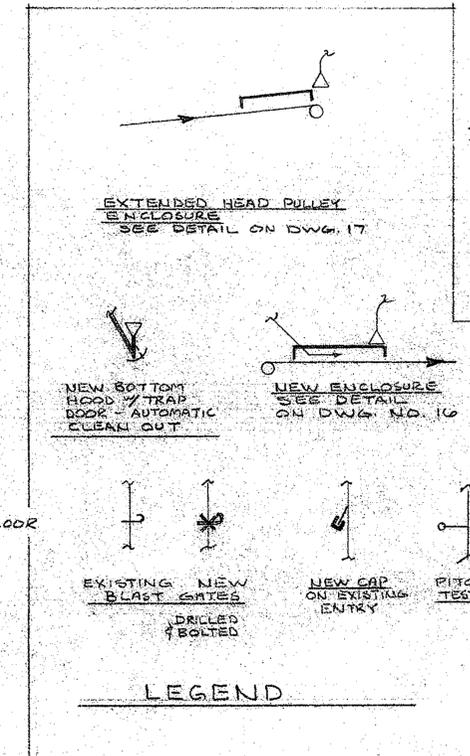
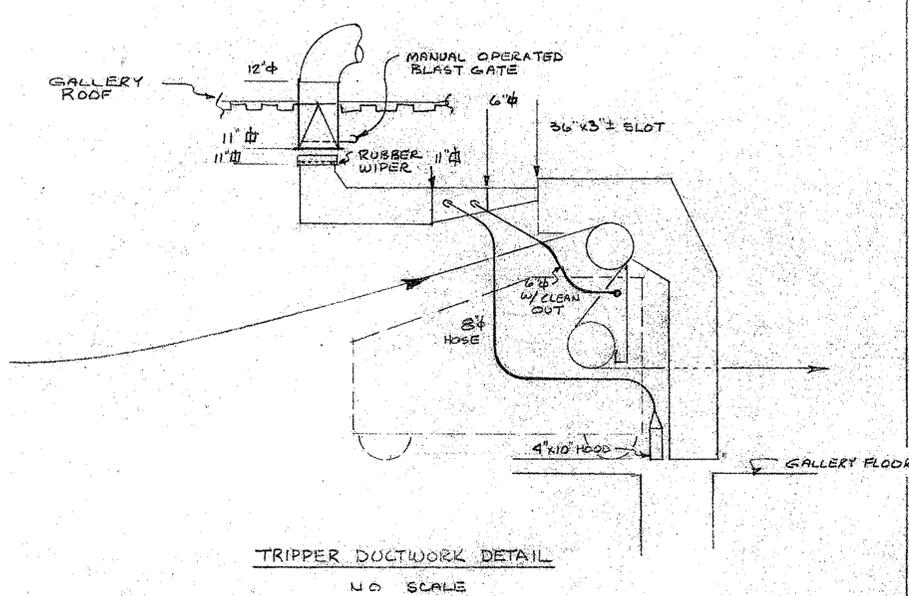
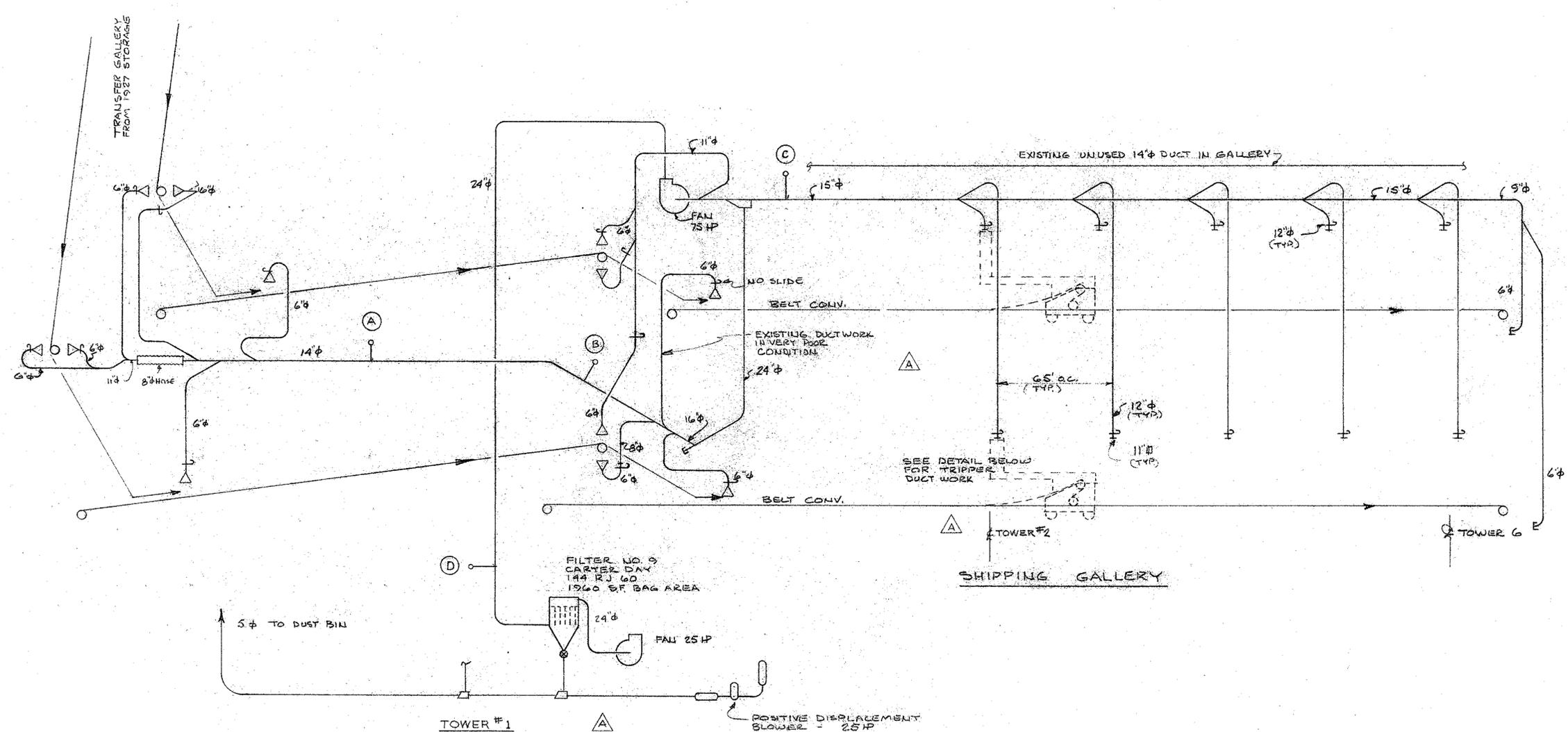


DRAWING NUMBER
6427

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER



TEST DATA - FEB 26, 1979

TEST HOLE	V.R.	S.P.	T.P.	DUCT DIA.	FPM	CFM
(A)	0.6	-3.9		14"	3102	3316
(B)	0.6			14"		
(C)	1.3	-5.7		15"	4566	5602
(D)	1.7	-5.2		24"	5222	16,417

NOTE: BOTH TRIPPERS WERE OPERATING AT NO. 5 TOWER DURING TESTING.

CH₂M DESIGN VOLUME & EPA PERMIT = 18,700 CFM

CONTINENTAL GRAIN CO. LONGVIEW, WASH.		JOB NO. 1423
1979 DUST SYSTEM REVISIONS		DRAWN / TRACED JDH
SCHEMATIC DIAGRAM EXISTING DUST SYSTEM NO. 9 SHIPPING GALLERY		CHECKED / DATE
MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		SCALE
MB CONSULTING ENGINEERS		DWG. NO. / ISSUE 14 / A

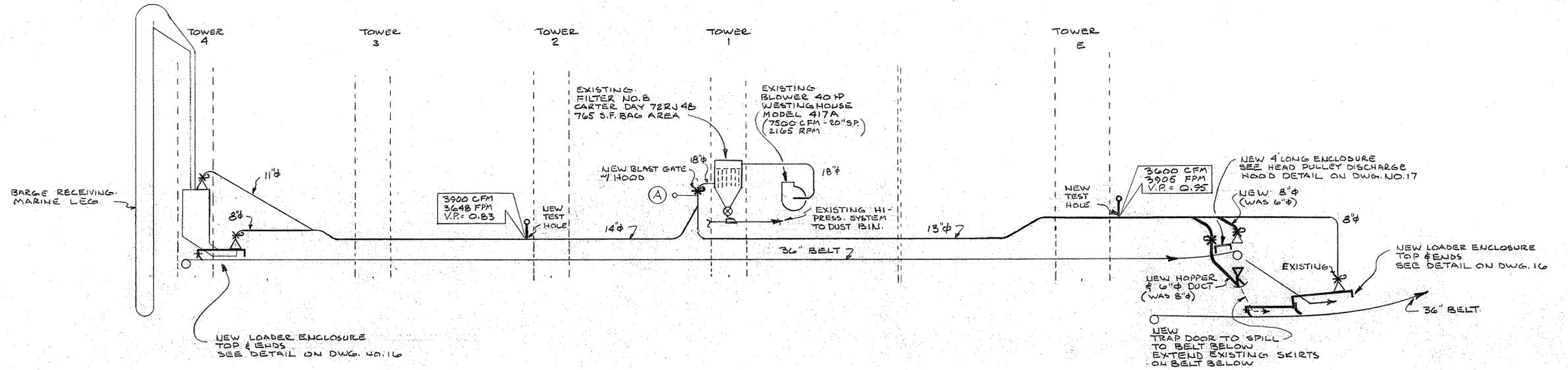
A) 8-JUNE-1979-OMITTED TRIPPER POSITION & TOWER #1-LJR

DRAWING NUMBER
6430

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER



TEST DATA

TEST HOLE	V.P.	S.P.	T.P.	DUCT DIA.	FPM	CFM
MAR. 14, 1979 (A)	0.4	3.4		18" φ	2533	4476

EXISTING PERMIT = 7,500 CFM

AIR TO CLOTH RATIO = 9.8:1

NOTE: DRILL & BOLT ALL BLASTGATES AFTER BALANCING SYSTEM

APR 10 1979

CONTINENTAL GRAIN CO. LONGVIEW, WASH.		JOB NO. 1423
1979 DUST SYSTEM REVISIONS		DRAWN TRACED JDH
SCHEMATIC DIAGRAM BARGE RECEIVING SYSTEM NO. 8		CHECKED DATE
MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		SCALE
MB CONSULTING ENGINEERS		DWG. NO. ISSUE 18

DRAWING NUMBER
8431

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER

TOWER 1
EXISTING FILTERS & 9
EXISTING SYSTEM NO. 9
DUCT WORK

TOWER 2
EXISTING SAMPLE LAB

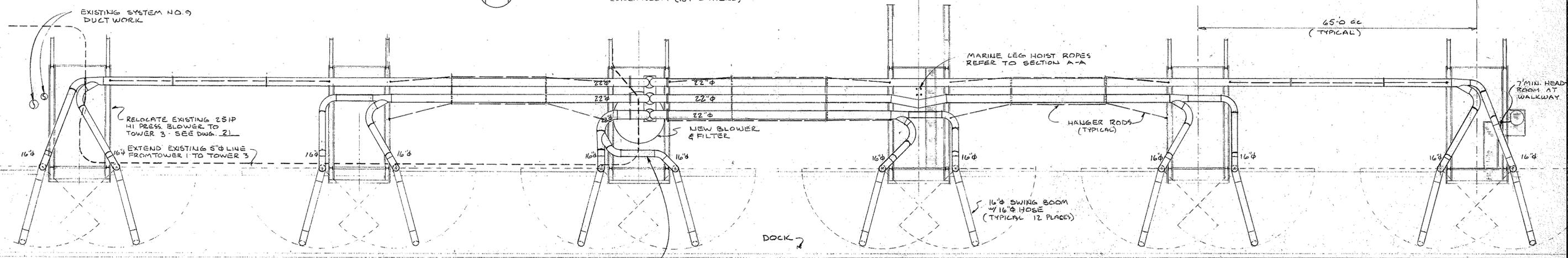


TOWER 3
REMOVE EXISTING LONGSHOREMEN
LUNCH ROOM - (BY OTHERS)

TOWER 4
EXISTING BARRE LEG

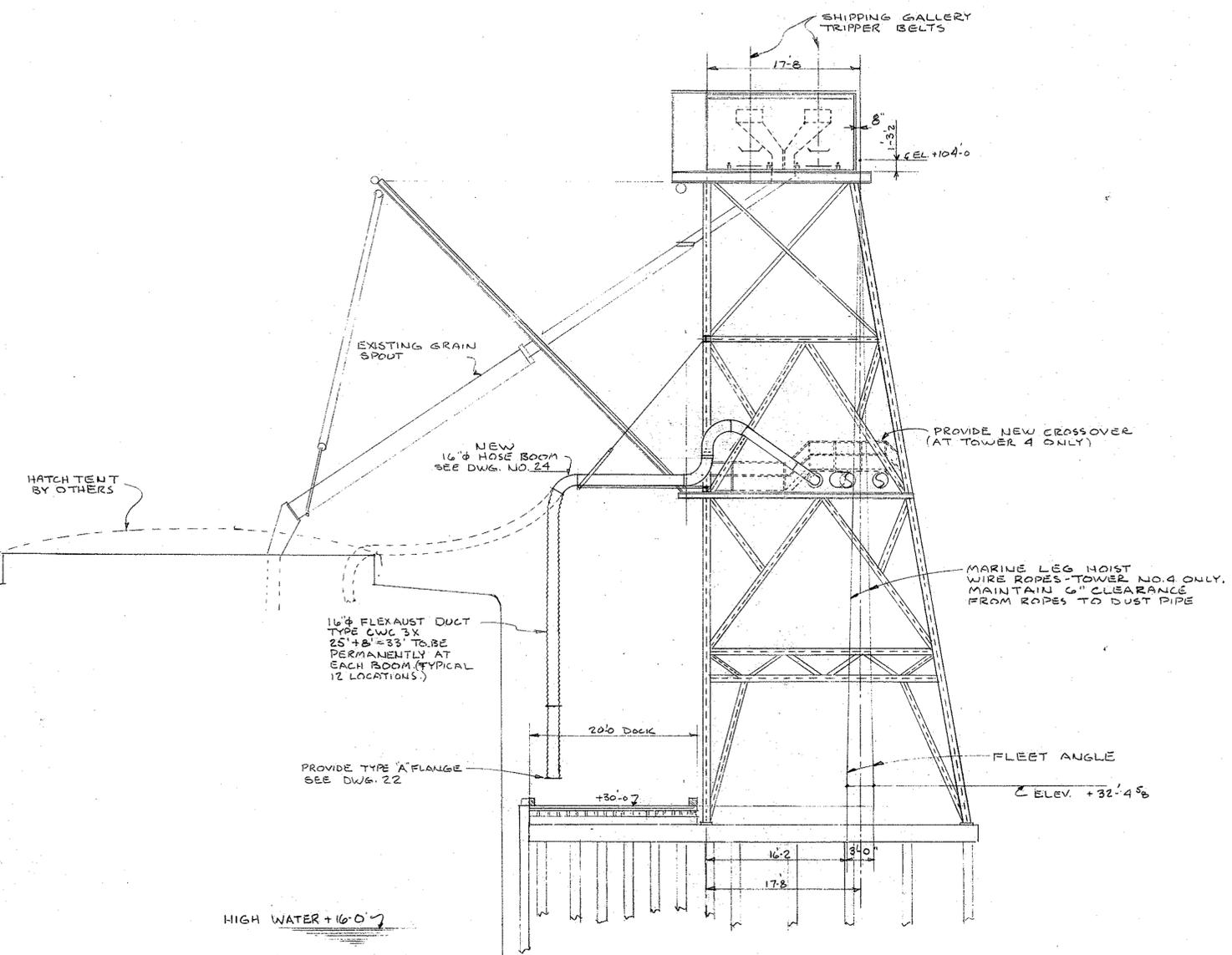
TOWER 5
OPEN

TOWER 6
OPEN



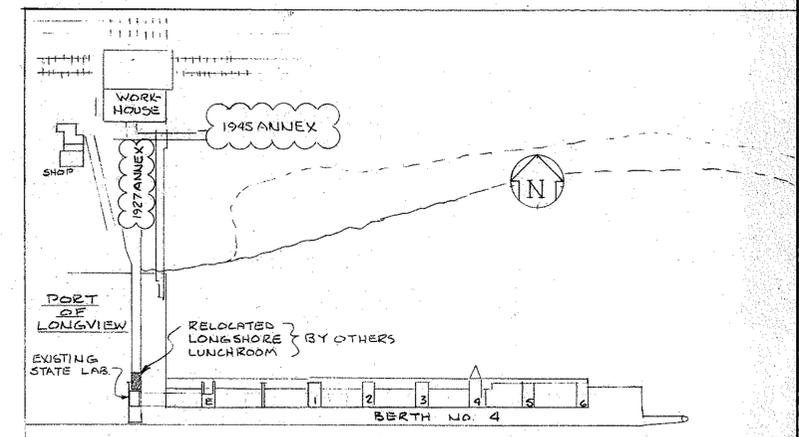
PLAN
3/2 = 1/2

SHIPPING GALLERY
TRIPPER BELTS



TOWER ELEVATION
3/2 = 1/2

- DRAWING LIST**
- DWG. DUST SYSTEM NO. 10
 - 19 PLAN & ELEVATION
 - 20 SCHEMATIC DIAGRAM
 - 21 FILTER DETAILS
 - 22 DUST SYSTEM NO. 10 DETAILS
 - 23 NEW FILTER SUPPORT PLATFORM
 - 24 DUST COLLECTION ROOM DETAILS



COLUMBIA RIVER
PLOT PLAN
1" = 100'



CONTINENTAL GRAIN CO. LONGVIEW, WASH.		JOB NO. 1423
1979 DUST SYSTEM REVISIONS		DRAWN TRACED
PLAN & ELEVATION NEW DUST SYSTEM NO. 10 SHIP LOADING HATCH COLLECTION		CHECKED DATE JDH
MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		SCALE AS NOTED
MB CONSULTING ENGINEERS		DWG. NO. ISSUE 19

MAY 11 1979

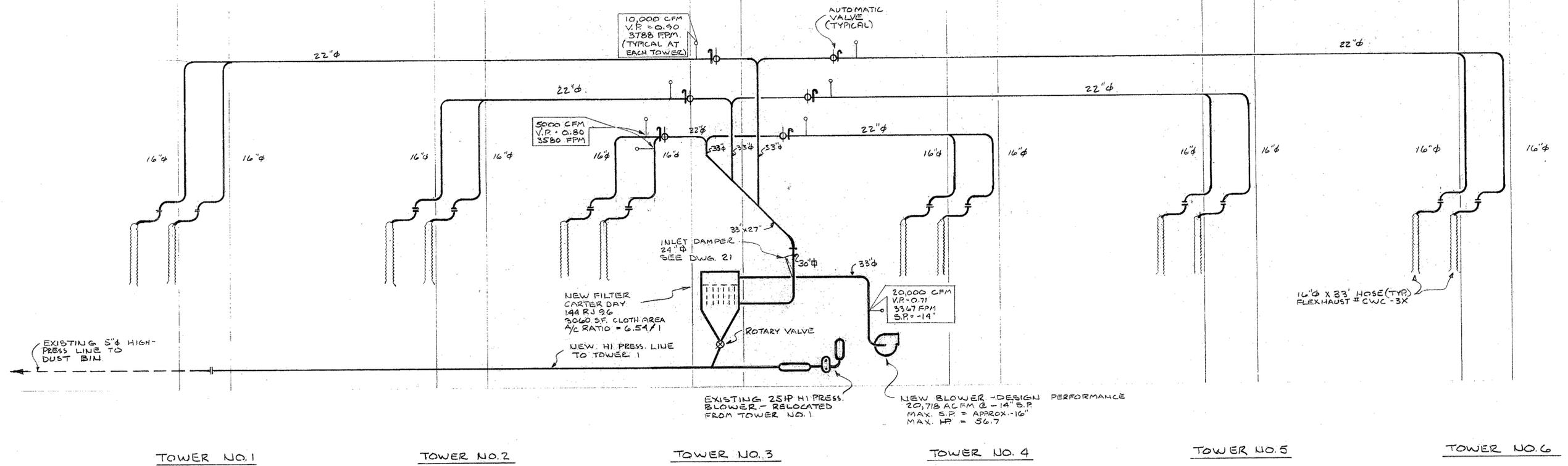
DRAWING NUMBER
6432

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER

SHIPPING GALLERY



TOWER NO. 1

TOWER NO. 2

TOWER NO. 3

TOWER NO. 4

TOWER NO. 5

TOWER NO. 6

FILTER - CARTER DAY
144 RJ 96 COMPLETE WITH
12 BLADE C. I. WITH OUTBOARD
BEARING. CAST END PLATE &
SHOE TEE VENTURI TO 5" PIPE

ROTARY VALVE
10" CARTER DAY
12 BLADE C. I. WITH OUTBOARD
BEARING. CAST END PLATE &
SHOE TEE VENTURI TO 5" PIPE

BLOWER BUFFALO FORGE CO.
MODEL 660 L 39 ARR. MT. B
DIRECT COUPLER. 75 HP 1800 RPM
CLASS II, GROUP G. MOTOR YU FRAME
INCLUDE DISCHARGE EVAISE WITH
BIRD SCREEN & CASING DRAIN.
FAN BEARINGS TO BE DESIGNED
FOR GREASE LUBE, NOT OIL.

	CONTINENTAL GRAIN CO. LONGVIEW, WASH.		JOB NO. 1423
	1979 DUST SYSTEM REVISIONS		DRAWN TRACED JDH
	SCHEMATIC DIAGRAM NEW DUST SYSTEM NO. 10 SHIP LOADING HATCH COLLECTION		CHECKED DATE 11 MAY 1979
	MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		SCALE
			DWG. NO. ISSUE 20

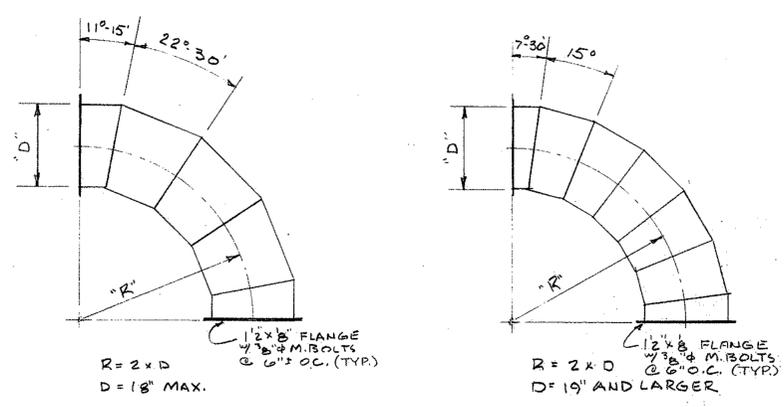
MAY 11 1979

B434

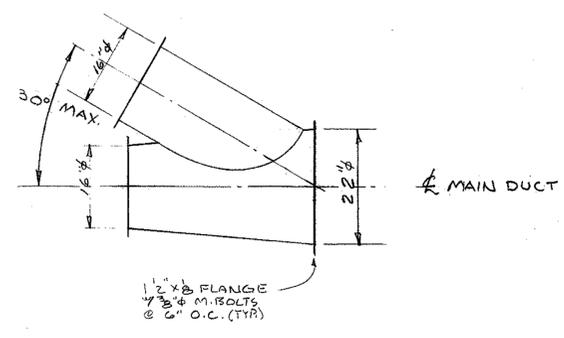
DRAWING NUMBER

DRAWING NUMBER

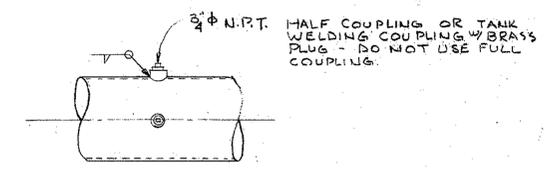
DRAWING NUMBER



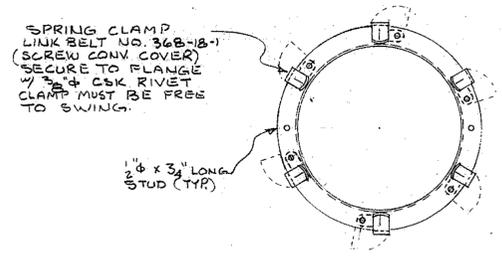
ELBOW - 18" MAX. NO SCALE
 ELBOW 19" AND LARGER NO SCALE



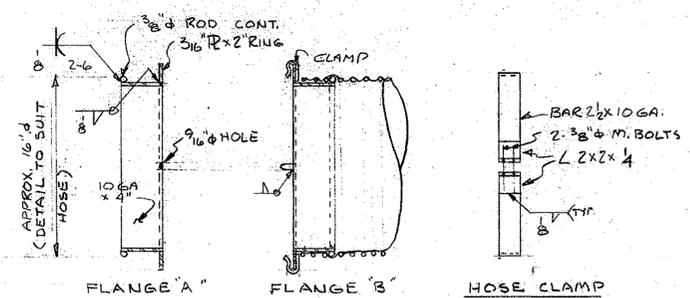
BRANCH ENTRY DUCT NO SCALE



PITOT TUBE PLUGS NO SCALE



SPRING CLAMP LINK BELT NO. 368-B-1 (SCREW COVER) SECURE TO FLANGE W/ 3/8" CSK RIVET CLAMP MUST BE FREE TO SWING.

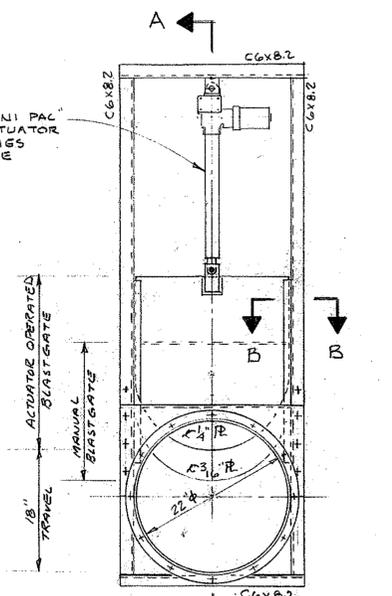


FLANGE "A" FLANGE "B" HOSE CLAMP

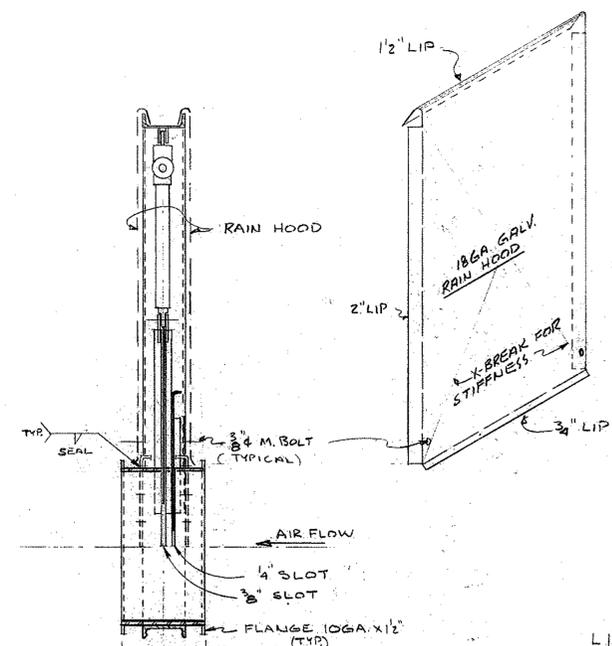
EACH EXTENSION HOSE SHALL HAVE ONE "A" FLANGE & ONE "B" FLANGE. THE PERMANENT BOOM HOSES SHALL TERMINATE WITH AN "A" FLANGE AT THE BOTTOM END.

16" HOSE CONNECTIONS 3" = 1'-0"

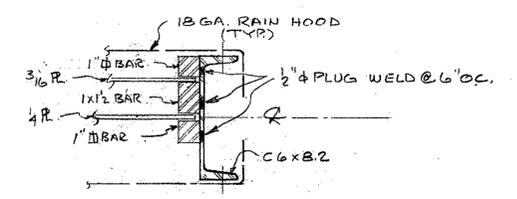
DUFF NORTON MINI PAC MECHANICAL ACTUATOR 1/2" LIMIT SWITCHES 115VAC - 18" RAISE 500 LB. LOAD



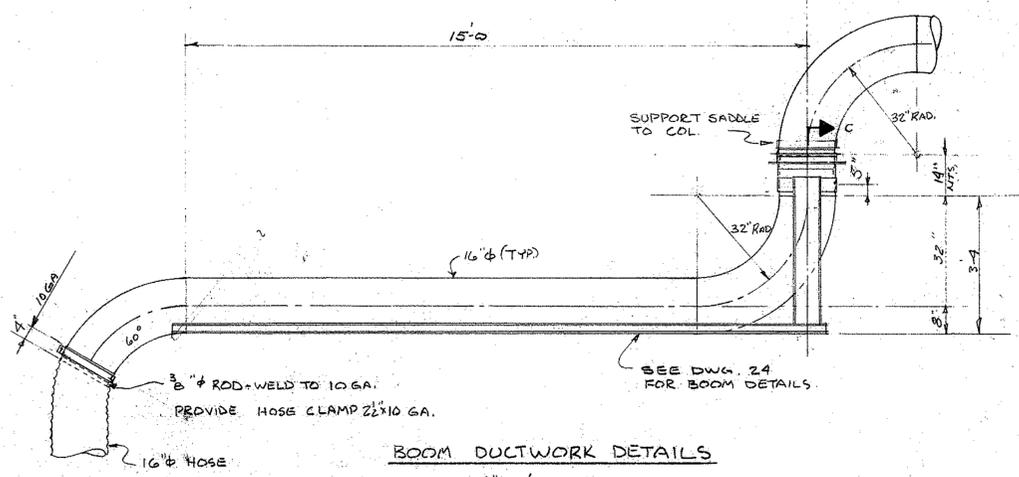
22" BLASTGATE (DOUBLE) COMBINED - ELECTRIC & MANUAL OPERATED 1" = 1'-0"



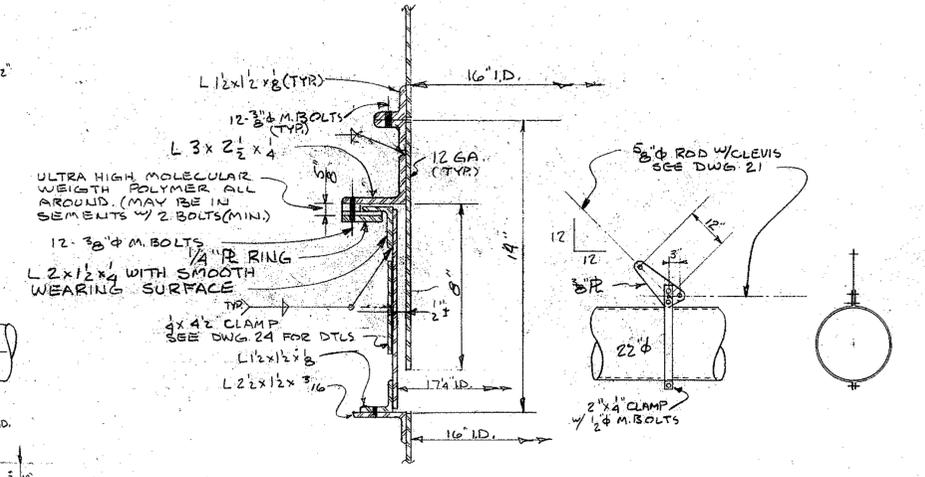
SECTION A-A 1" = 1'-0"



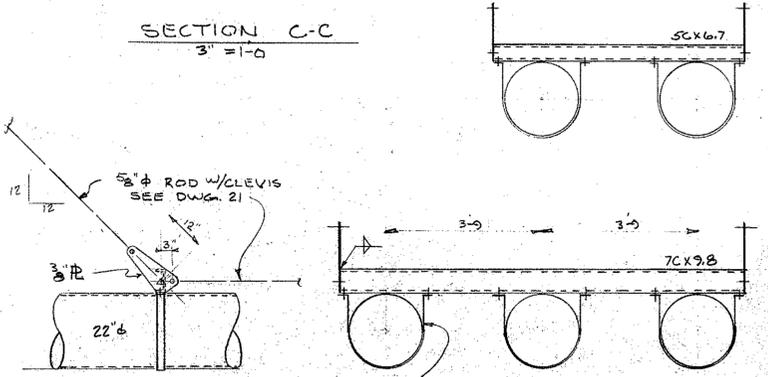
SECTION B-B 3" = 1'-0"



BOOM DUCTWORK DETAILS 1/2" = 1'-0"

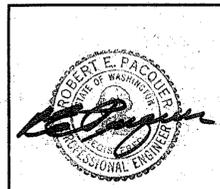


SECTION C-C 3" = 1'-0"



TYPICAL DUCT CLAMPS BETWEEN TOWERS 1/2" = 1'-0"

NOTE: DUCTWORK SHALL BE OF GALVANIZED STEEL, RIVETED & SOLDERED AND OF THE FOLLOWING GAUGES, EXCEPT WHERE NOTED OTHERWISE. 16" & 22" - 18 GA. 33" - 14 GA. ELBOWS & FITTINGS TO HAVE FLANGES PER DETAIL. ELBOWS & FITTINGS TO BE TWO GAUGES HEAVIER THAN NOTED FOR STRAIGHT DUCTWORK ABOVE. ALL DUCTWORK SHALL BE RIGIDLY SUPPORTED. THE 5" HIGH PRESSURE LINE SHALL BE SCHEDULE 40 SEAMLESS PIPE. THE BENDS SHALL HAVE A 5 FOOT RADIUS, BE REMOVABLE & HAVE MORRIS CLAMP TYPE COUPLINGS.



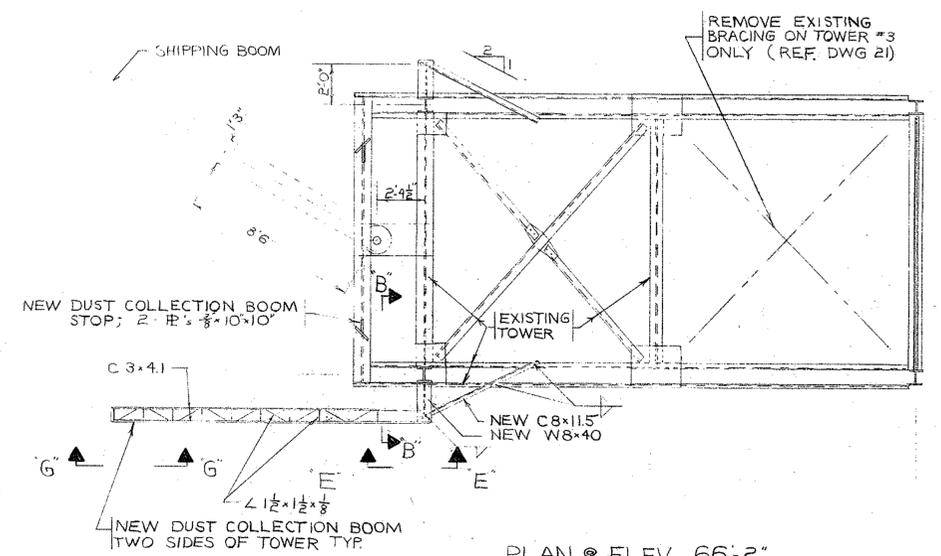
CONTINENTAL GRAIN CO. LONGVIEW, WASH.		JOB NO. 1423
1979 DUST SYSTEM REVISIONS		DRAWN JDH
DETAILS NEW DUST SYSTEM NO. 10 SHIP LOADING HATCH COLLECTION		CHECKED DATE 1/18/79
MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		SCALE AS NOTED
MB CONSULTING ENGINEERS		DWG. NO. 22

DRAWING NUMBER
B436

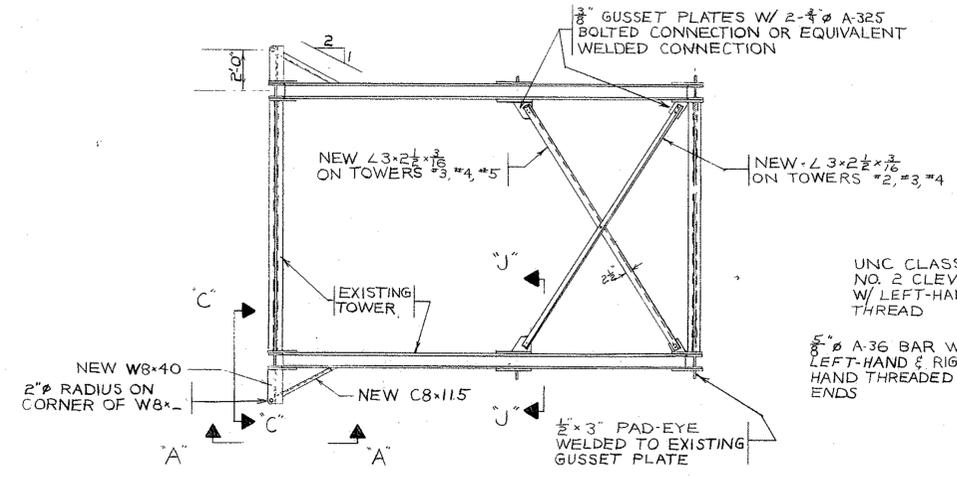
DRAWING NUMBER

DRAWING NUMBER

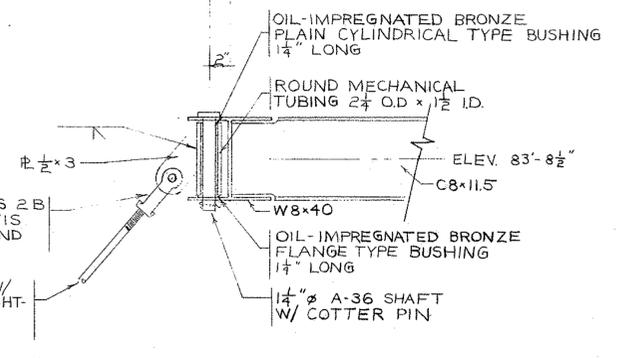
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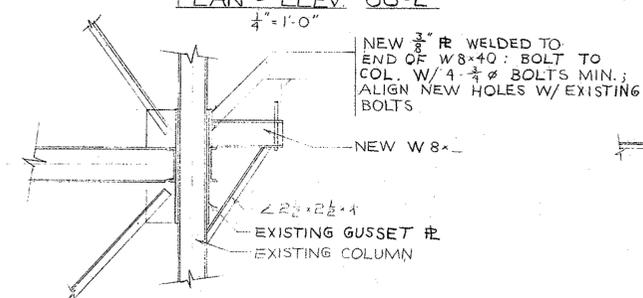
PLAN @ ELEV. 66'-2"
1/4" = 1'-0"



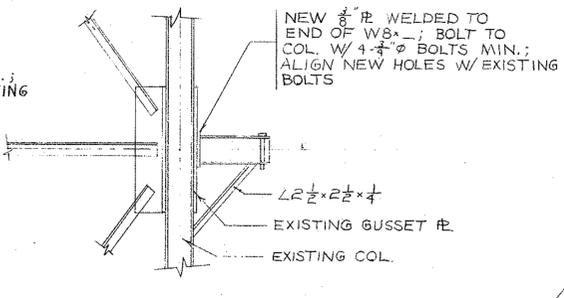
PLAN @ ELEV. 84'-0"
1/4" = 1'-0"



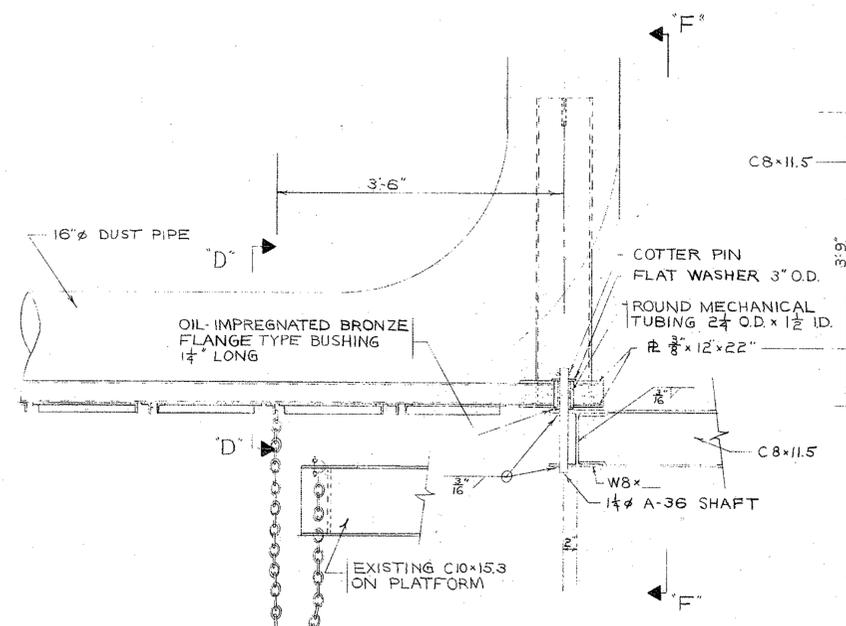
SECTION "A-A"
1/2" = 1'-0"



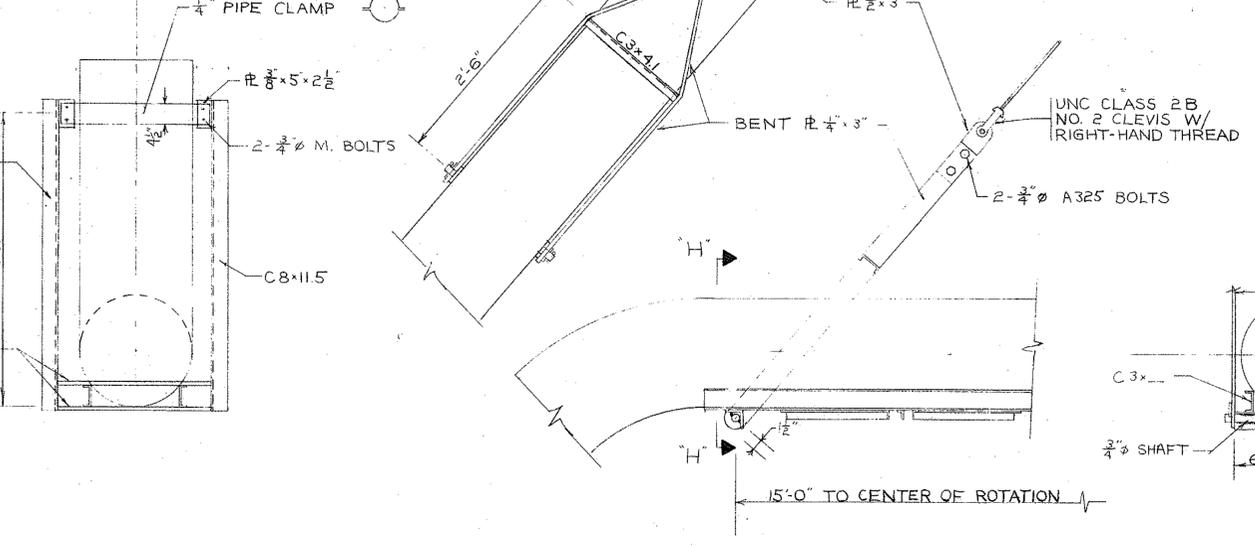
SECTION "B-B"
1/2" = 1'-0"



SECTION "C-C"
1/2" = 1'-0"

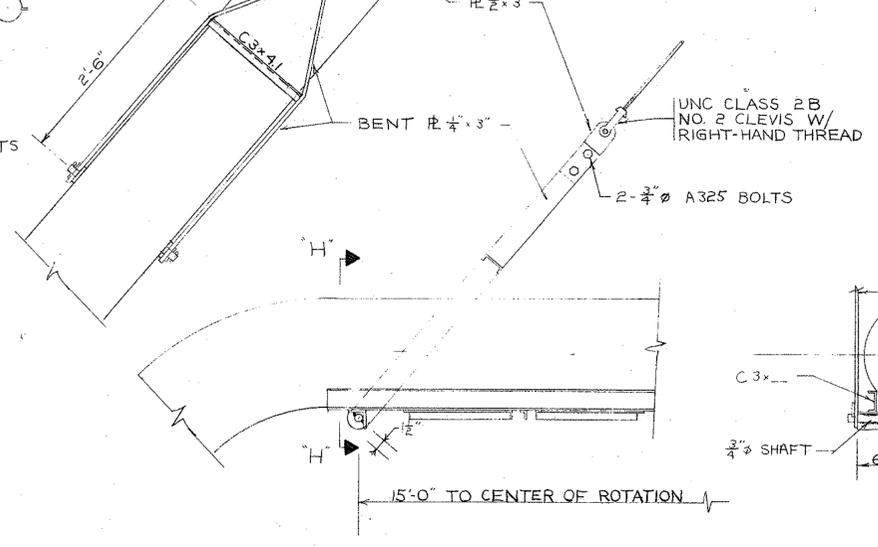


SECTION "D-D"
1" = 1'-0"

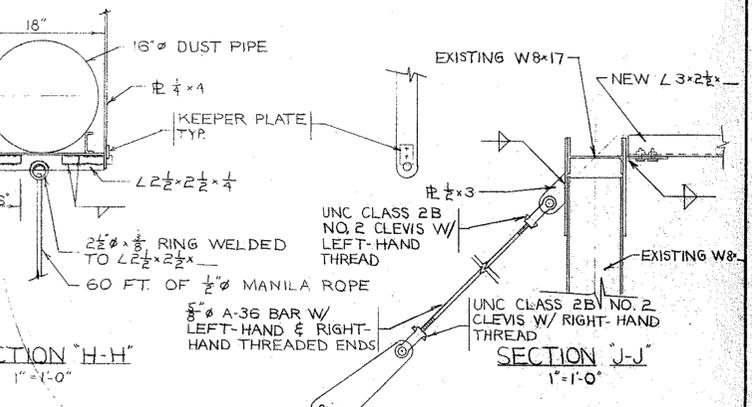


SECTION "E-E"
1" = 1'-0"

SECTION "F-F"
1" = 1'-0"



SECTION "G-G"
1" = 1'-0"



SECTION "H-H"
1" = 1'-0"

SECTION "J-J"
1" = 1'-0"

- NOTES:
1. ALL WELDS SHALL BE 3/16" CONTINUOUS FILLET WELDS UNLESS SPECIFIED OTHERWISE.
 2. SEE DWG. #23 FOR ADDITIONAL NOTES.
 3. SEE DWG. #19 FOR GENERAL ARRANGEMENT OF BOOMS.

1/2" CHAIN SUFFICIENTLY LONG TO PERMIT THE BOOM TO SWING PARALLEL TO DOCK (MIN. WORKING LOAD 5000#)



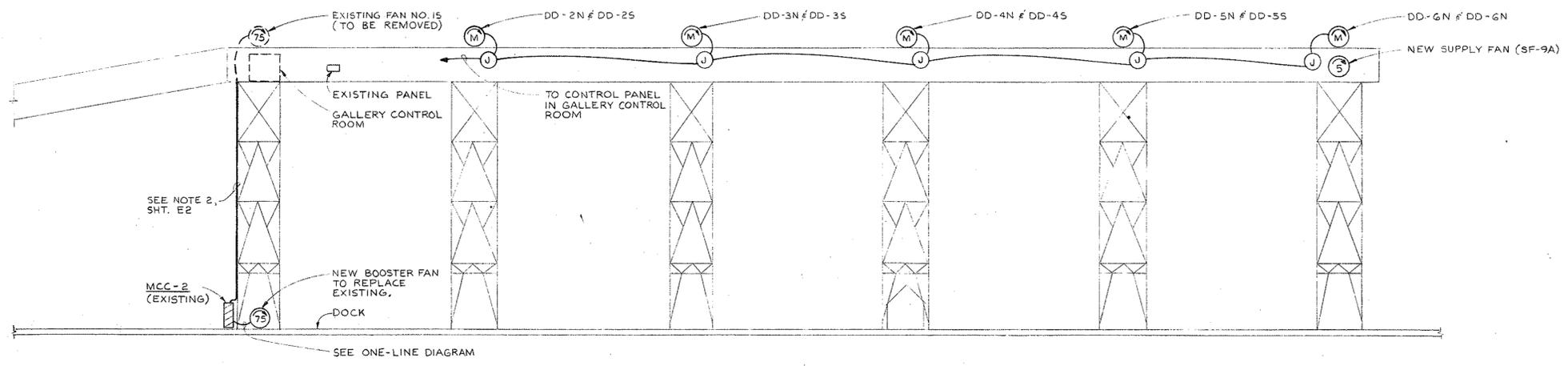
CONTINENTAL GRAIN LONGVIEW, WA. 1979 DUST SYSTEM REVISIONS		JOB NO. 1423
DUST COLLECTION BOOM DETAILS; SHIP LOADING HATCH COLLECTION		DRAWN TRACED
MARSHALL, BARR & PACQUER 915 LLOYD BUILDING SEATTLE, WASHINGTON 98101		CHECKED DATE DN 4/30/77
MB CONSULTING ENGINEERS		SCALE AS NOTED
DWG. NO. ISSUE 24		

DRAWING NUMBER
B437

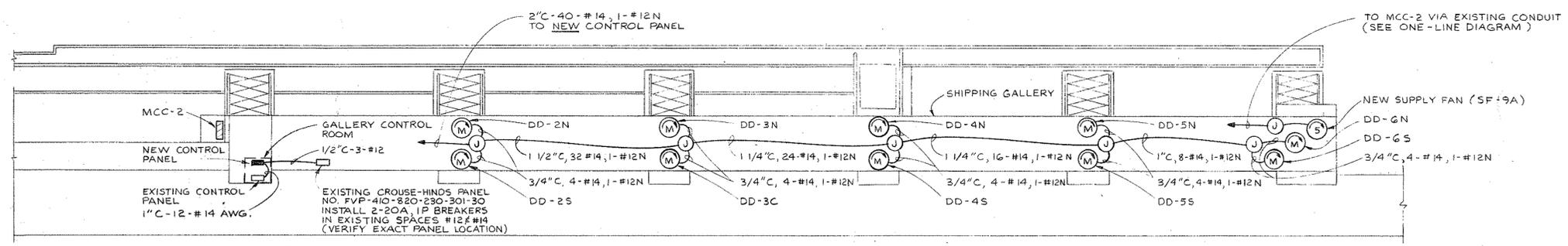
DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER



ELEVATION AT SHIPPING GALLERY AND DOCK
SCALE: 1" = 20'-0"



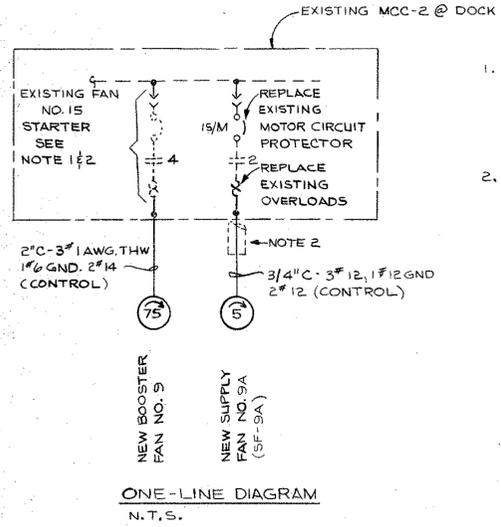
PLAN AT SHIPPING GALLERY AND DOCK
SCALE: 1" = 20'-0"



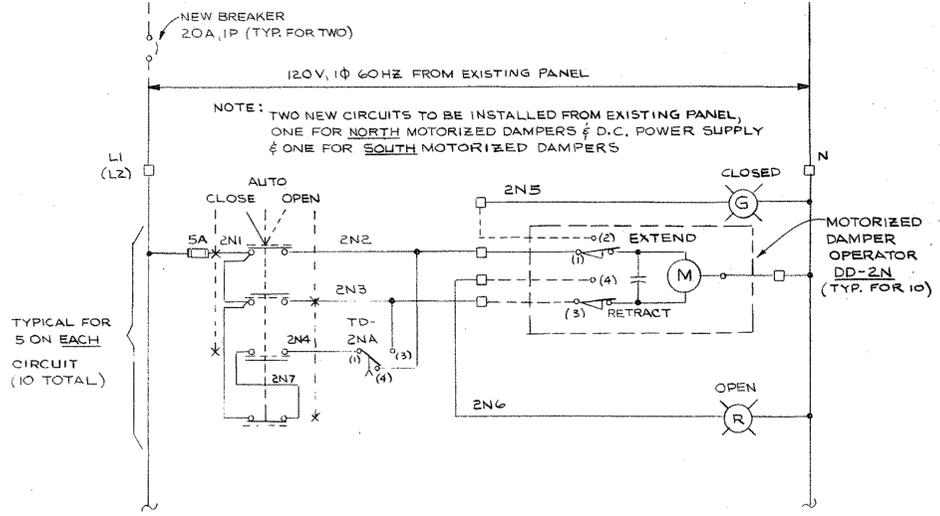
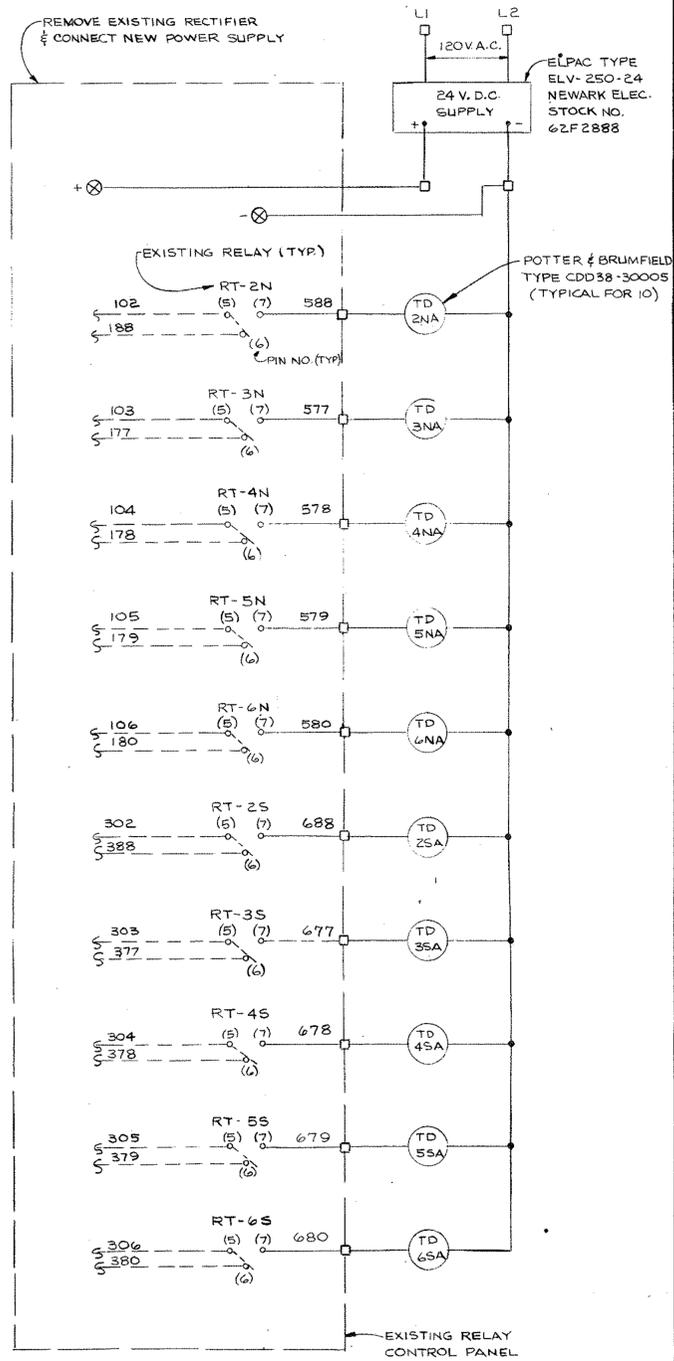
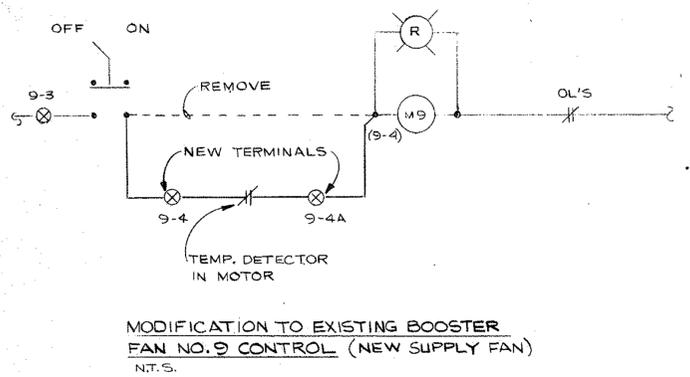
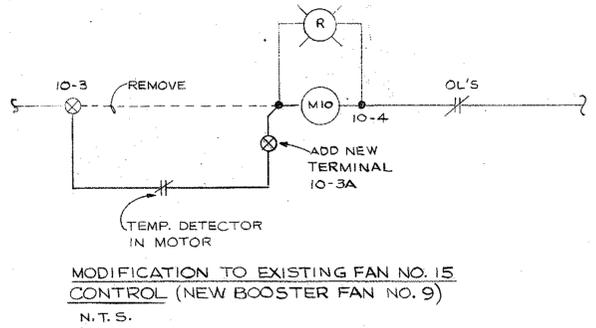
GENERAL NOTES

1. WORK SHALL CONFORM TO REQUIREMENTS OF 1978 NEC.
2. ALL WORK IN AND AROUND THE SHIPPING GALLERY SHALL BE CONSIDERED AS IN A CLASS II, GROUP G, DIV. 1, HAZARDOUS LOCATION AND SHALL COMPLY WITH ART. 502 OF THE NEC. WORK IN GALLERY CONTROL ROOM IS NON-HAZARDOUS DUE TO POSITIVE VENTILATION SYSTEM.
3. VERIFY LOCATIONS OF ALL EQUIPMENT WITH MECHANICAL CONTRACTOR.

 R&W ENGINEERING <small>SKYLINE BUILDING, SUITE 104 2011 SW 10TH AVENUE PORTLAND, OREGON 97221</small>	NO.	DATE	REVISION	BY
	PROJECT NO.	7.12	CONTINENTAL GRAIN COMPANY Longview, Washington	DES MCW DRN BVM CHK MCW
	DATE	JULY, 1979	1979 DUST SYSTEM NO. 9 REVISION	SCALE
	DOCK PLAN AND ELEVATION			DRAWING NO. E1 of 4



- NOTES:
- EXISTING FAN NO. 15 (75 HP) IS BEING REMOVED FROM TOP OF SHIPPING GALLERY. REUSE EXISTING STARTER FOR NEW BOOSTER FAN.
 - REMOVE WIRE FROM EXISTING CONDUIT TO FAN NO. 15. REUSE CONDUIT FROM MOTOR CONTROL CENTER NO. 2 AT DOCK TO SHIPPING GALLERY FOR CONNECTION TO NEW SUPPLY FAN NO. 9A.



SCHEDULE

DUST DAMPER NO.	TD. NO.	WIRE NO.
DD-2N	TD-2NA	2N1 2N2 2N3 2N4 2N5 2N6 2N7
DD-3N	TD-3NA	3N1 3N2 3N3 3N4 3N5 3N6 3N7
DD-4N	TD-4NA	4N1 4N2 4N3 4N4 4N5 4N6 4N7
DD-5N	TD-5NA	5N1 5N2 5N3 5N4 5N5 5N6 5N7
DD-6N	TD-6NA	6N1 6N2 6N3 6N4 6N5 6N6 6N7
DD-2S	TD-2SA	2S1 2S2 2S3 2S4 2S5 2S6 2S7
DD-3S	TD-3SA	3S1 3S2 3S3 3S4 3S5 3S6 3S7
DD-4S	TD-4SA	4S1 4S2 4S3 4S4 4S5 4S6 4S7
DD-5S	TD-5SA	5S1 5S2 5S3 5S4 5S5 5S6 5S7
DD-6S	TD-6SA	6S1 6S2 6S3 6S4 6S5 6S6 6S7

MOTORIZED DUST DAMPER CONTROL
N.T.S.

<p>R&W ENGINEERING 501 W. BULLING SLATE RD PORTLAND, OREGON 97221</p>	NO.	DATE	REVISION	BY
	PROJECT NO. 7.12	DATE 7/79	CONTINENTAL GRAIN COMPANY Longview, Washington 1979 DUST SYSTEM NO. 9 REVISION ONE-LINE DIAGRAM CONTROL DIAGRAMS	DES. MCW DRN. FJW CHK. MCW SCALE NONE DRAWING NO. E2 of 4

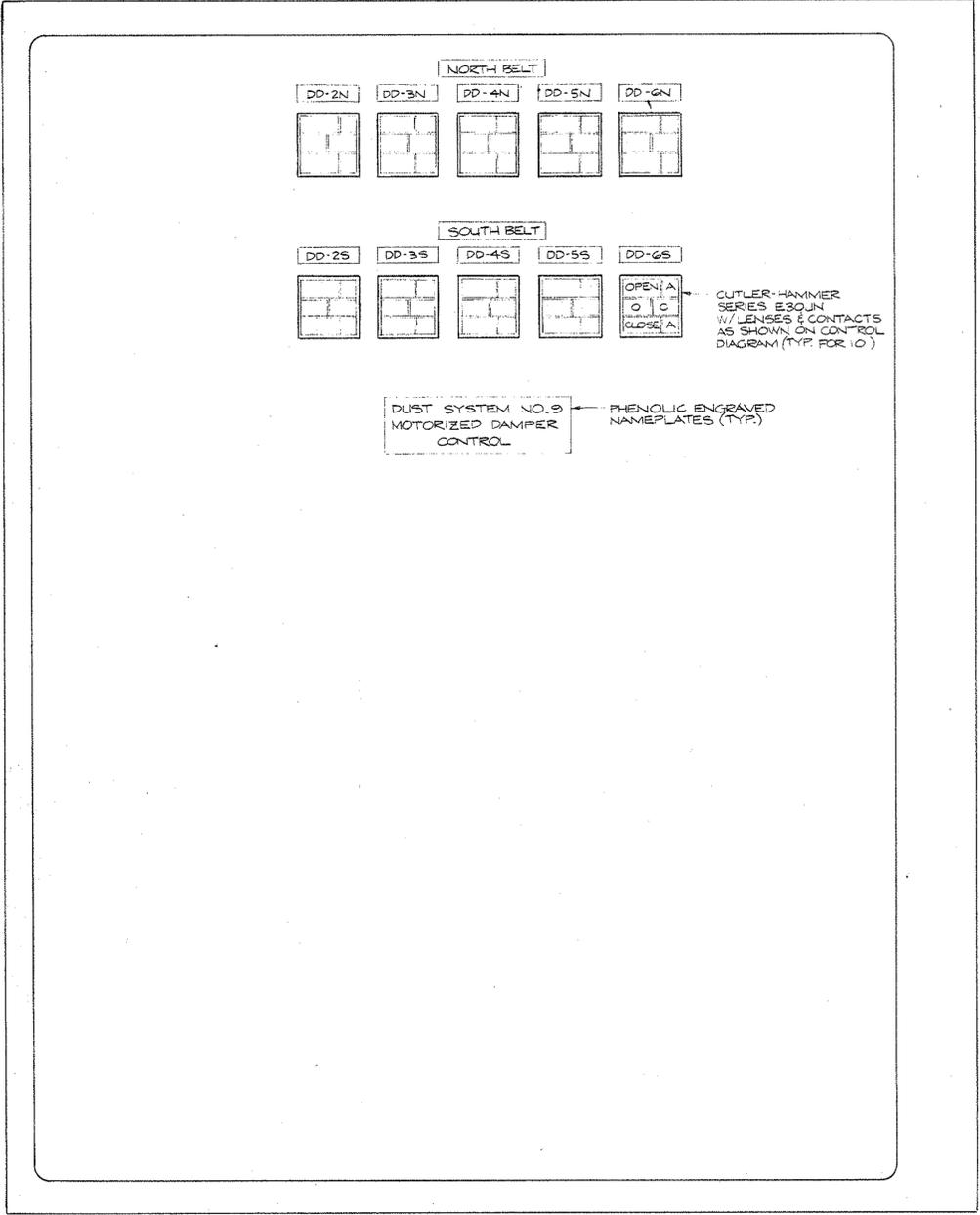
DRAWING NUMBER
6439

DRAWING NUMBER

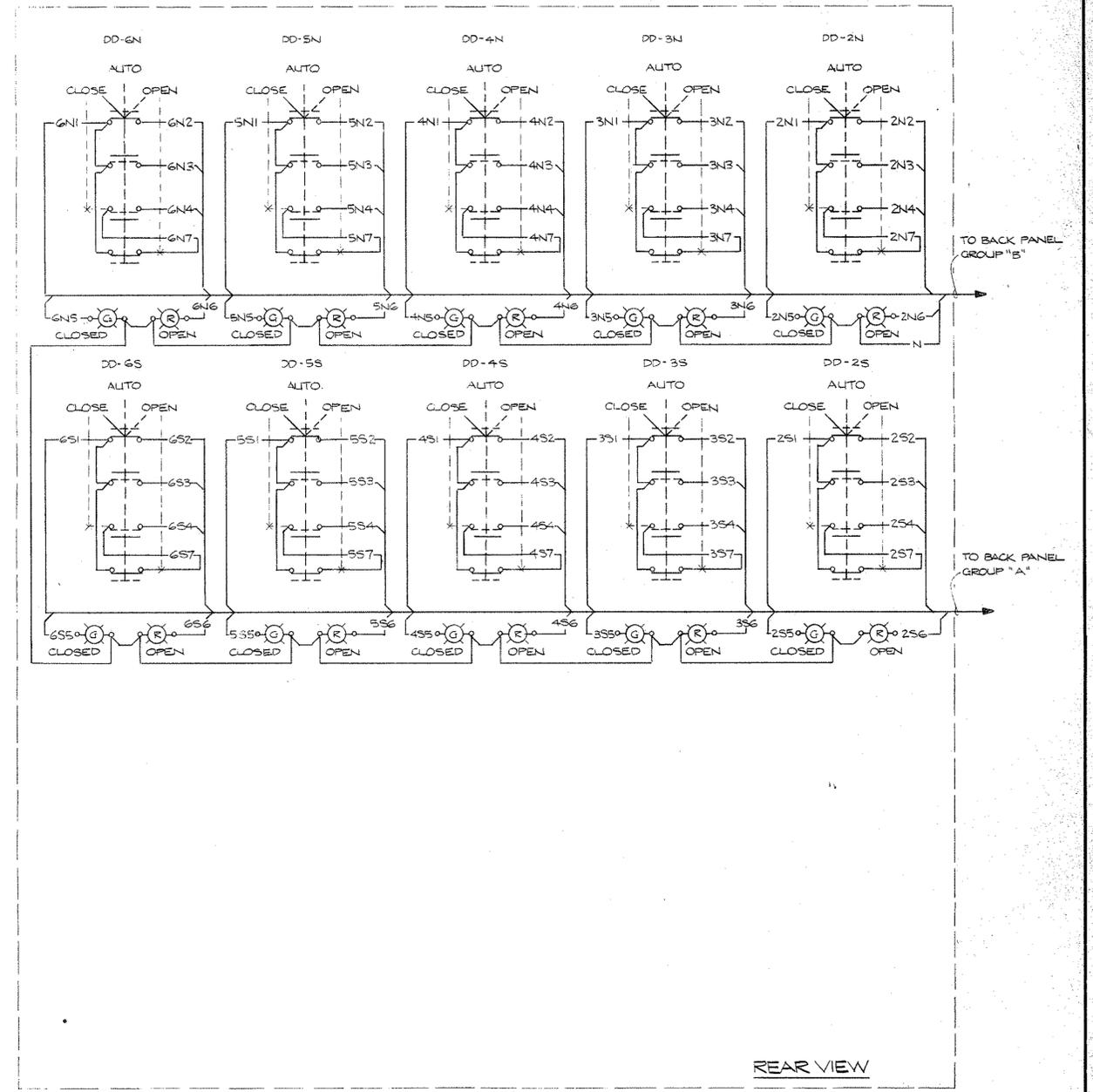
DRAWING NUMBER

DRAWING NUMBER

HOFFMAN (BULLETIN A-25)
CAT. NO. A-30525082P
W/A 30P24 BACK PANEL &
SQ. D. CO. TYPE RC-1 DISCONNECT.

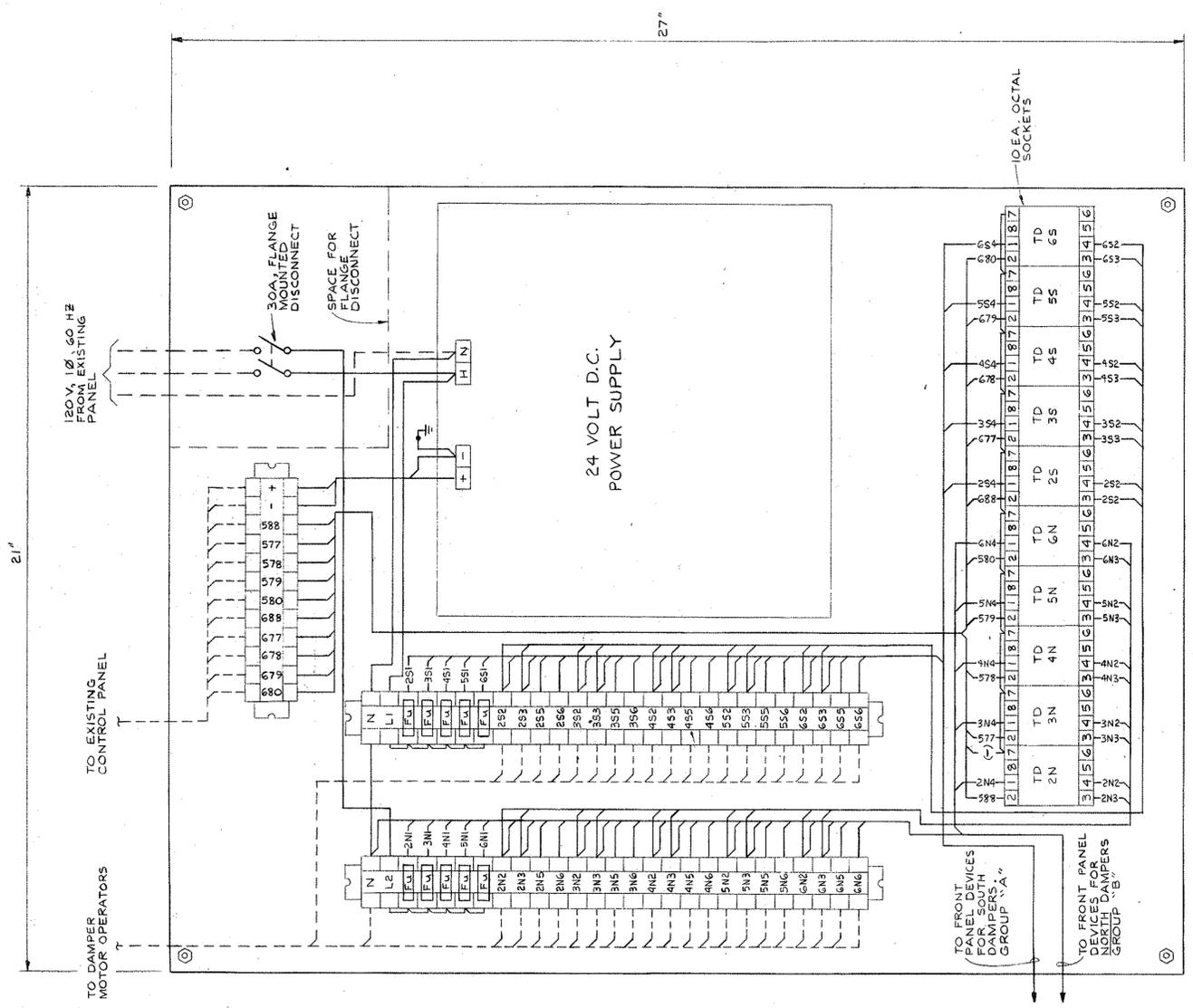


SYSTEM NO.9 DAMPER CONTROL PANEL
FRONT PANEL LAYOUT
HALF SCALE



SYSTEM NO.9 DAMPER CONTROL PANEL
FRONT PANEL WIRING DIAGRAM
N.T.S.

NO.	DATE	REVISION	BY
 R&W ENGINEERING <small>SKYLARK BUILDING, SUITE 104 2041 SW 5TH AVENUE PORTLAND, OREGON 97221</small>	PROJECT NO. 7.12	CONTINENTAL GRAIN COMPANY Longview, Washington 1979 DUST SYSTEM NO.9 REVISION	DES. MCW DRN. SMYB CHK. MCW SCALE AS SHOWN DRAWING NO.
	DATE JULY 1979	DAMPER CONTROL PANEL FRONT PANEL LAYOUT & WIRING DIAGRAM	E3 of 4



SYSTEM NO. 9 DAMPER CONTROL PANEL
BACK PANEL LAYOUT & WIRING DIAGRAM
HALF SCALE

 <i>Mark C. Winke</i>	NO.	DATE	REVISION	BY
				DES MCW
				DRN BVM
				CHK MCW
			SCALE HALF SCALE	
			DRAWING NO.	
PROJECT NO. 7.12	1979 DUST SYSTEM NO. 9 REVISION			E4 of 4
DATE JULY 1979	DAMPER CONTROL			