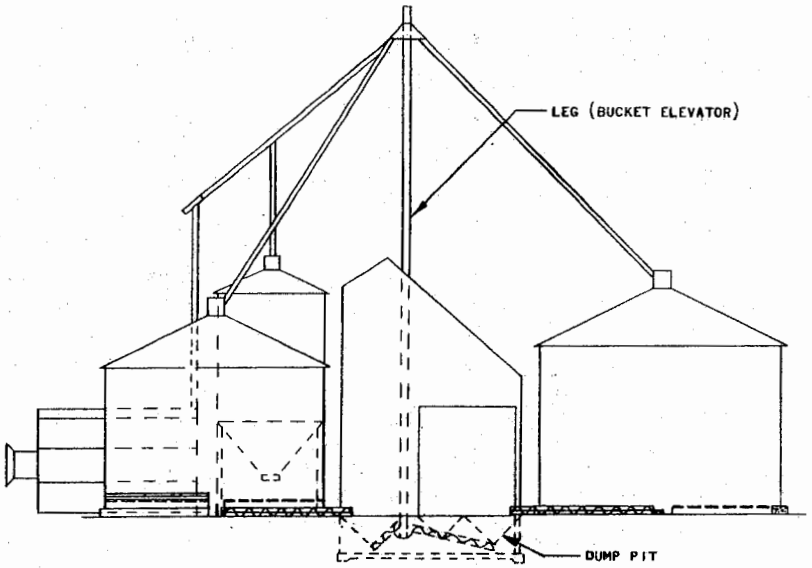
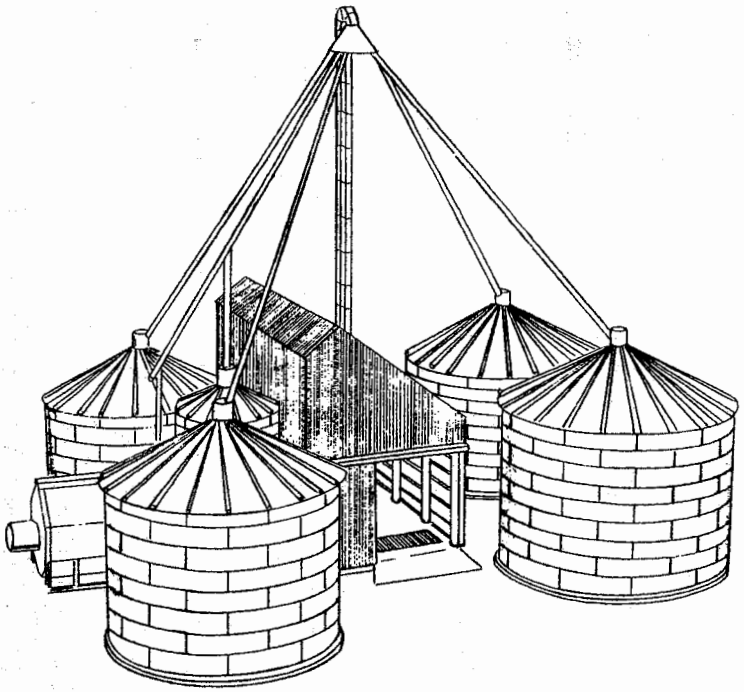
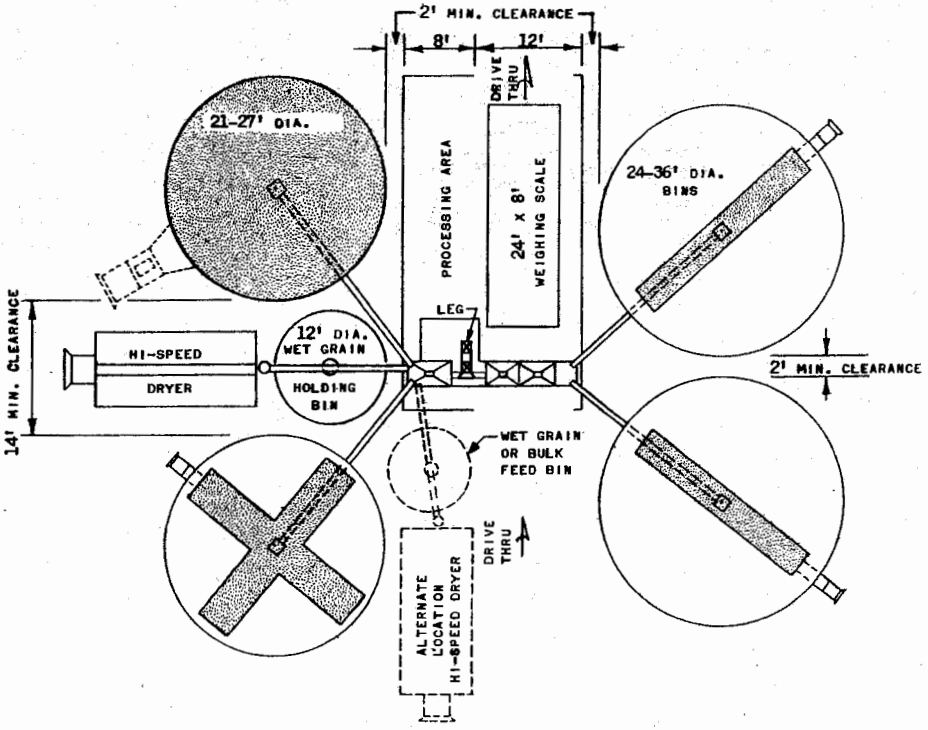






LAYOUT & MECHANIZATION SCHEMATIC

This plan was developed and prepared by:

BRUCE A. MCKENZIE AND JOHN E. MENTZER, Extension Agricultural Engineers, and W. H. FRIDAY, Assistant Professor, Agricultural Engineering Department, Purdue University, Lafayette, Indiana.

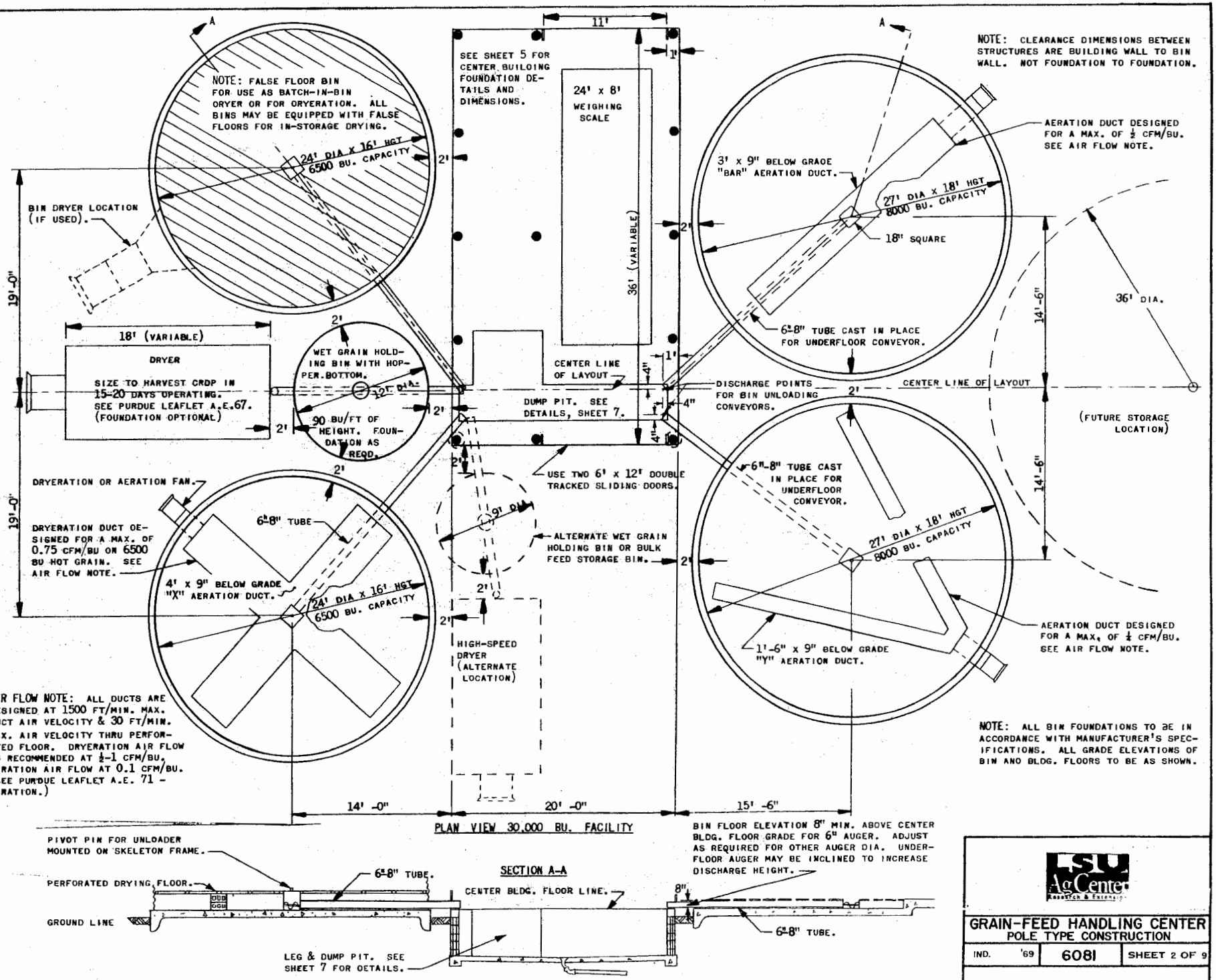
It was originally published by Purdue University as Plan No. P73294 and is reprinted with approval.

MWPS 73294

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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

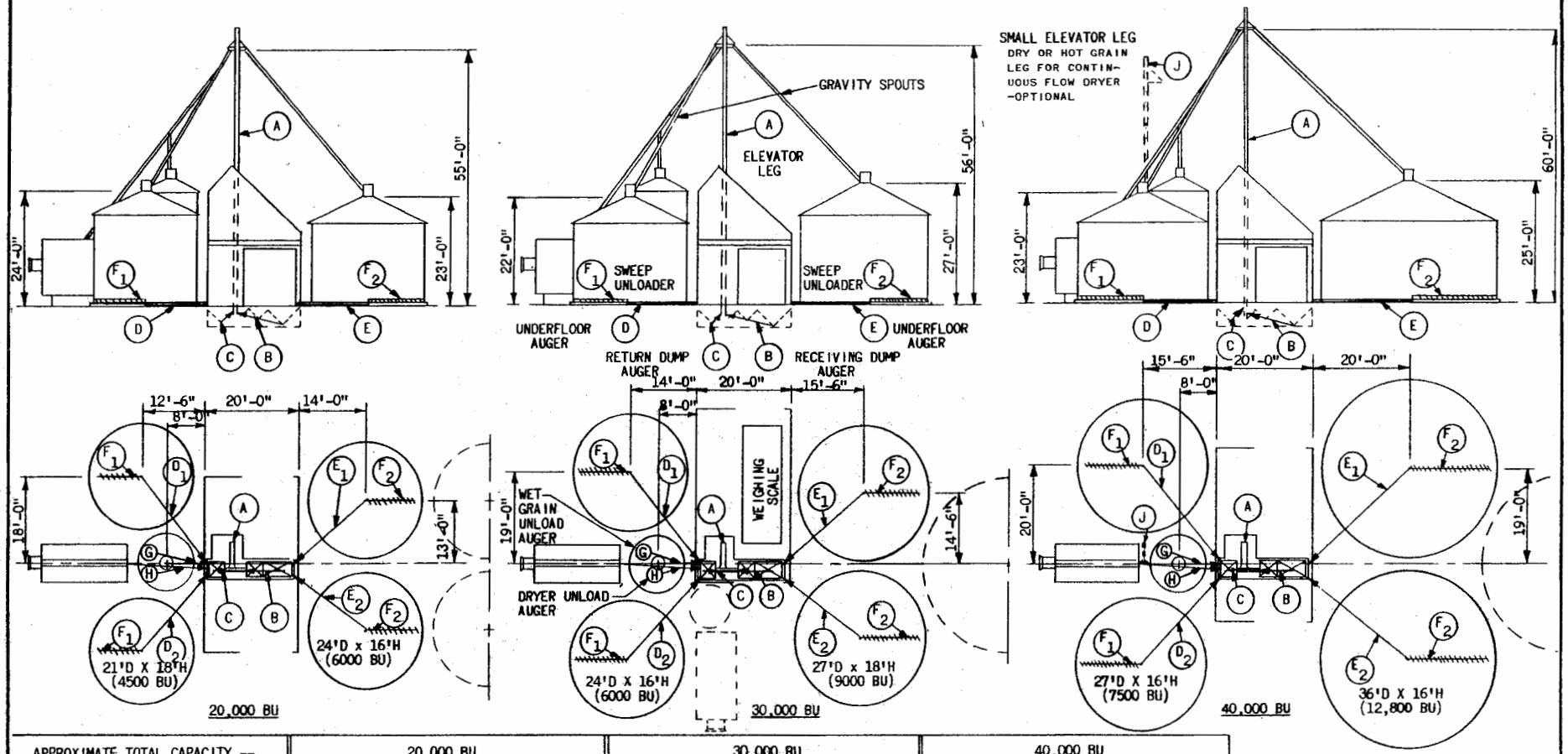
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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

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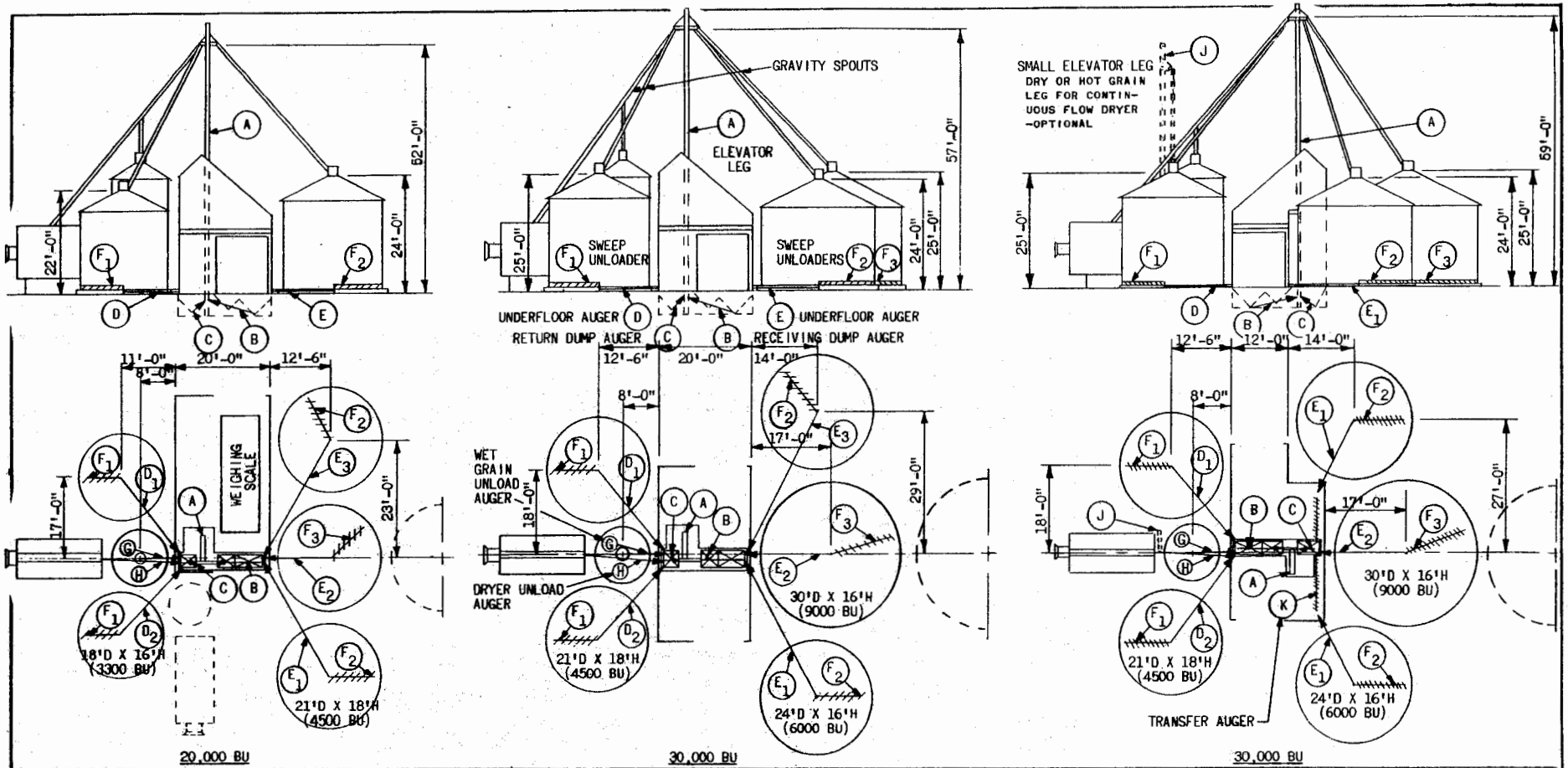
APPROXIMATE TOTAL CAPACITY -- ALTERNATIVE HANDLING RATES --	20,000 BU 1000-1200 BU/HR FLOW RATE					30,000 BU 1500-2000 BU/HR FLOW RATE					40,000 BU 2500-3000 BU/HR FLOW RATE				
GRAIN HANDLING EQUIPMENT	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY 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"	1500-2000	3-5	A	60'	9x6"	2500-3000	7½
GRAVITY SPOUTS			6"					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	10'	4" OR 6"	1000	¾ 1	F_1	11½'	6"	1000-1200	1	F_1	13'	6"	1000-1200	1½
SWEEP UNLOADERS	F_2	11½'	4" OR 6"	1000	¾ 1	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

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

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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

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20,000 BU | 30,000 BU | 30,000 BU

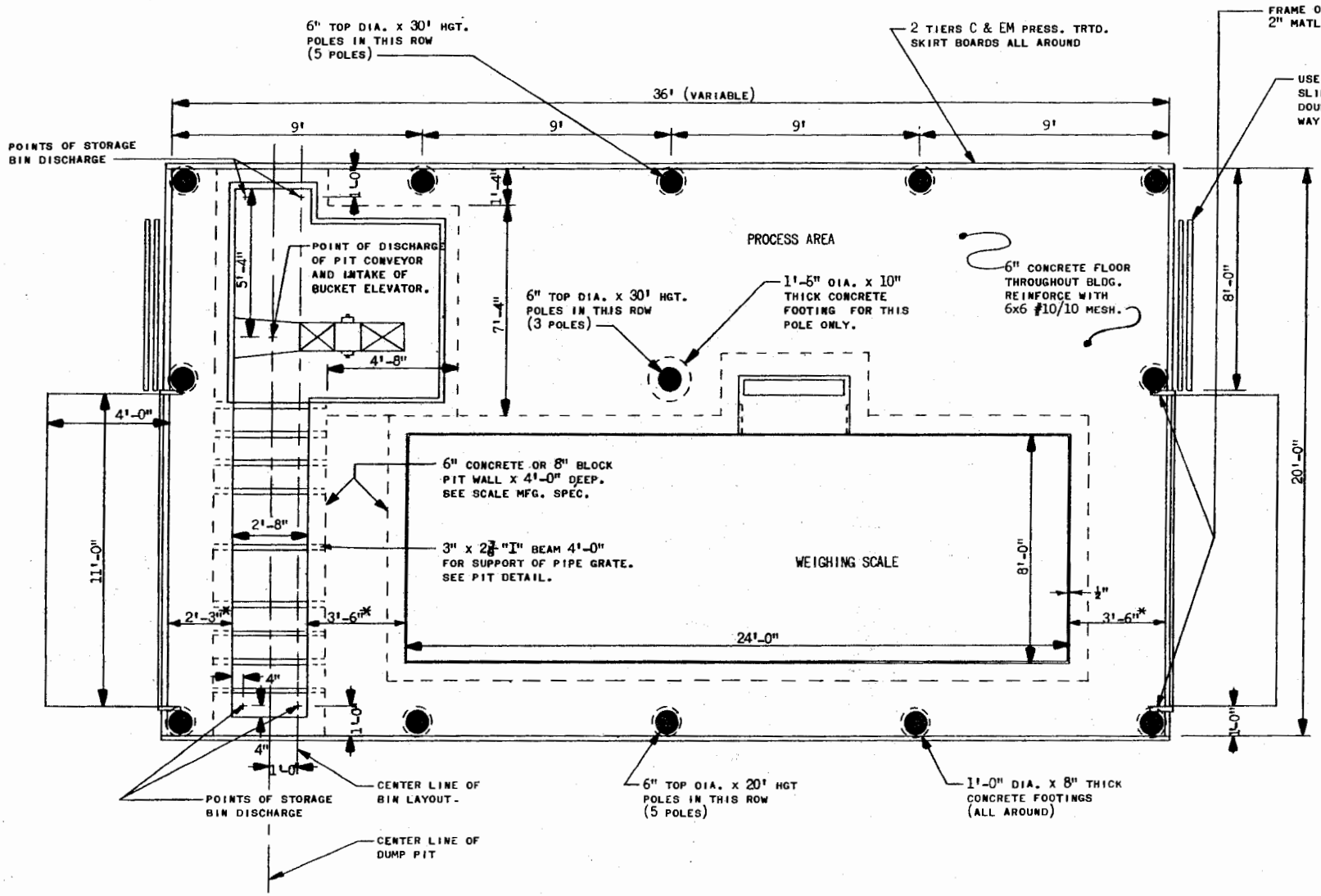
APPROXIMATE TOTAL CAPACITY-- ALTERNATIVE HANDLING RATES--	20,000 BU 1000-1200 BU/HR FLOW RATE					30,000 BU 2500-3000 BU/HR FLOW RATE					30,000 BU 2500-3000 BU/HR FLOW RATE				
GRAIN HANDLING EQUIPMENT	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP	CODE	LENGTH OR HEIGHT	SIZE	ESTIMATED CAPACITY BU/HR	HP
ELEVATOR LEG	A	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"-"U"	2500	2
SWEEP UNLOADERS	F_1	8½'	4"		3/4	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

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

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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

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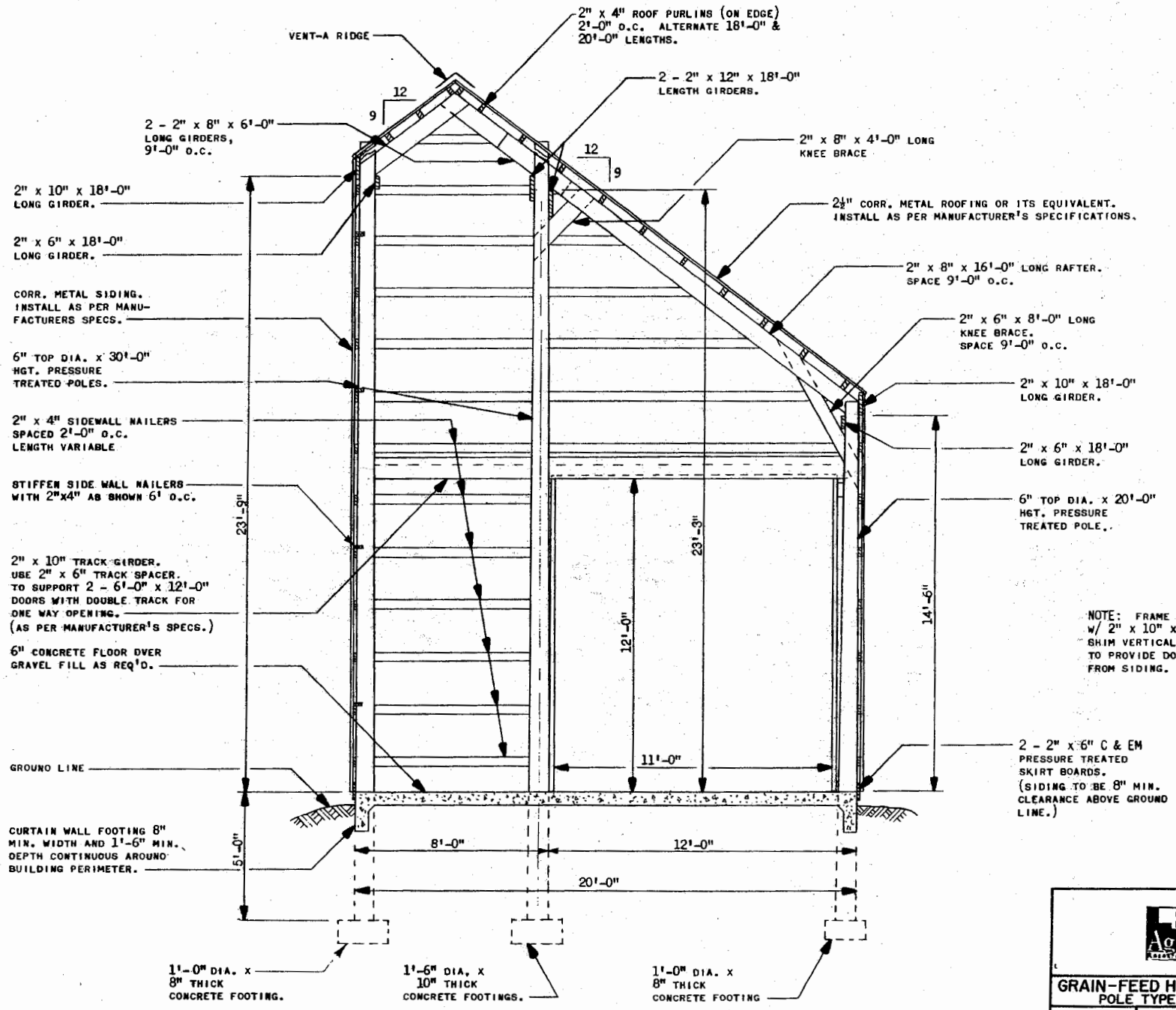
FLOOR & FOUNDATION PLAN

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

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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

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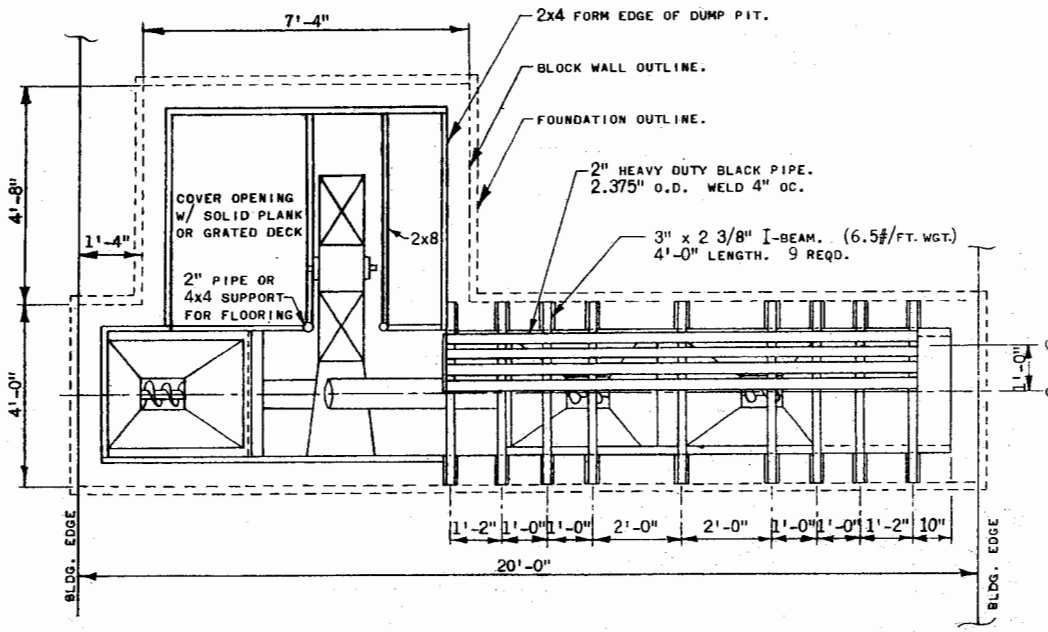


TYPICAL SECTION VIEW

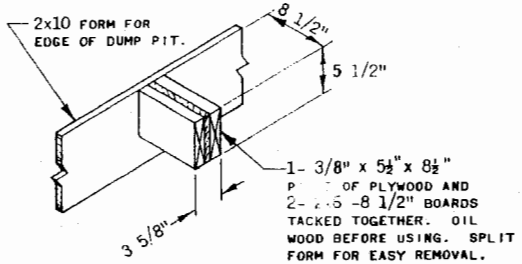
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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

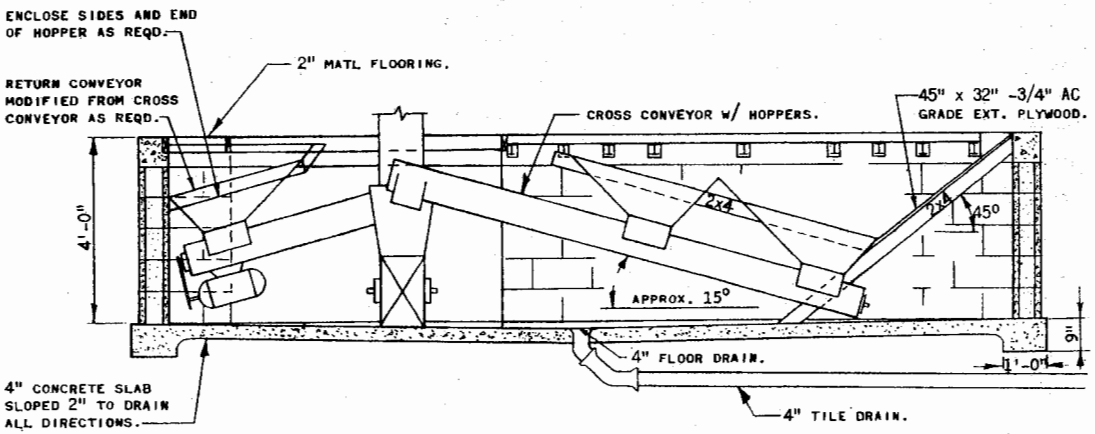
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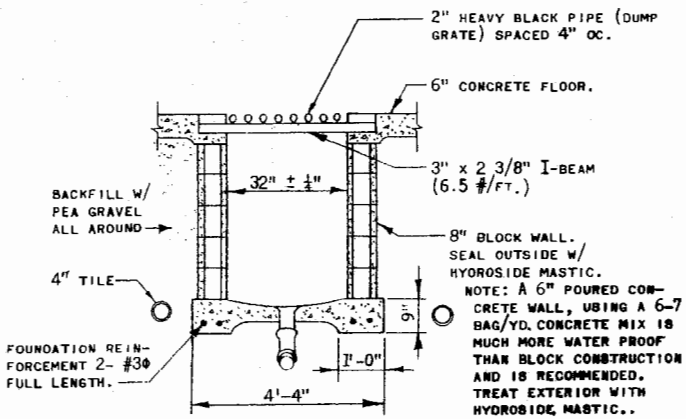
PLAN VIEW



I-BEAM NOTCH FORMING DETAIL



ELEVATION VIEW



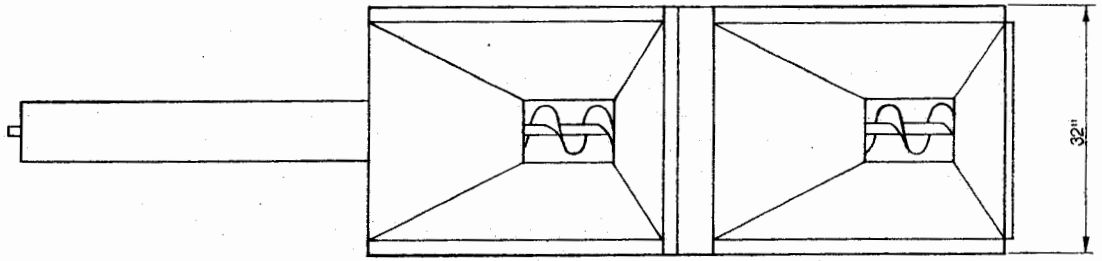
NOTE: A 6" POURED CONCRETE WALL, USING A 6-7 BAG/YD. CONCRETE MIX IS MUCH MORE WATER PROOF THAN BLOCK CONSTRUCTION AND IS RECOMMENDED. TREAT EXTERIOR WITH HYDROSIDE, MASTIC..

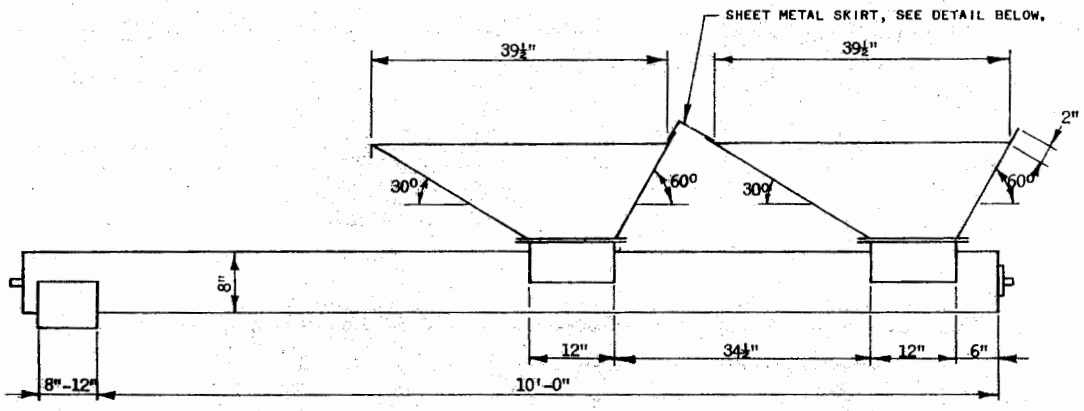
END SECTION OF DUMP PIT

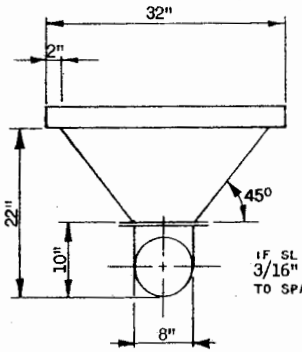
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GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

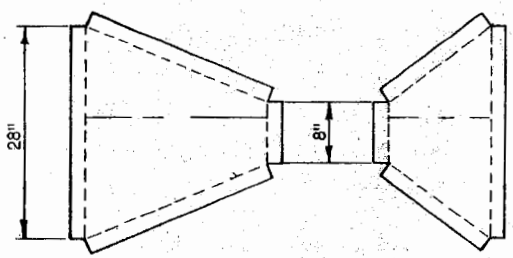
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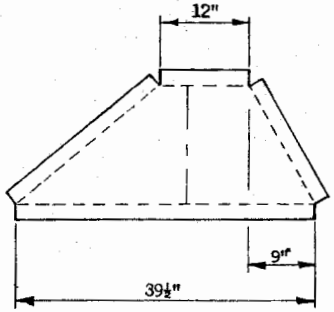




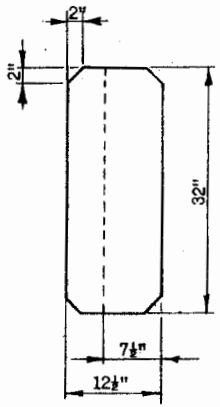
IF SLIDE IS DESIRED, USE 3/16" x 3/4" BAR STOCK TO SPACE EACH SIDE.



HOPPER END PANELS



HOPPER SIDE PANELS



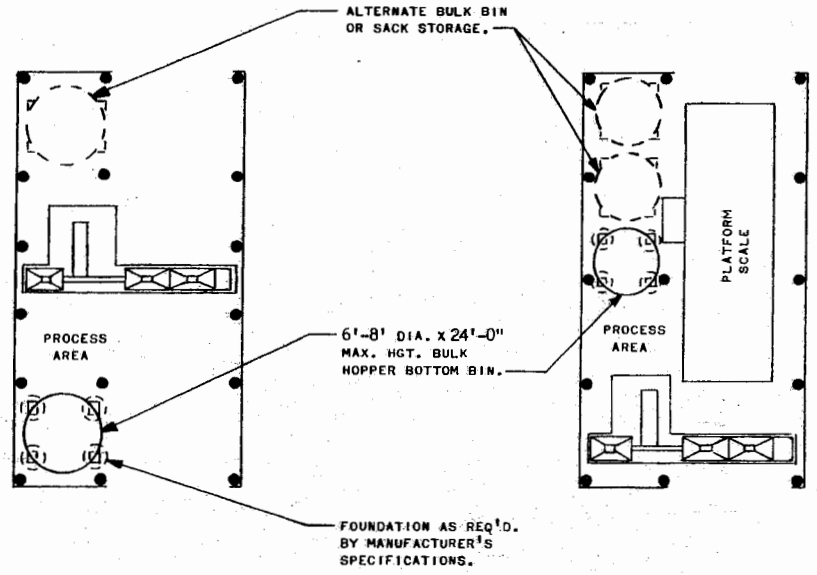
SKIRT BETWEEN HOPPERS

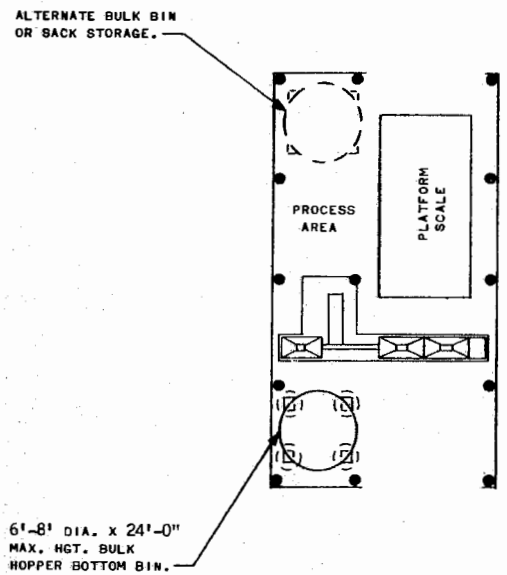
NOTE: ALL FLANGES ARE DRAWN 2", BUT MAY BE MODIFIED TO EASE FABRICATION. 16 GAGE STEEL IS SUGGESTED. MODIFICATIONS MAY BE NECESSARY TO ADAPT TO A PARTICULAR SCREW CONVEYOR.

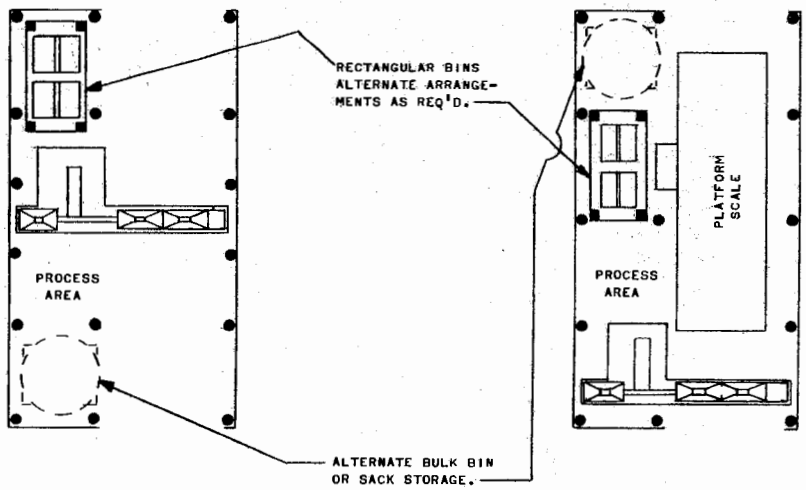
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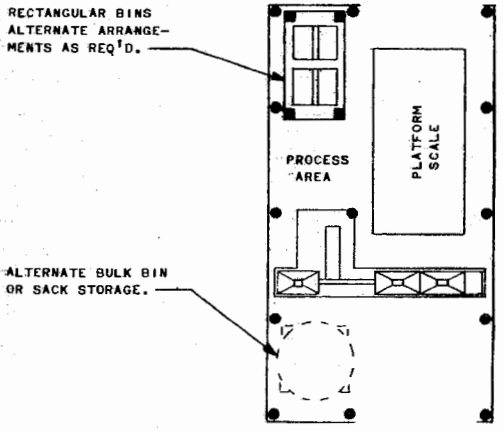
GRAIN-FEED HANDLING CENTER
POLE TYPE CONSTRUCTION

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GRAIN-FEED HANDLING CENTER
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