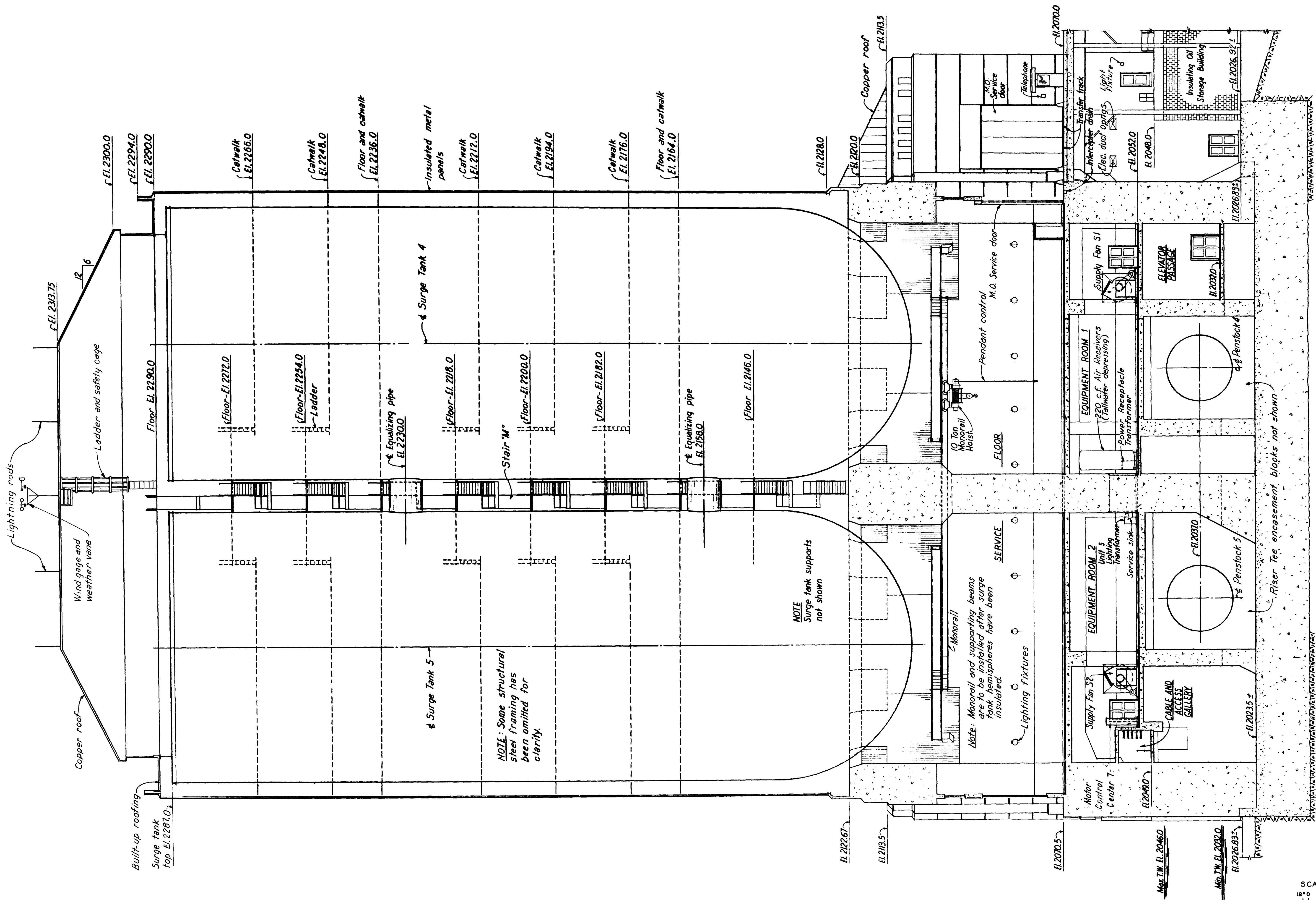


1. Work this drawing with drawings (84E271) thru (84E277) inclusive.
2. General notes (84E272)

[illegible]

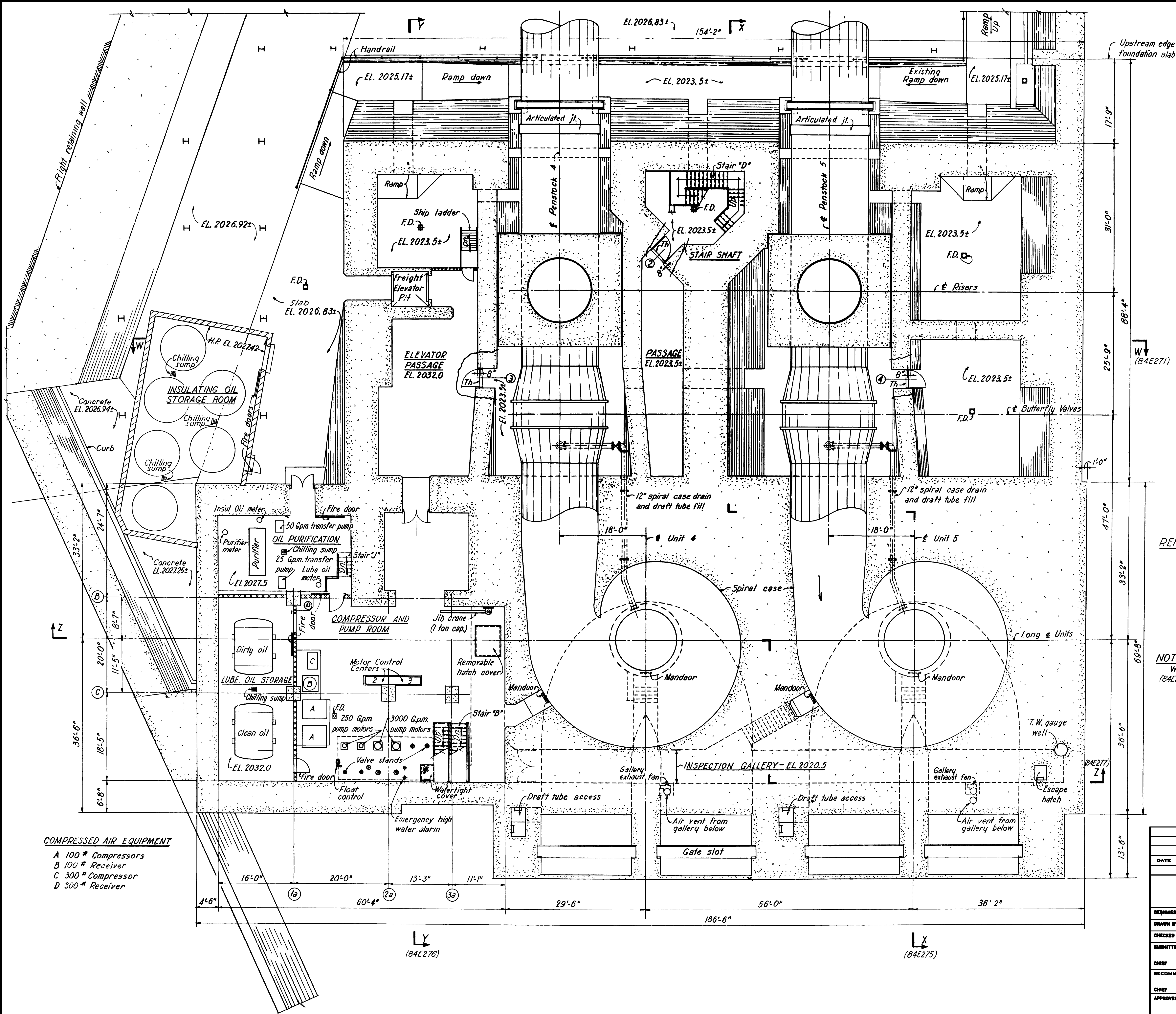


NOTES
Work this drawing with drawings (84E272) and (84E272) thru (84E277) inclusive.
General notes, drawing (84E272)



THIS PLAN ACCOMPANIES CONTRACT NO. MODIFICATION NO.

REVISIONS		DATE	DESCRIPTION	MADE	APPROD
U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA					
DESIGNED BY: MISSOURI RIVER DRAWN BY: FORT PECK LAKE, MONTANA CHECKED BY: SUBMITTED BY: CHIEF SECTION RECOMMENDED: POWER PLANT 2 CHIEF BRANCH EQUIPMENT ARRANGEMENT APPROVED: LONGITUDINAL SECTION CHIEF ENGINEERING DIVISION SURGE TANK STRUCTURE DATE: MAY 1974 SCALE: AS SHOWN SPEC. NO. DRAWING NUMBER MFP-OPN84E27I SHEET					



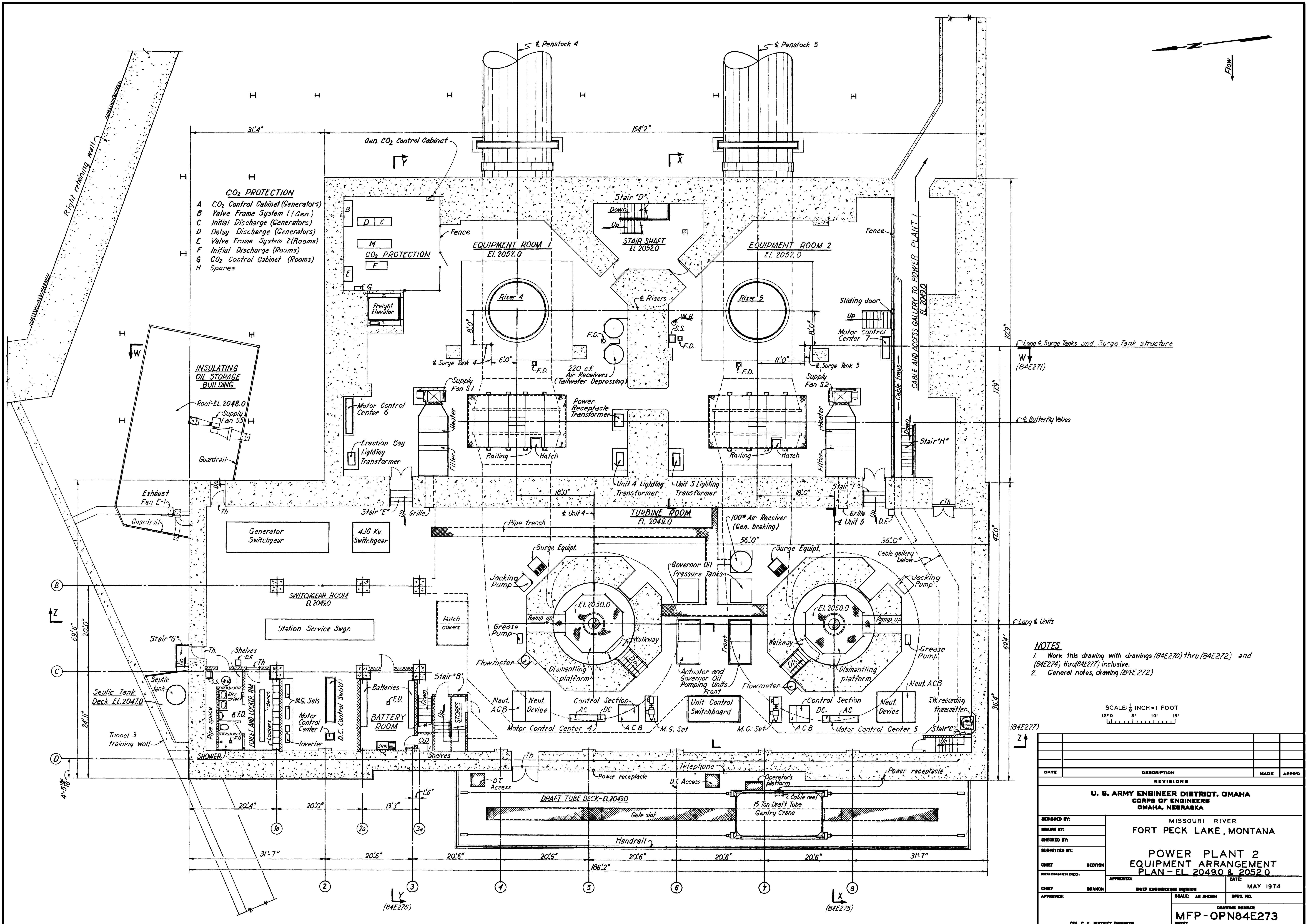
REFERENCE DWGS
Door Schedule (84E242)

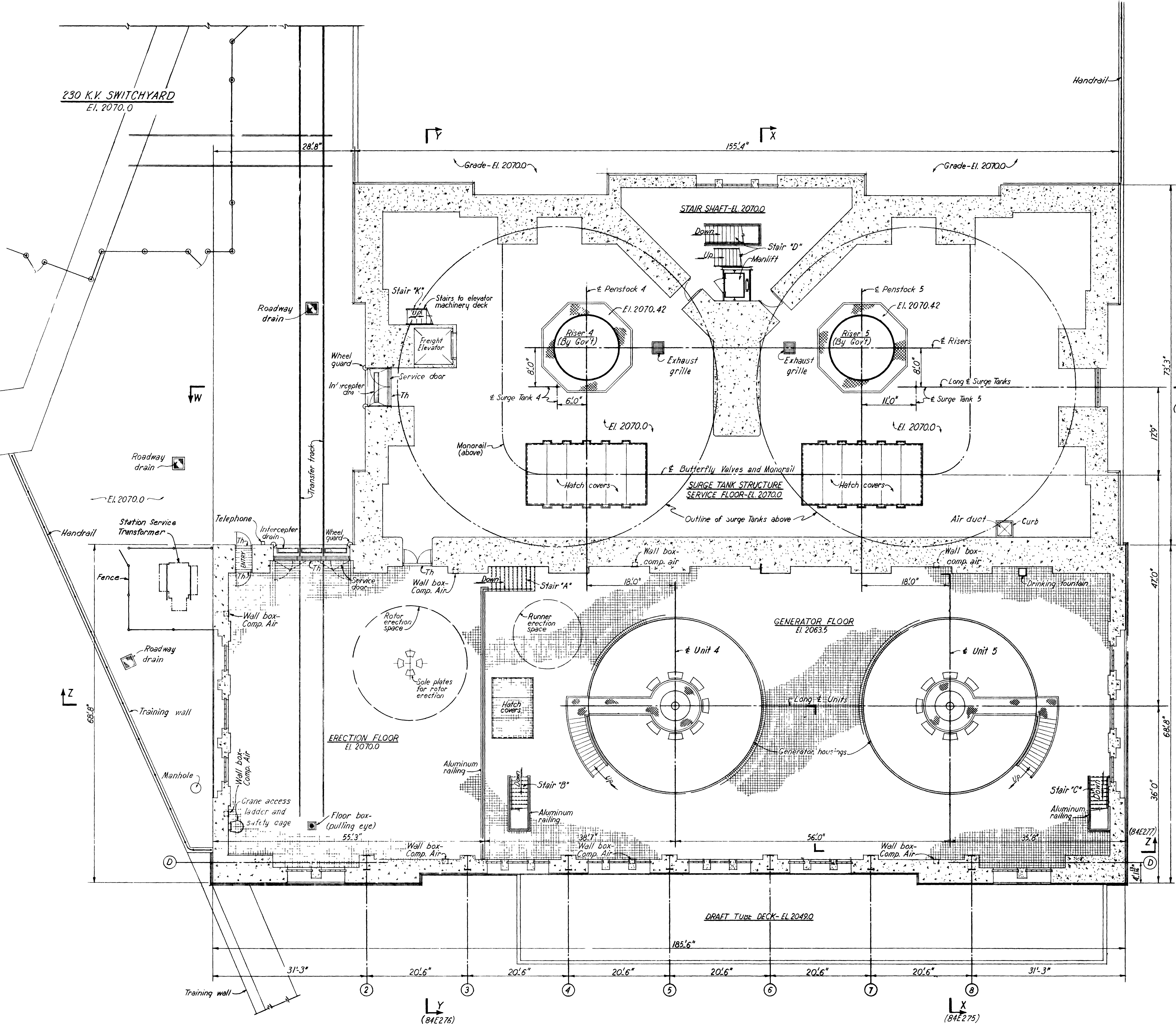
NOTES
Work this drawing with drawings (84E270)/(84E271) and (84E273) thru (84E277) inclusive.

SCALE: 1/4" = 1' FOOT
12" 0 5' 10' 15'

COMPRESSED AIR EQUIPMENT
A 100 # Compressors
B 100 # Receiver
C 300 # Compressor
D 300 # Receiver

DATE	DESCRIPTION	MADE	APPROD
REVISIONS			
U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA			
DESIGNED BY:	MISSOURI RIVER FORT PECK LAKE, MONTANA		
DRAWN BY:	POWER PLANT 2 EQUIPMENT ARRANGEMENT PLAN - EL. 2032.0		
CHECKED BY:	SECTION	APPROVED:	DATE: MAY 1974
SUBMITTED BY:	CHIEF	CHIEF ENGINEERING DIVISION	
RECOMMENDED:	BRANCH	SCALE: AS SHOWN	SPEC. NO.
APPROVED:	DRAWING NUMBER MFP-OPN84E272		SHEET
COL. G. L. DISTRICT ENGINEER			

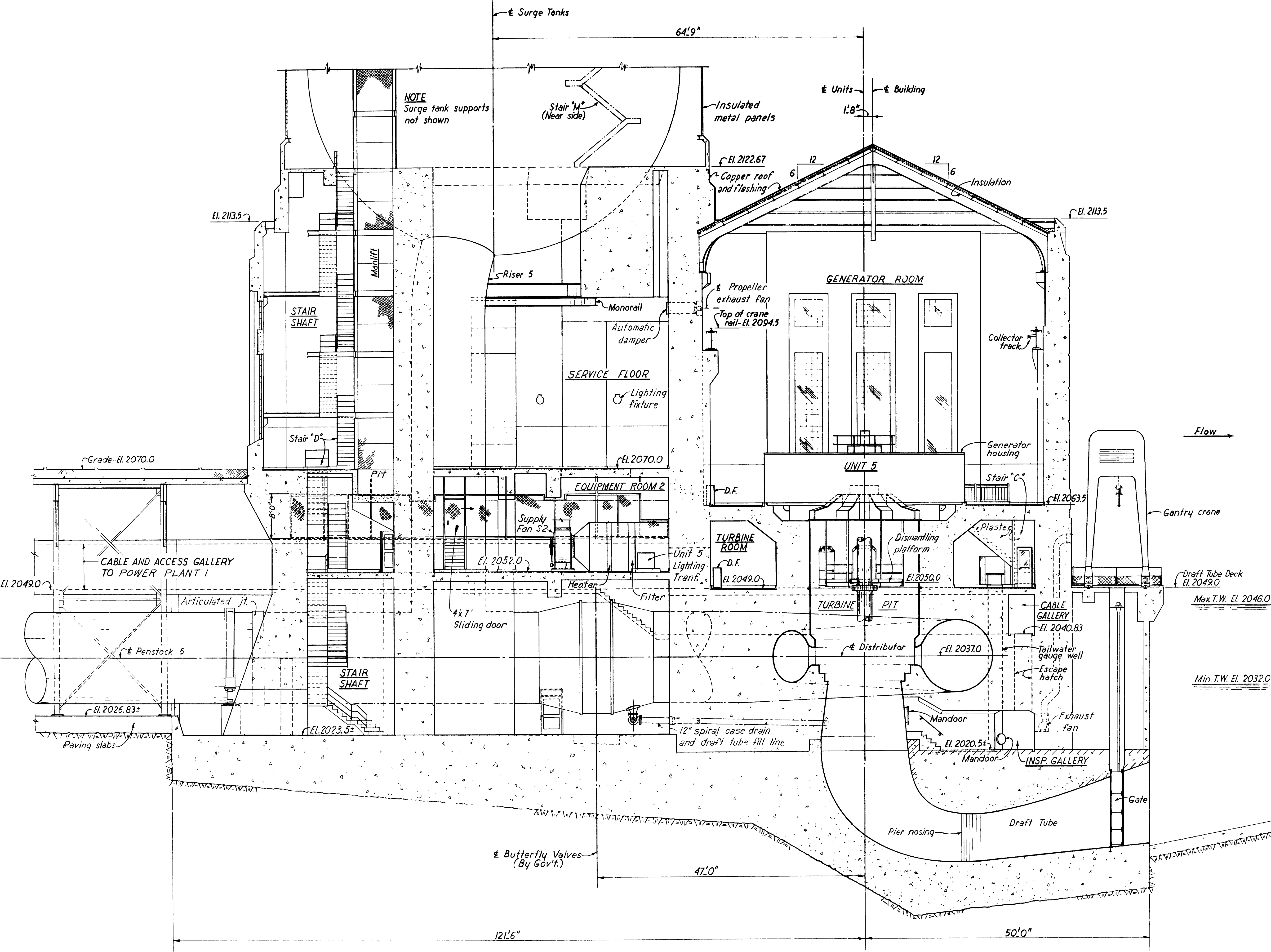




NOTES
Work this drawing with drawings (84E270) thru (84E273) and (84E275) thru (84E277) inclusive.
General notes, drawing (84E272)

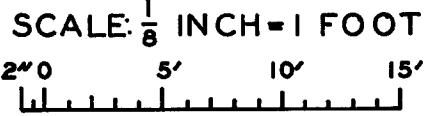
SCALE: 1/8" = 1' FOOT
12" 0 5' 10' 15'

DATE		DESCRIPTION		MADE	APPROD
REVISIONS					
U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA					
MISSOURI RIVER FORT PECK LAKE, MONTANA					
POWER PLANT 2 EQUIPMENT ARRANGEMENT PLAN - EL. 2063.5 & 2070.0					
DESIGNED BY:	SECTION	APPROVED:	CHIEF ENGINEERING DIVISION	DATE:	MAY 1974
DRAWN BY:	SECTION	APPROVED:	CHIEF ENGINEERING DIVISION	SCALE:	AS SHOWN
CHECKED BY:	SECTION	APPROVED:	CHIEF ENGINEERING DIVISION	SPEC. NO.	
SUBMITTED BY:	SECTION	APPROVED:	CHIEF ENGINEERING DIVISION	DRAWING NUMBER	MFP-OPN84E274
RECOMMENDED:	SECTION	APPROVED:	CHIEF ENGINEERING DIVISION	SHEET	
CHIEF	BRANCH	APPROVED:	CHIEF ENGINEERING DIVISION		
COL. G. E. DISTRICT ENGINEER					



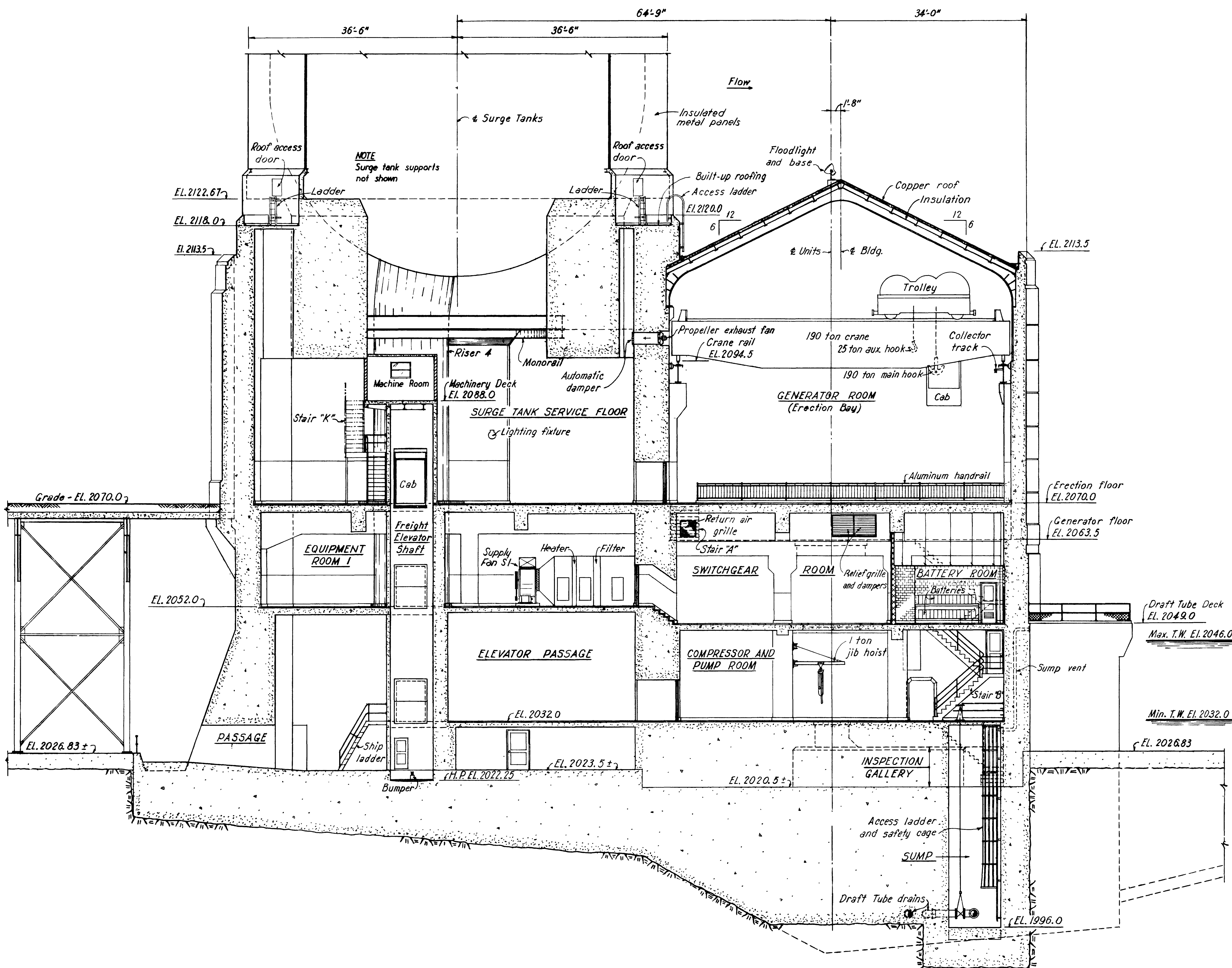
SECTION X-X

- NOTES
- 1. Work this drawing with drawings (84E270) thru (84E274) inclusive and (84E276) and (84E277)
 - 2. General notes, drawing (84E272)



THIS PLAN ACCOMPANIES CONTRACT NO. MODIFICATION NO.

DATE		REVISION		MADE	APPRO
REVISIONS					
U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA					
DESIGNED BY:		MISSOURI RIVER FORT PECK LAKE, MONTANA			
DRAWN BY:		POWER PLANT 2 EQUIPMENT ARRANGEMENT TRANSVERSE SECTION - GENERATOR BAY			
CHECKED BY:		SECTION		DATE: MAY 1974	
SUBMITTED BY:		RECOMMENDED:		APPROVED:	
CHIEF	BRANCH	CHIEF ENGINEERING DIVISION		SPEC. NO.	
APPROVED:		SCALE: AS SHOWN		DRAWING NUMBER MFP - OPN84E275 SHEET	
COL. E. E. DISTRICT ENGINEER					



SECTION Y-Y

- NOTES**
1. Work this drawing with drawings (84E270) thru (84E275) inclusive and (84E277).
 2. General notes, drawing (84E272)

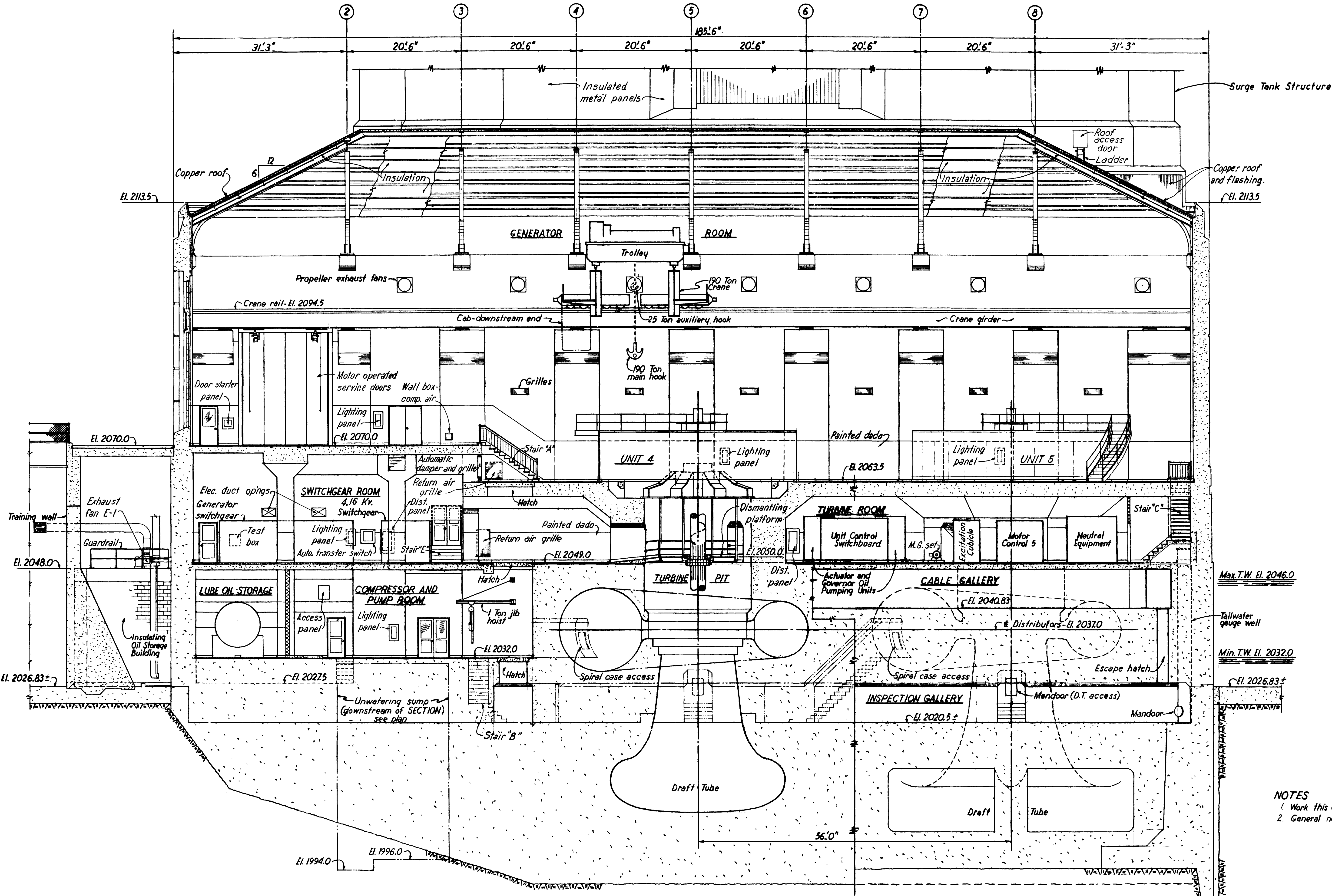
SCALE: 1/8" = 1' 0"



THIS PLAN ACCOMPANIES CONTRACT NO. MODIFICATION NO.

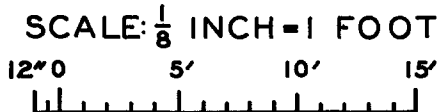
REVISIONS	
DATE	DESCRIPTION

U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA	
MISSOURI RIVER FORT PECK LAKE, MONTANA	
POWER PLANT 2 EQUIPMENT ARRANGEMENT TRANSVERSE SECTION-ERECTION BAY	
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
SUBMITTED BY:	
CHIEF	SECTION
RECOMMENDED:	
CHIEF	BRANCH
APPROVED:	
SCALE: AS SHOWN	
SPEC. NO.	
DRAWING NUMBER	
MFP - OPN84E276	
COL. C. E. DISTRICT ENGINEER	



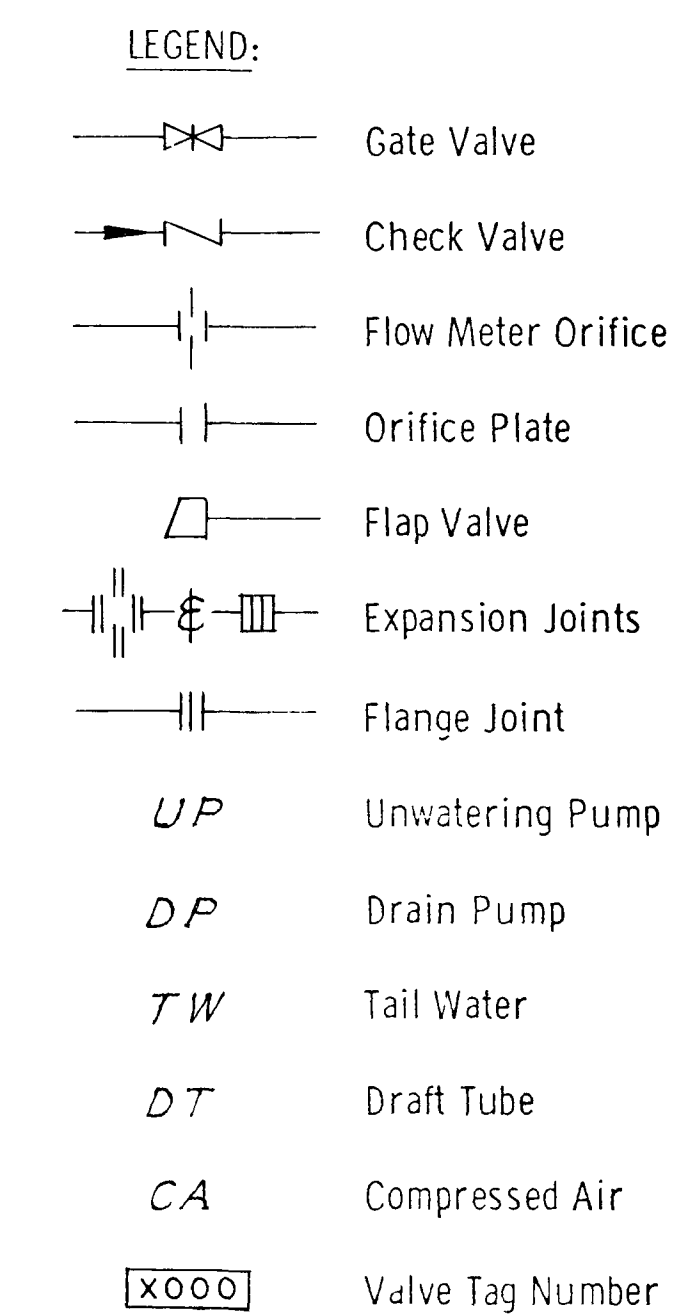
SECTION Z-Z

- NOTES
1. Work this drawing with drawings (B4E270) thru (B4E276) inclusive.
 2. General notes, drawing (B4E272)

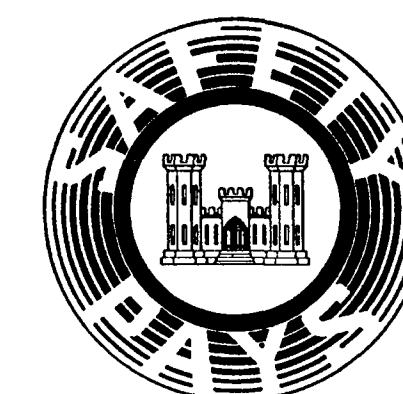


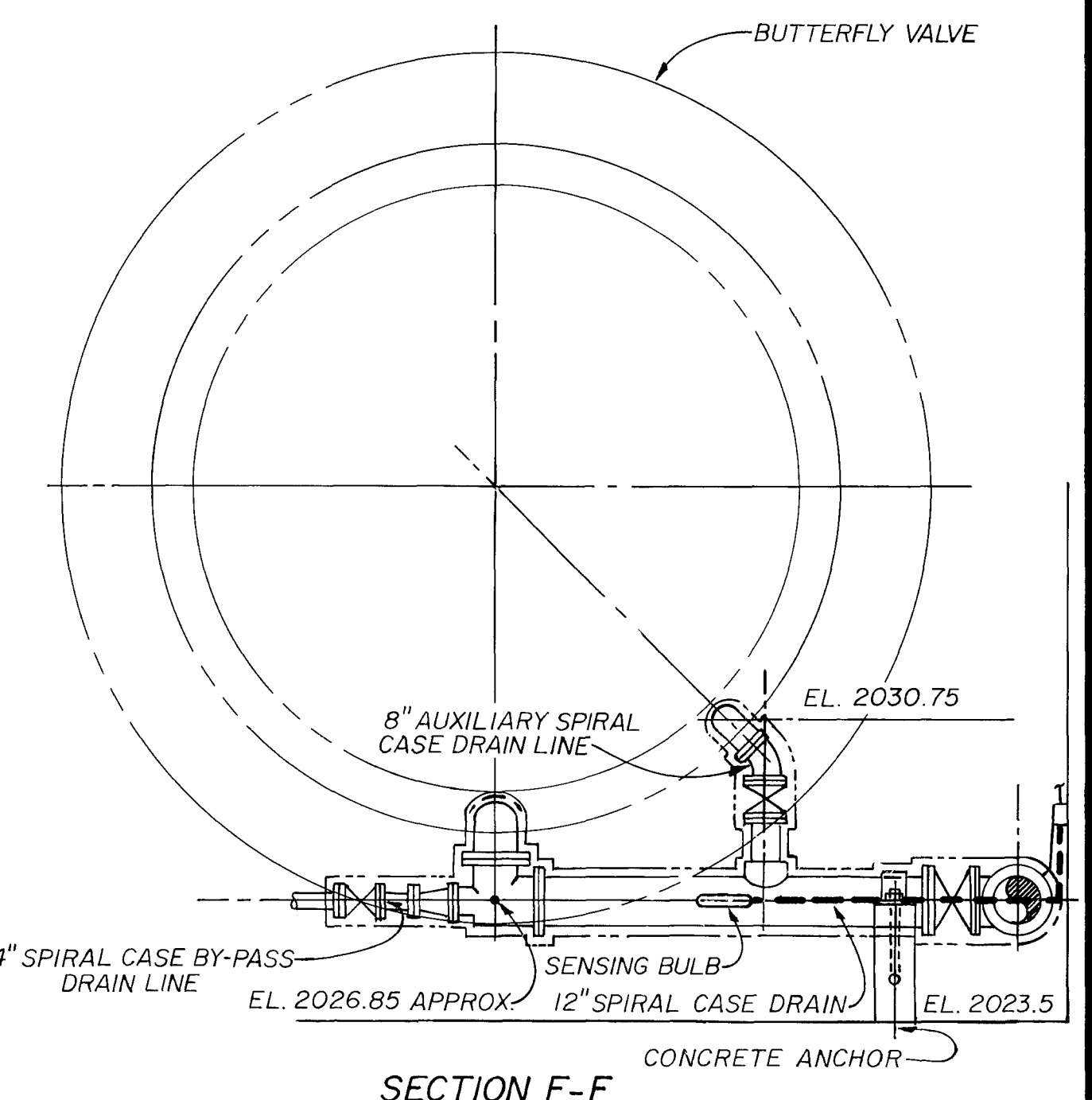
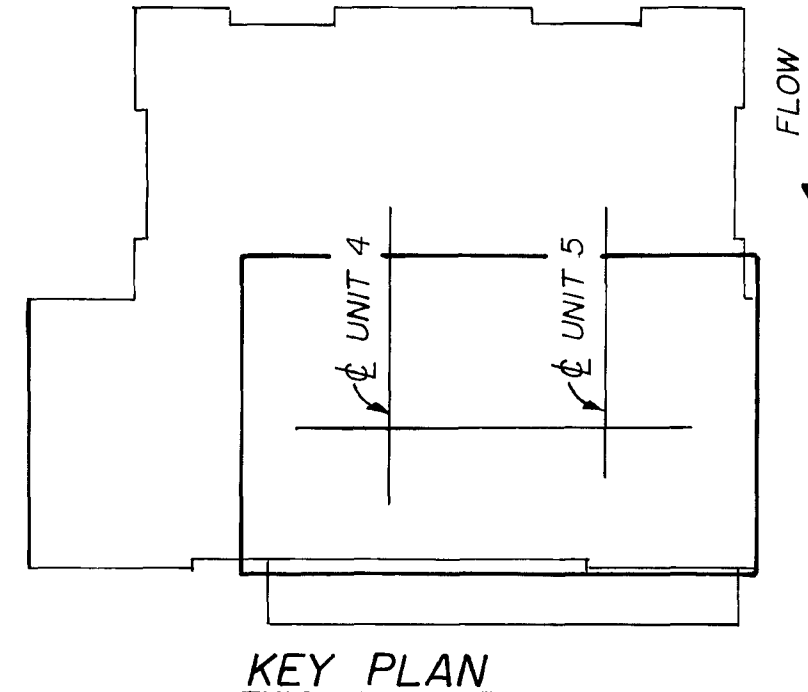
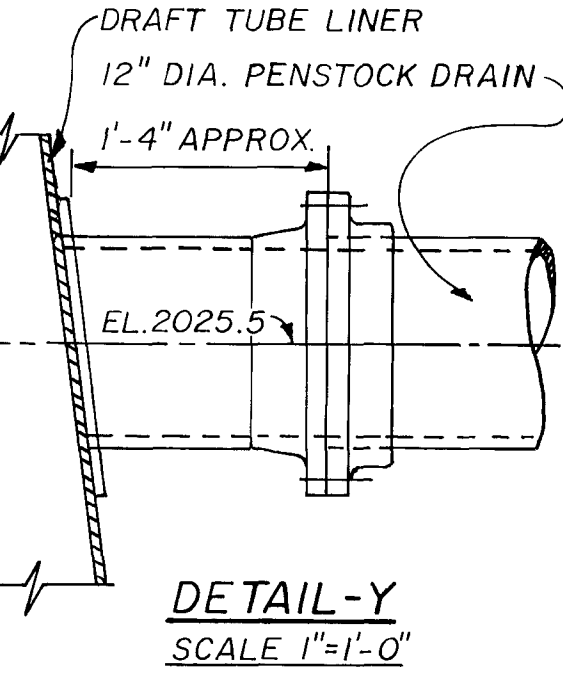
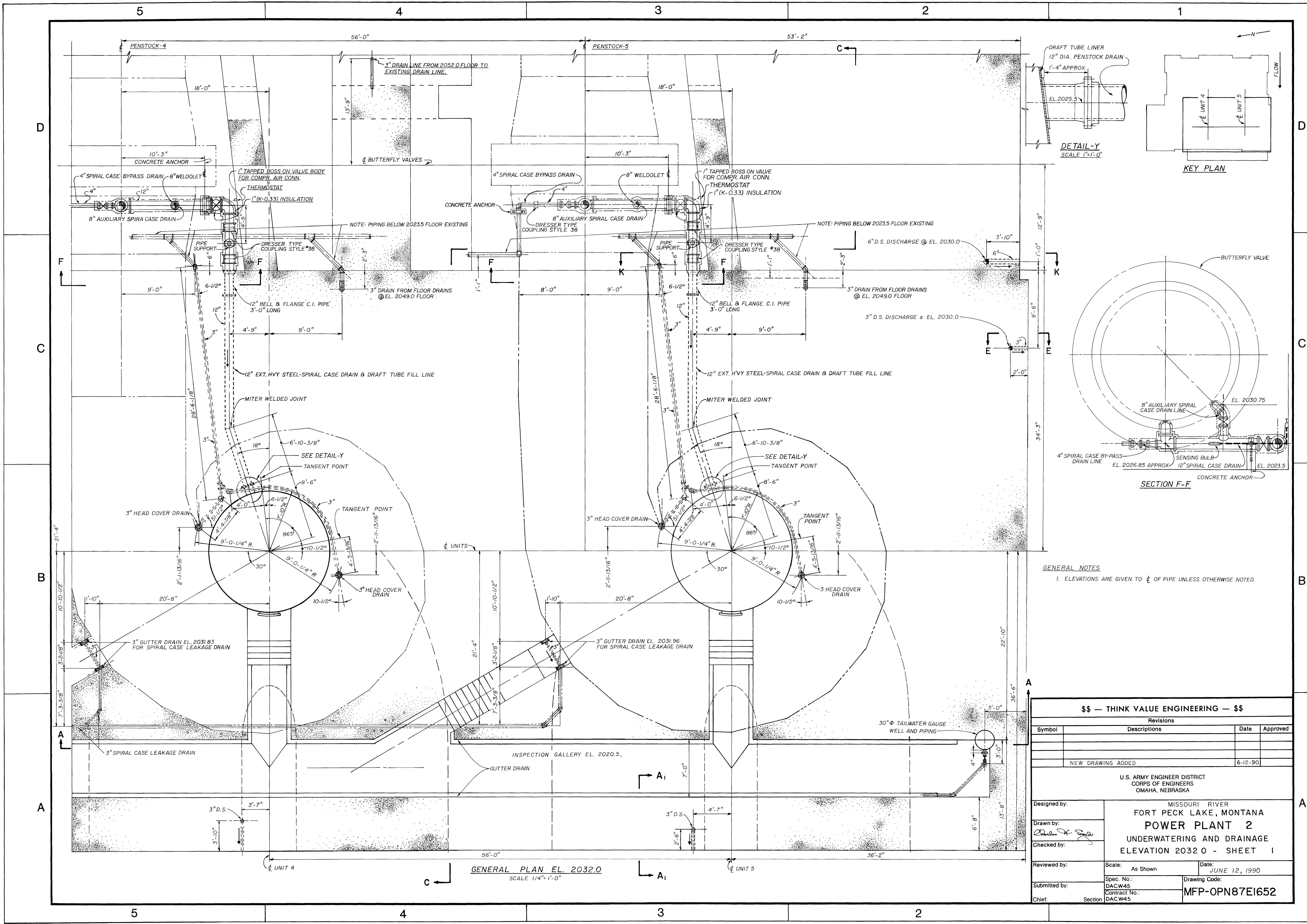
THIS PLAN ACCOMPANIES CONTRACT NO. MODIFICATION NO.

DATE		DESCRIPTION		MADE	APPROD
REVISIONS					
U. S. ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA					
DESIGNED BY:		MISSOURI RIVER FORT PECK LAKE, MONTANA			
DRAWN BY:		POWER PLANT 2 LONGITUDINAL SECTION GENERATOR AND ERECTION BAYS			
CHECKED BY:		APPROVED:		DATE: MAY 1974	
SUBMITTED BY:		CHIEF ENGINEERS DIVISION		SCALE: AS SHOWN	
CHIEF		BRANCH		SPEC. NO.	
APPROVED:		DRAWING NUMBER		MFP-OPN84E277	
COL. G. L. DISTRICT ENGINEER		MEST			



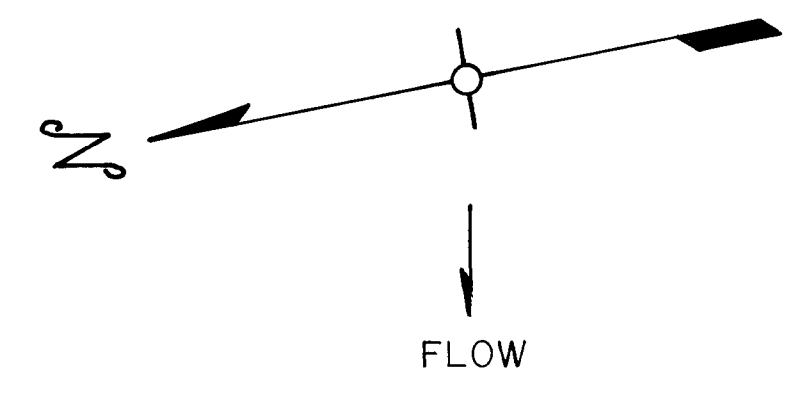
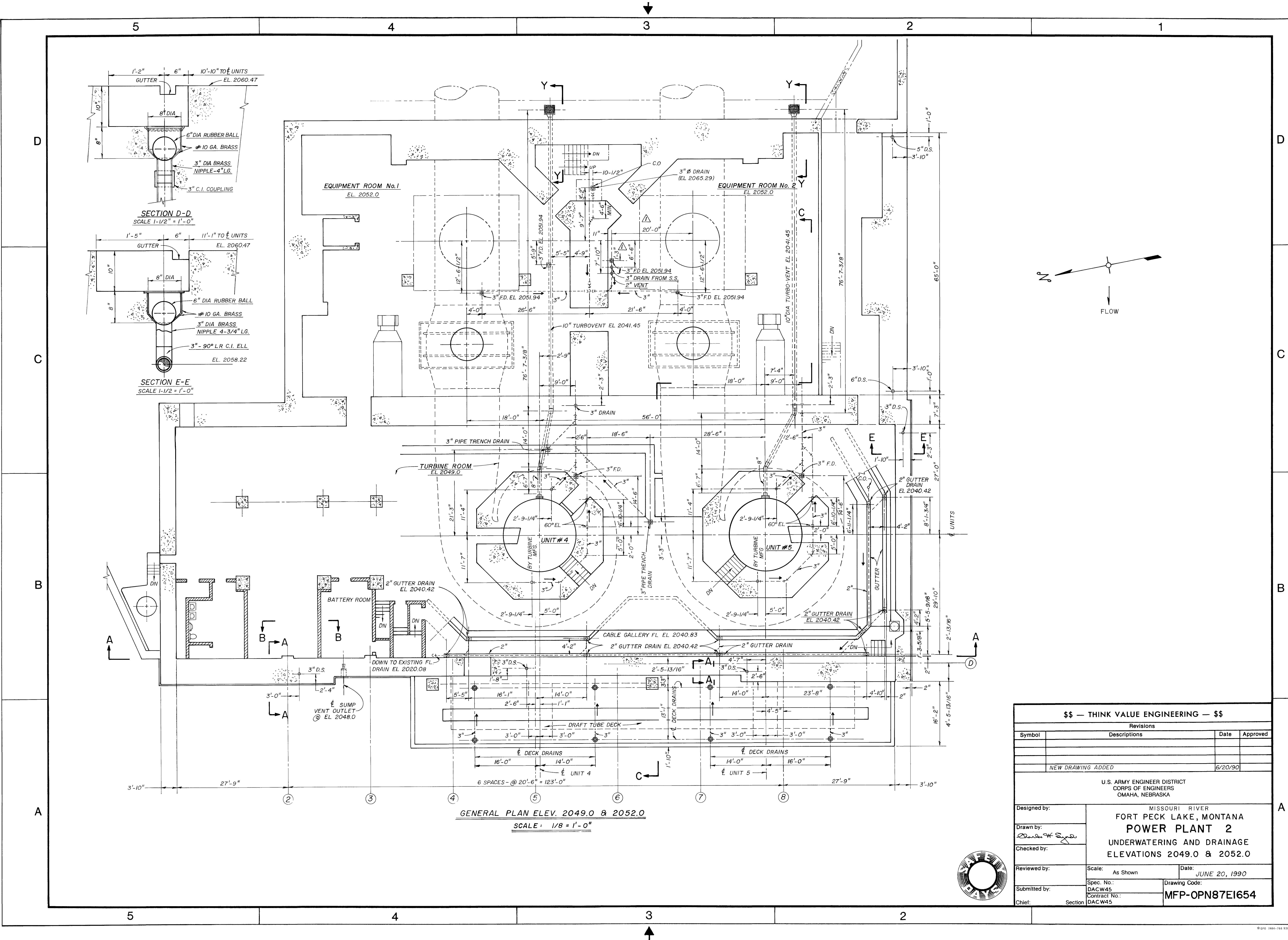
THIS PLAN ACCOMPANIES CONTRACT No. _____
MODIFICATION No. _____



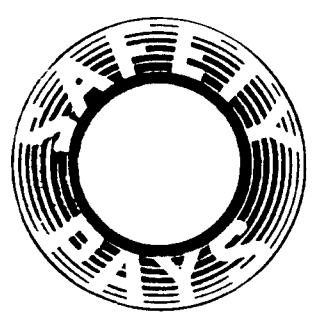


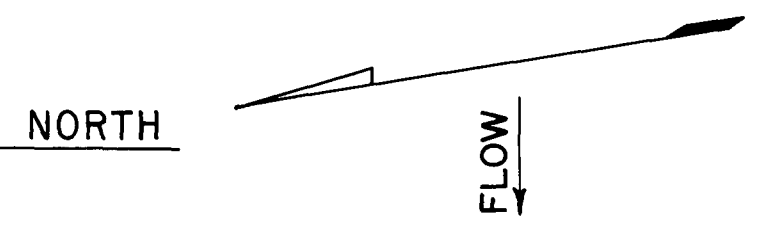
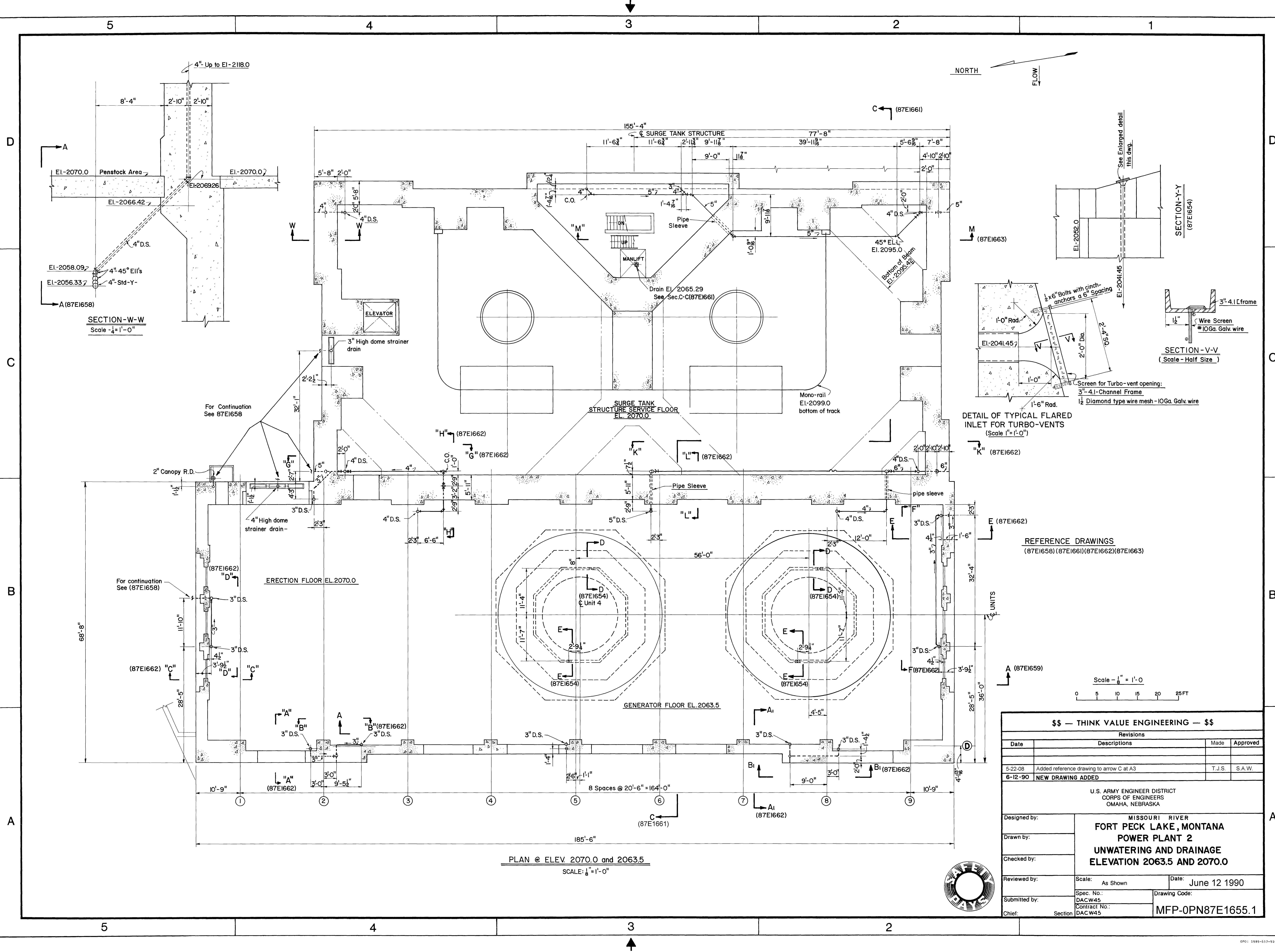
GENERAL NOTES
1. ELEVATIONS ARE GIVEN TO ϕ OF PIPE UNLESS OTHERWISE NOTED.

\$\$\$ — THINK VALUE ENGINEERING — \$\$\$			
Revisions			
Symbol	Descriptions	Date	Approved
NEW DRAWING ADDED		6-12-90	
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA			
Designed by:	MISSOURI RIVER FORT PECK LAKE, MONTANA		
Drawn by:	POWER PLANT 2		
Checked by:	UNDERWATERING AND DRAINAGE		
Reviewed by:	ELEVATION 2032.0 - SHEET 1		
Submitted by:	Scale: As Shown	Date: JUNE 12, 1990	Drawing Code:
Chief:	Spec. No.: DACW45	Contract No.: MFP-OPN87E1652	Section: DACW45



Revisions			
Symbol	Descriptions	Date	Approved
	NEW DRAWING ADDED	6/20/90	
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA			
Designed by:	MISSOURI RIVER FORT PECK LAKE, MONTANA		
Drawn by:	POWER PLANT 2		
Checked by:	UNDERWATERING AND DRAINAGE		
Reviewed by:	ELEVATIONS 2049.0 & 2052.0		
Submitted by:	Scale: As Shown	Date: JUNE 20, 1990	
Chief:	Spec. No.: DACW45	Drawing Code:	
	Contract No.:		
	Section: DACW45		
			MFP-OPN87E1654





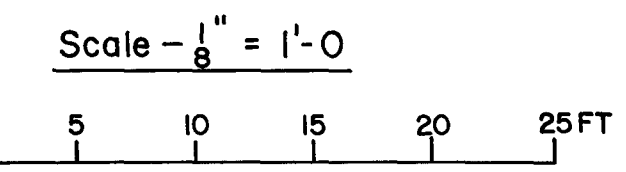
SECTION-W-W
Scale - 1/4" = 1'-0"

SECTION-Y-Y
(87E1654)

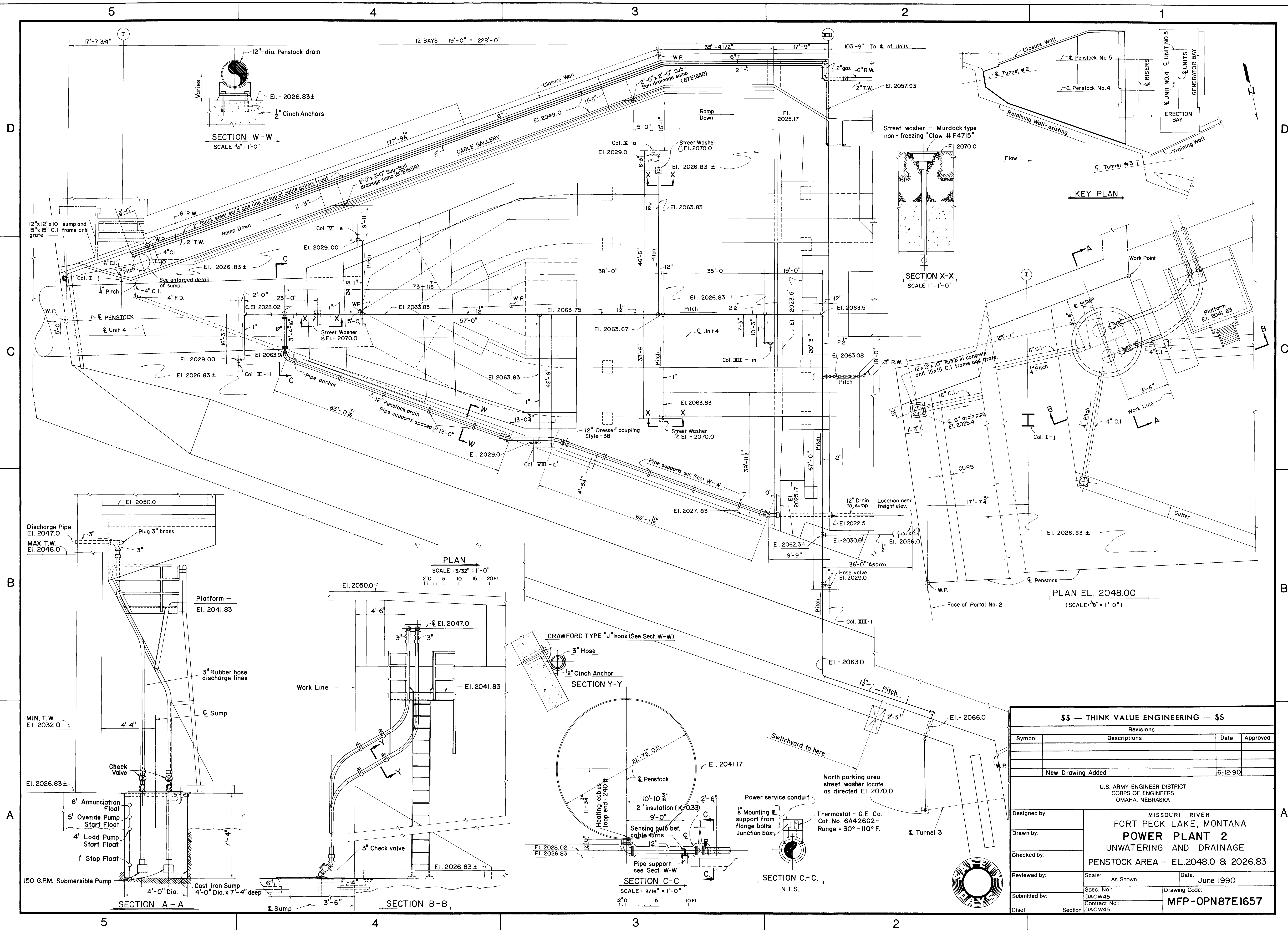
SECTION-V-V
(Scale - Half Size)

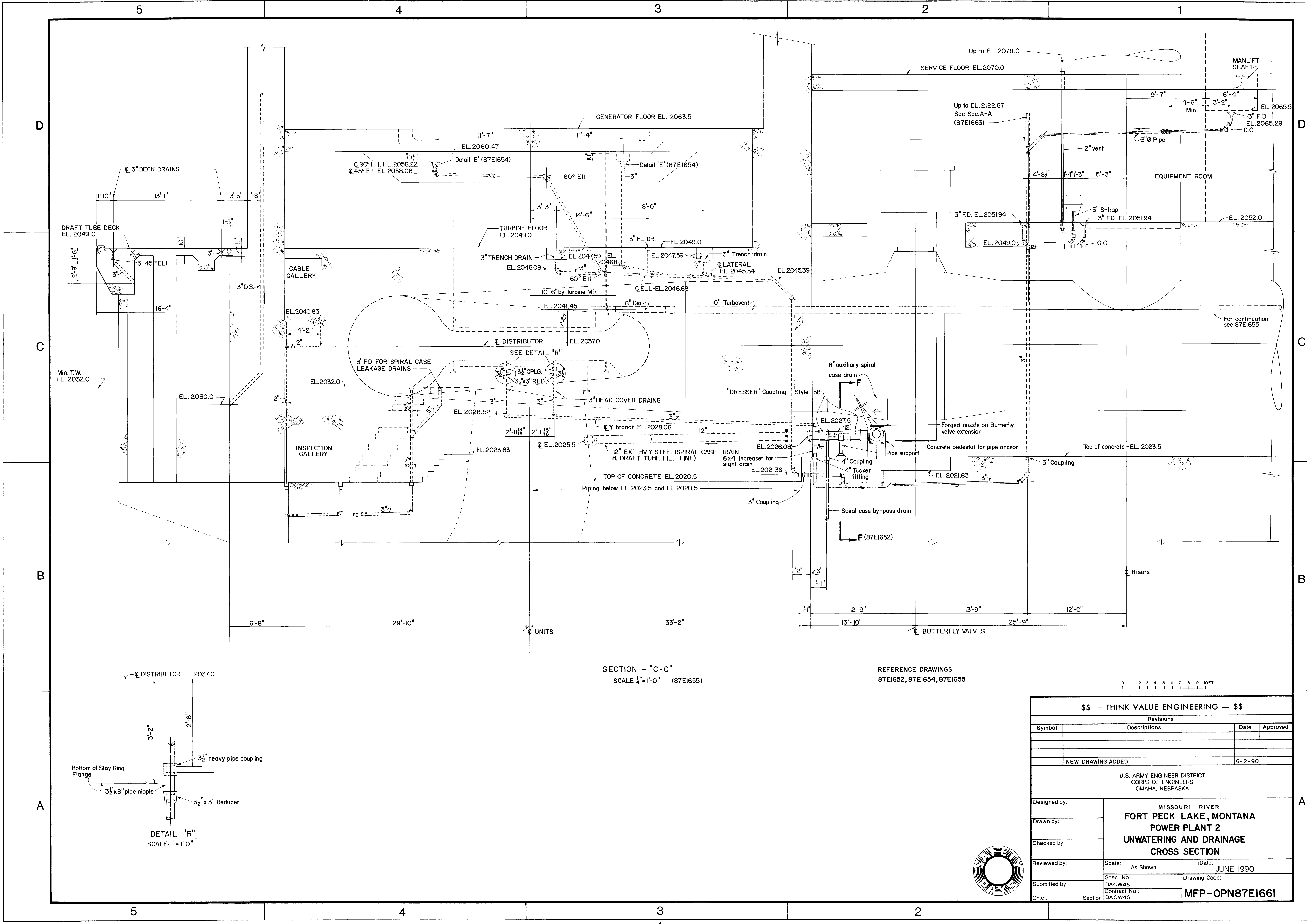
DETAIL OF TYPICAL FLARED
INLET FOR TURBO-VENTS
(Scale 1" = 1'-0")

REFERENCE DRAWINGS
(87E1658) (87E1661) (87E1662) (87E1663)



Revisions			
Date	Descriptions	Made	Approved
5-22-08	Added reference drawing to arrow C at A3	T.J.S.	S.A.W.
6-12-90	NEW DRAWING ADDED		
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA			
Designed by:	MISSOURI RIVER FORT PECK LAKE, MONTANA		
Drawn by:	POWER PLANT 2		
Checked by:	UNWATERING AND DRAINAGE		
Reviewed by:	ELEVATION 2063.5 AND 2070.0		
Submitted by:	Scale: As Shown	Date: June 12 1990	
Chief:	Spec. No.: DACW45	Drawing Code:	
	Contract No.: DACW45		
			MFP-0PN87E1655.1

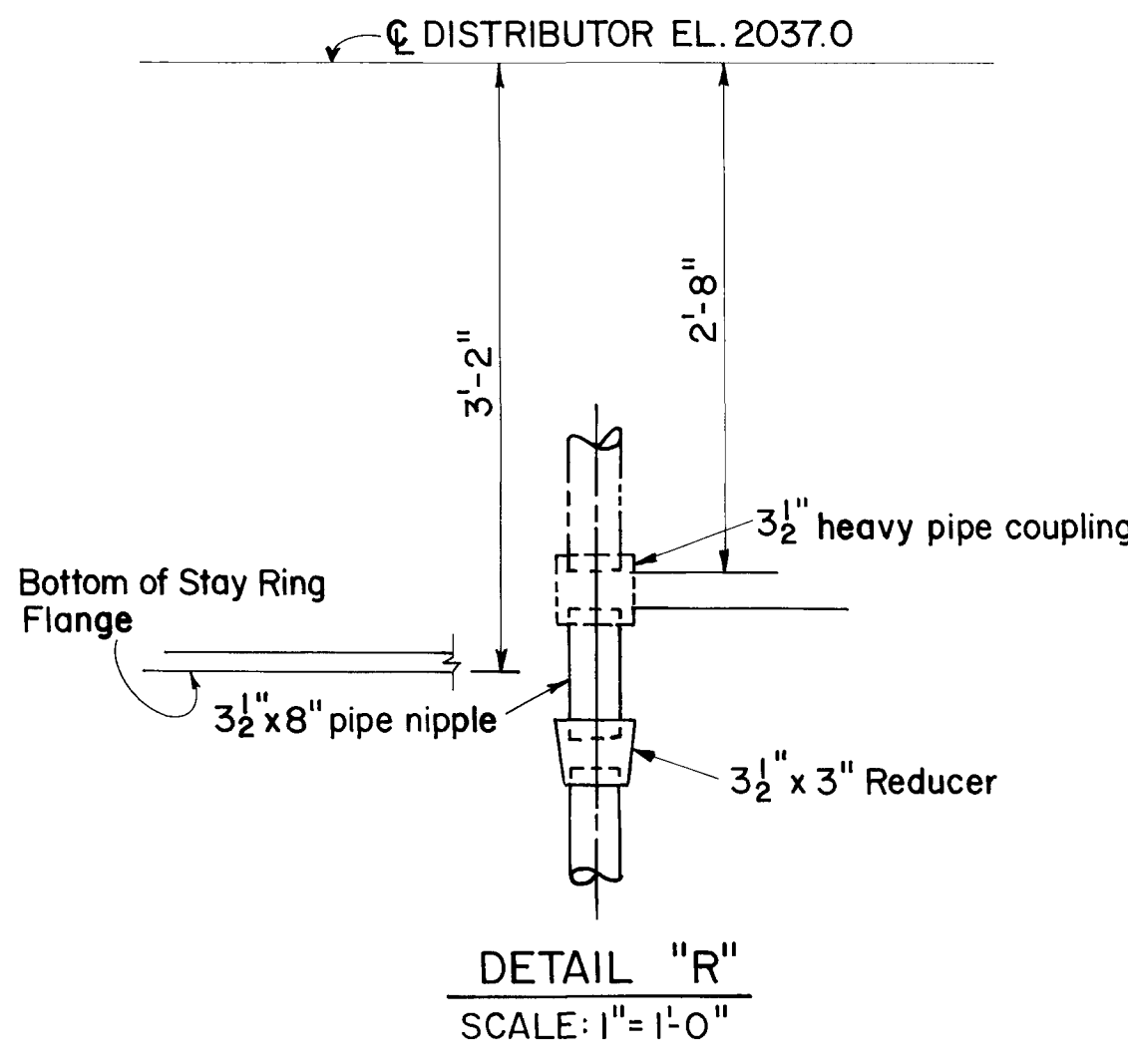




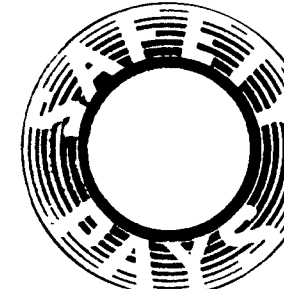
SECTION - "C-C"
SCALE 1/4"=1'-0" (87E1655)

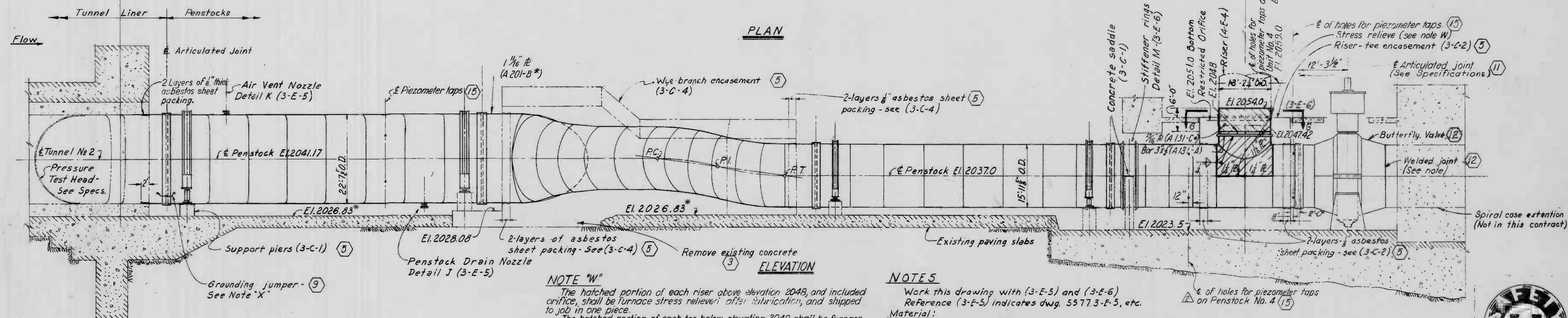
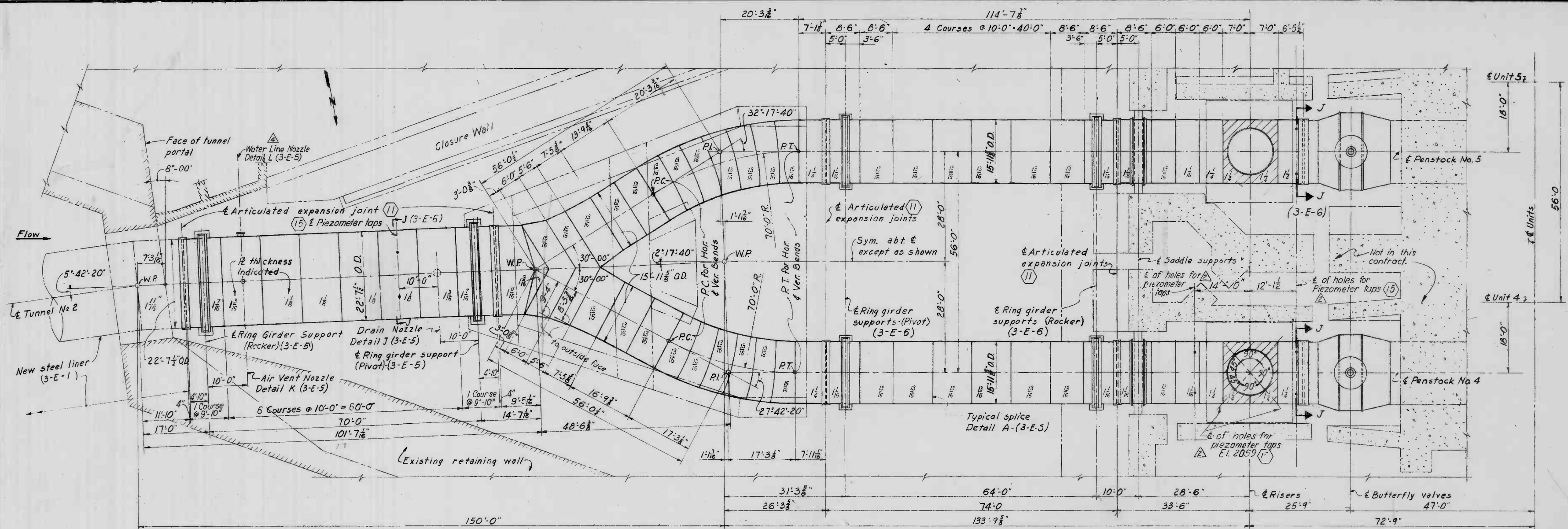
REFERENCE DRAWINGS
87E1652, 87E1654, 87E1655

0 1 2 3 4 5 6 7 8 9 10 FT



\$\$ — THINK VALUE ENGINEERING — \$\$			
Revisions			
Symbol	Descriptions	Date	Approved
NEW DRAWING ADDED		6-12-90	
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS OMAHA, NEBRASKA			
Designed by:	MISSOURI RIVER FORT PECK LAKE, MONTANA POWER PLANT 2 UNWATERING AND DRAINAGE CROSS SECTION		
Drawn by:			
Checked by:			
Reviewed by:			
Submitted by:	Scale: As Shown	Date: JUNE 1990	
Chief:	Spec. No.: DACW45	Drawing Code:	
	Contract No.: DACW45	MFP-OPN87E1661	





REFERENCE DRAWINGS
 Penstock Support Piers - (3-C-1)
 Surge tanks & Risers - (4-E-1)
 Steel Tunnel Liner - (3-E-1) & (3-E-2)

NOTE "W"

The hatched portion of each riser above elevation 2048, and included orifice, shall be furnace stress relieved after fabrication, and shipped to job in one piece.

The hatched portion of each tee below elevation 2048 shall be furnace stress relieved and shipped to the job in not more than two pieces.

NOTE "X"

Provide grounding jumper cables at each articulated joint in penstock and riser - 2 per joint. (Electric Service Supplies Co. "tigerweld" type FB-4, 2/0 - B & S or equal).

NOTES

Unless otherwise noted, steel plates $\frac{1}{4}$ to $\frac{1}{8}$ inch thick inclusive shall conform to A131-B; and plates $\frac{1}{8}$ inch thick and over shall conform to A131-C.

Unless otherwise shown, all items on this drawing will be paid for under payment item No. 9.

*Elevation 2026.83 is elevation to which original concrete slab was placed and is the elevation shown on all drawings. Subsequent rebound of the area has increased this elevation. Therefore, the contractor shall field check all required elevations in the penstock area and make all necessary revisions to any affected concrete or reinforcement details.

Spiral case extension will have a 3" trim length at its upstream end. This will have to be trimmed and beveled in the field for welding.

NOTES

Work this drawing with (3-E-5) and (3-E-6).
 Reference (3-E-5) indicates dwg. 5577.3-E-5, etc.

Material:

Steel identified as A131-A, B, or C and A373 shall conform to the corresponding ASTM designations in the specifications, paragraph 4-04.

The identification of plate steel, followed by an asterisk (*), indicates plates which shall be normalized to ASTM designation A300.

Welding:

Pipe Shell - Welds to conform to the provisions of 1956 ASME Boiler Code, Section VIII, "Rules for Construction of Unfired Pressure Vessels." Welds to be full penetration, continuous and smooth unless otherwise noted.

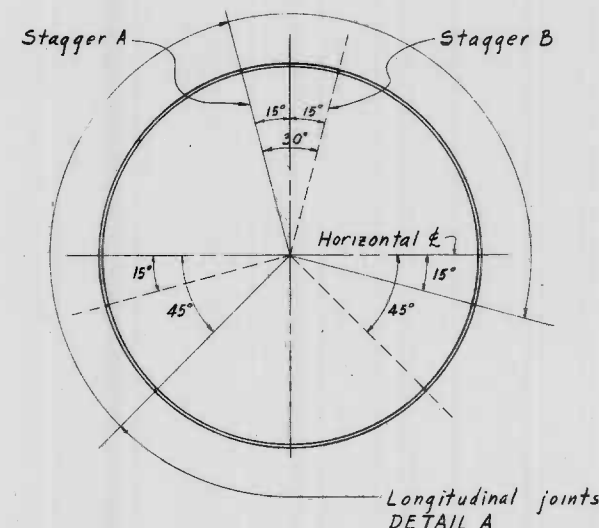
Ring Girder Supports - Welds to conform to the applicable provisions of the A.W.S. "Standard Code for Arc and Gas Welding in Building Construction." All stiffener webs and flanges to have not more than six (6) radial joints, and shall be equally spaced on the circumference and shall not coincide with longitudinal joints in penstock shell. Stiffener web joints shall be staggered with flange joints.

Pressure test - See Specs.

Thickness shown for machined material is the thickness required after machining.

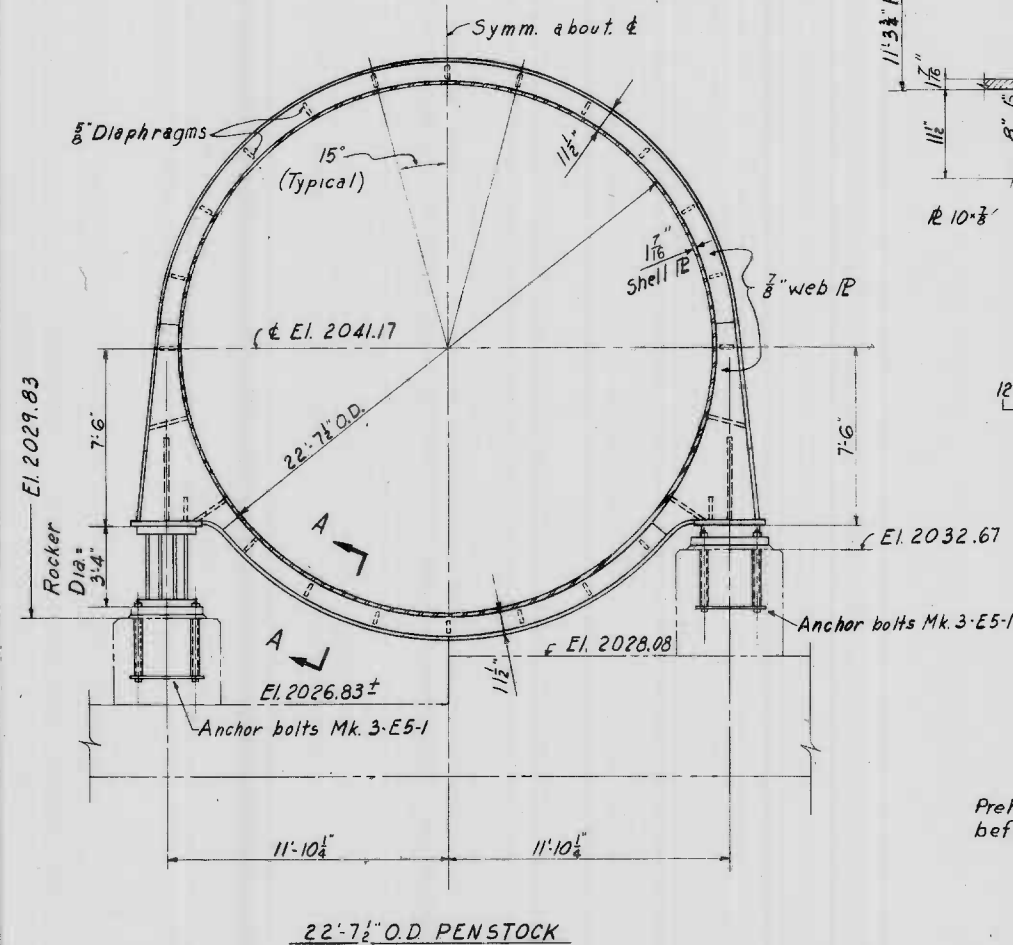
All ring girder sections to be stress relieved in not more than six segments before welding to penstock shell.

4	4-18-60	Added water line nozzle	WLF	RCF
3	8-27-58	Addendum No. 3	WLF	RCF
2	8-4-58	Addendum No. 1	WLF	RCF
1	7-10-58	Revised prior to advertising	WLF	RCF
KEY	DATE	REVISION INDICATED BY	BY	CHECKED, APP.
ERIK FLOOR & ASSOCIATES, INC. ENGINEERS CHICAGO, ILL.				
CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, N.D.				
MISSOURI RIVER IMPROVEMENT FORT PECK DAM—SECOND POWER PLANT PENSTOCKS AND TUNNEL LINER STRUCTURAL STEEL PENSTOCKS SHEET 1				
DESIGNED	BY	CHECKED	APPROVED	RECOMMENDED
DRAWN	BY	CHECKED	APPROVED	RECOMMENDED
SUPERVISED	BY	CHECKED	APPROVED	RECOMMENDED
J.L. Schnitz ERIK FLOOR & ASSOCIATES, INC. APPROVAL RECOMMENDED F. J. Williams CHIEF DESIGN BRANCH APPROVED J. M. Williams CHIEF ENGINEERING DIVISION SCALE: 1" = 10'-0" SPEC. NO. DRAWING NUMBER 5577.3-E-4 SHEET OF				
SEPTEMBER 1957				
PENSTOCKS, TUNNEL LINER AND SURGE TANKS—CONTRACT				



NOTE:
Alternate sections of penstock to have longitudinal joints staggered 30°

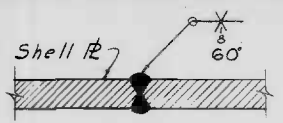
LOCATION OF LONGITUDINAL JOINTS IN PENSTOCK
No Scale



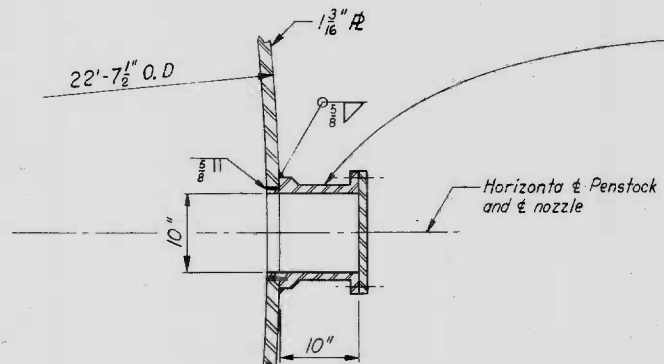
HALF SECTION
ROCKER SUPPORT

HALF SECTION
PIVOT SUPPORT

Scale: 1/4" = 1'-0"
10 1 2 3 4 5 6 7 8 9 10 FT.

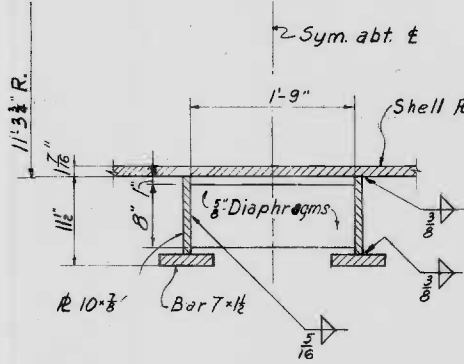


DETAIL A
Scale: 3" = 1'-0"
Typical at longitudinal and circumferential joints in penstock (shop and field)

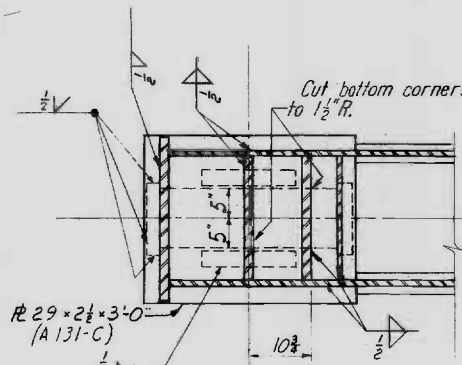


DETAIL J
Scale: 1" = 1'-0"

DETAIL L
Scale: 1" = 1'-0"

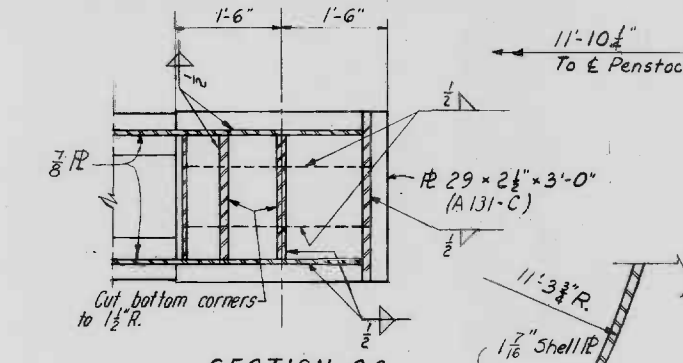


SECTION A-A
(Typical)
Scale: 1" = 1'-0"

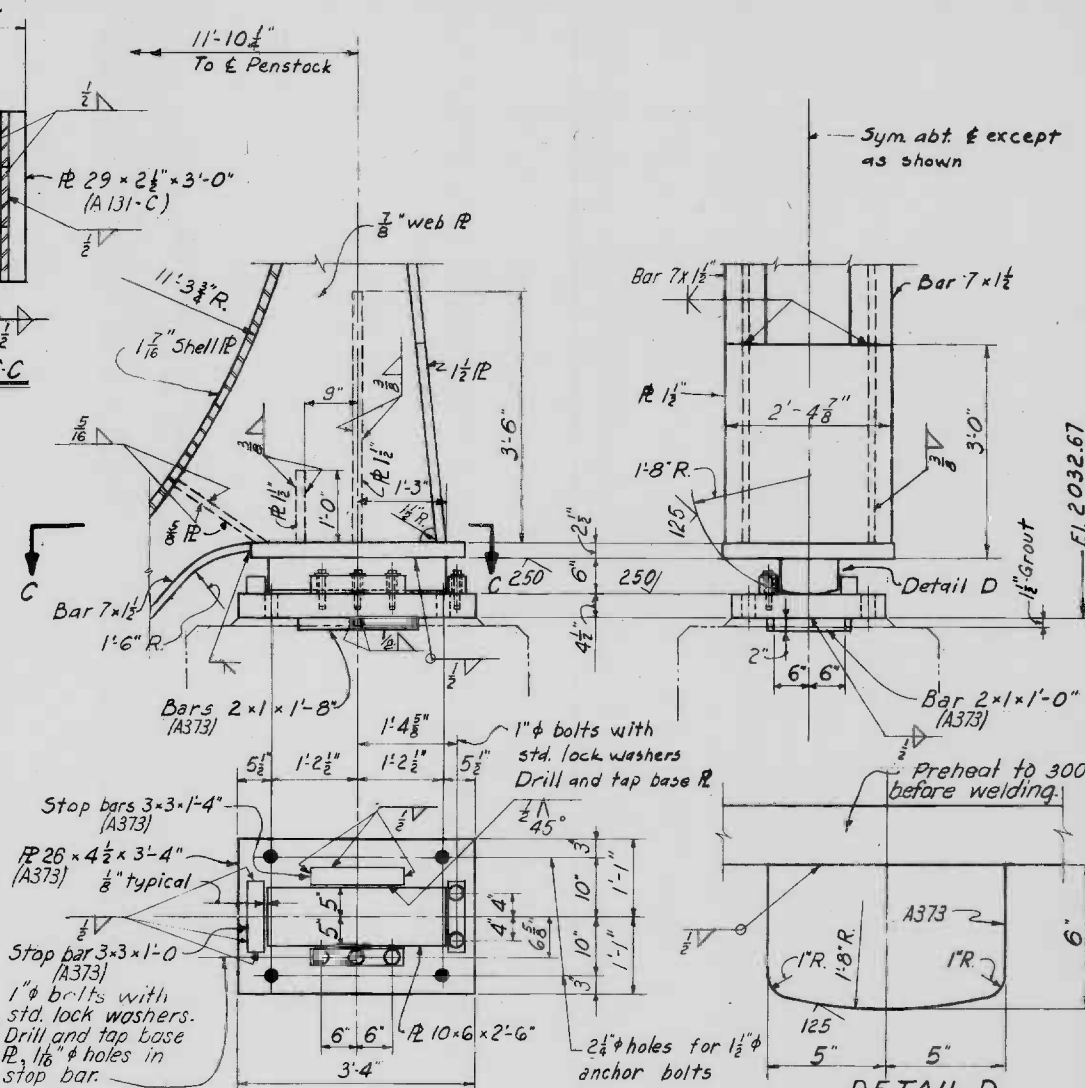


SECTION B-B

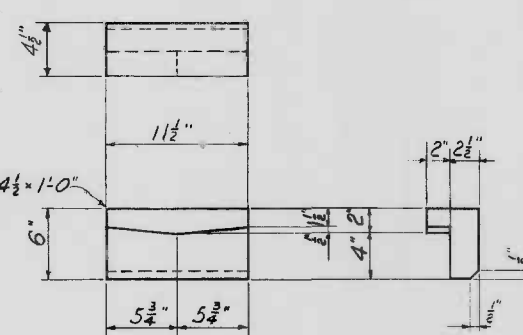
DETAIL K
Scale: 1" = 1'-0"



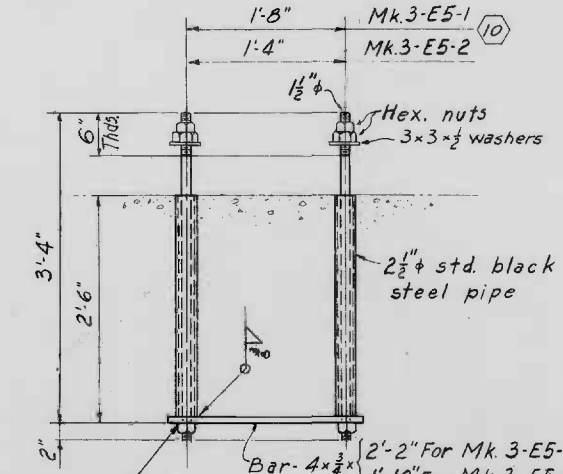
SECTION C-C



DETAIL OF PIVOT SUPPORT
(22'-7 1/2" O.D. Penstock)



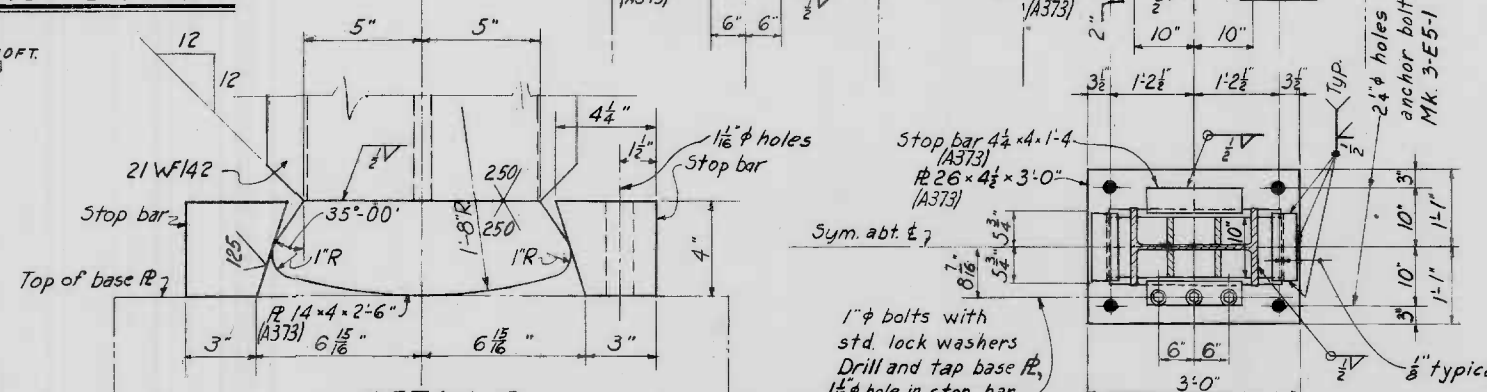
DETAIL E
(Keepers)
Scale: 1/2" = 1'-0"



ANCHOR BOLTS

Mk. 3-E5-1 8 Sets reqd.
Mk. 3-E5-2 16 Sets reqd.

No scale



DETAIL C
Scale: 3" = 1'-0"

DETAIL OF ROCKER SUPPORT
(22'-7 1/2" O.D. Penstock)

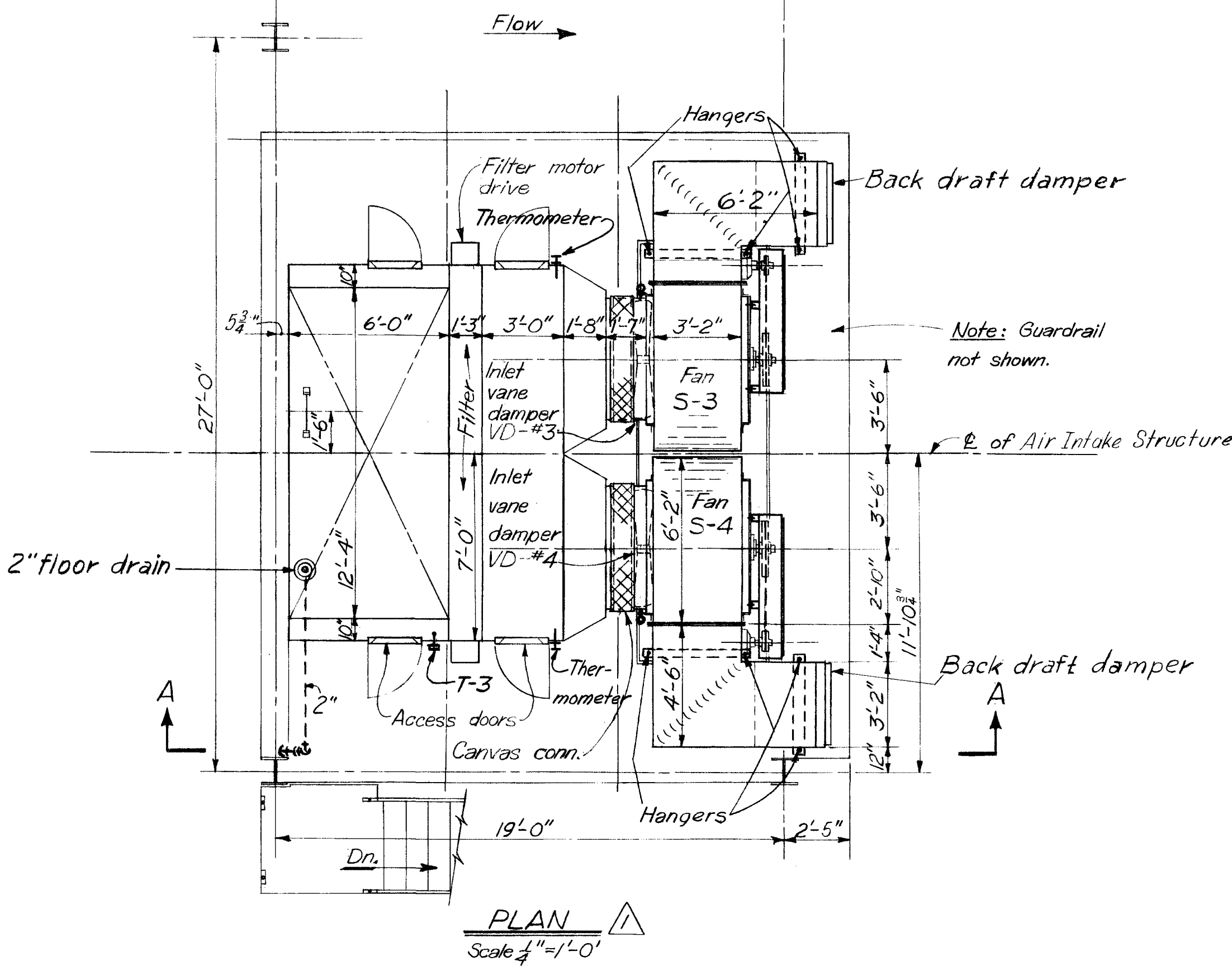
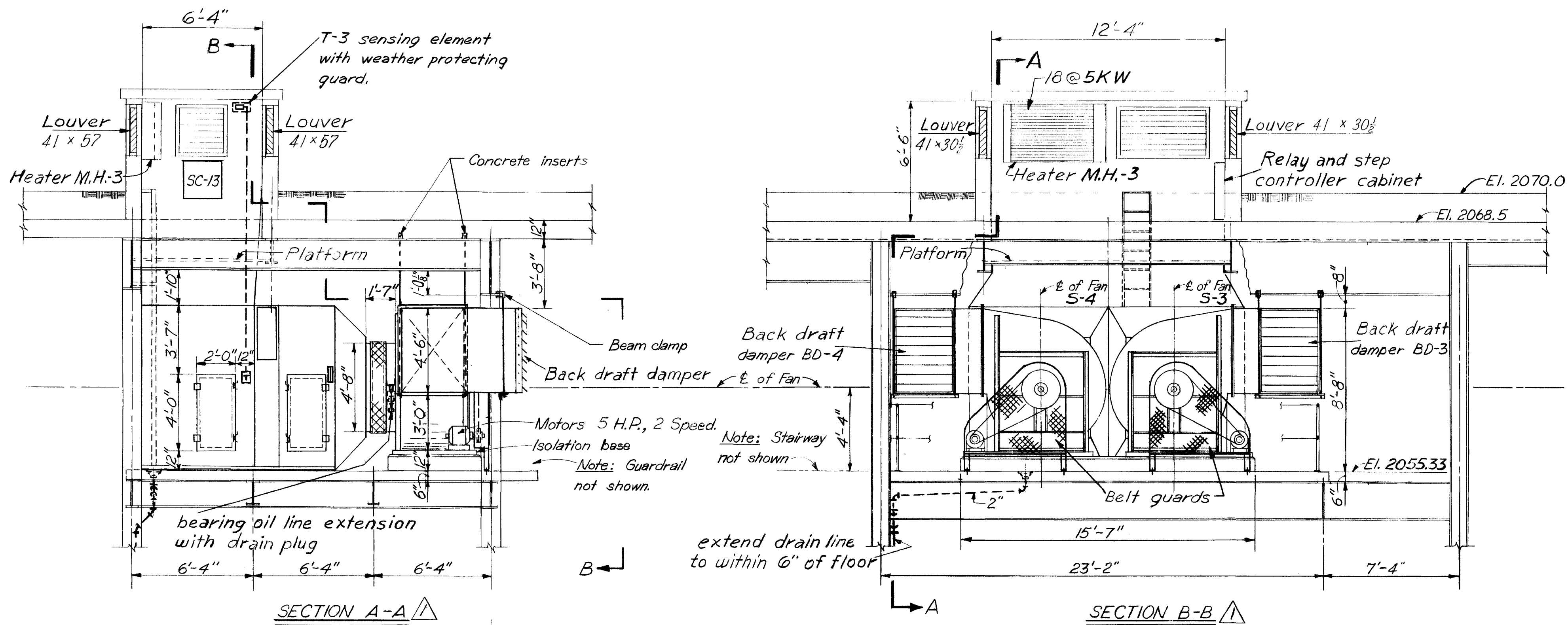
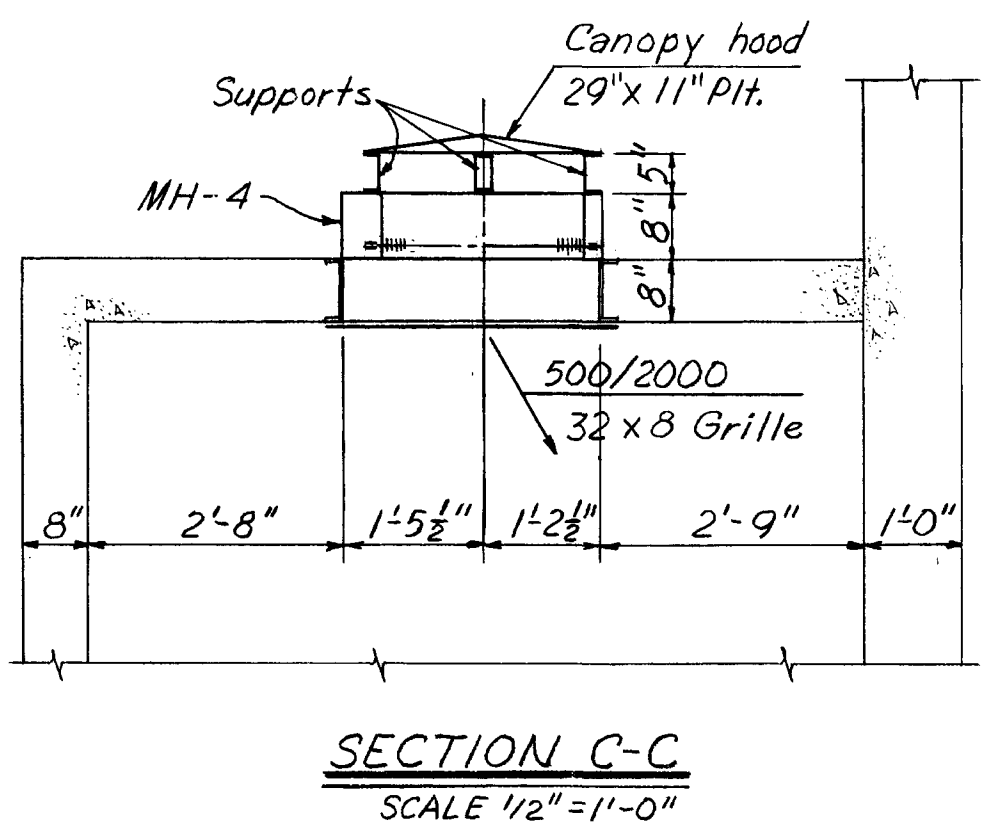
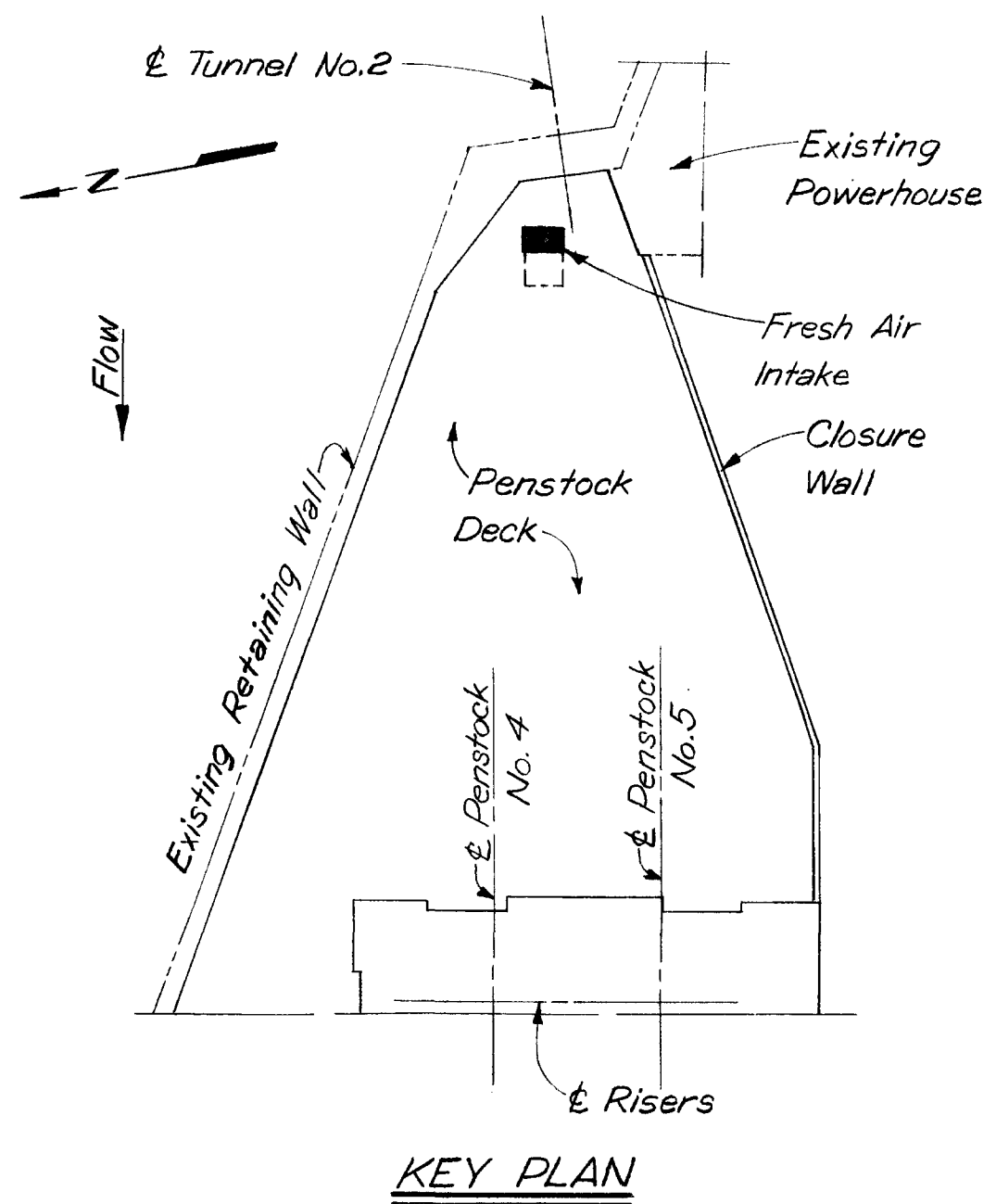
NOTES
Work this drawing with (3-E4) and (3-E-6).
Thickness shown for machined material is the thickness required after machining.
Rocker assemblies to be stress relieved.
All ring girder sections to be stress relieved in not more than six segments before welding to penstock shell.
Unless shown otherwise all items shown on this drawing will be paid for under payment item No. 9.
Steel identified as A373 shall conform to ASTM designation A373-56T or Federal Specification QQ-S-740, Type II.



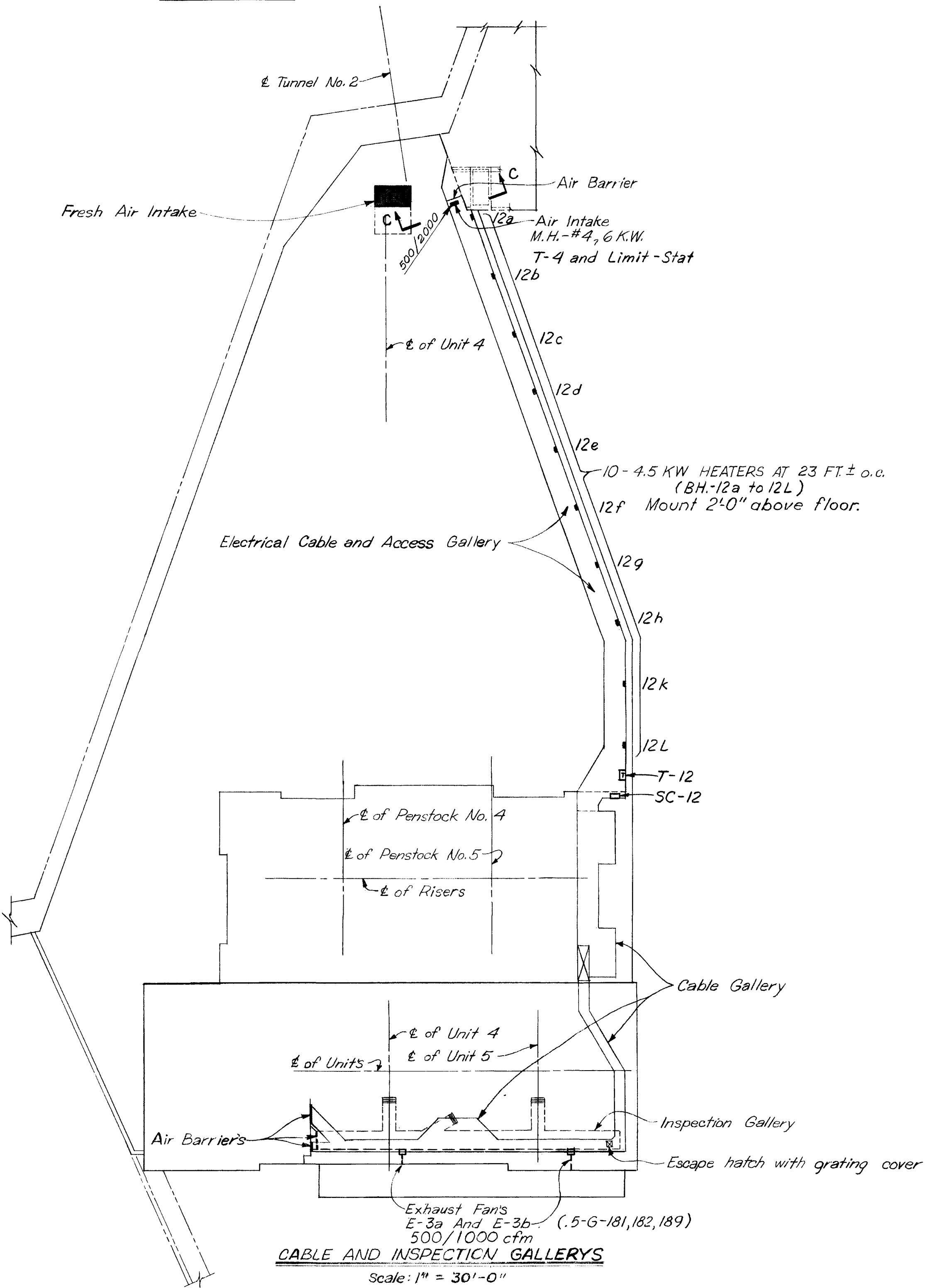
2	4-18-60	Added Detail L	W.D. R.F.J.	W.D. R.F.J.
1	7-10-58	Revised prior to advertising	W.D. R.F.J.	W.D. R.F.J.
KEY	DATE	REVISION INDICATED BY Δ	BY	CHKD. APP.
ERIK FLOOR & ASSOCIATES, INC. CHICAGO, ILL.				
CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, N.D.				
MISSOURI RIVER IMPROVEMENT FORT PECK DAM—SECOND POWER PLANT PENSTOCKS AND TUNNEL LINER STRUCTURAL STEEL PENSTOCKS SHEET 2				
DESIGNED	W.D. R.F.J.	BY	W.D. R.F.J.	
DRAWN	W.D. R.F.J.	BY	W.D. R.F.J.	
CHECKED	W.D. R.F.J.	BY	W.D. R.F.J.	
SUBMITTED	W.D. R.F.J.	BY	W.D. R.F.J.	
APPROVED	W.D. R.F.J.	BY	W.D. R.F.J.	
SEPTEMBER 1957				
DRAWING NUMBER 5.577.3-E-5				
SHEET OF				

PENSTOCKS, TUNNEL LINER AND SURGE TANKS—CONTRACT

Place holder - Fort Peck needs to add location of PP8 and detail view for items that replaced MCC8



FRESH AIR INTAKE - PLAN AND SECTIONS



PAYMENT ITEMS

32

REFERENCE DWGS.

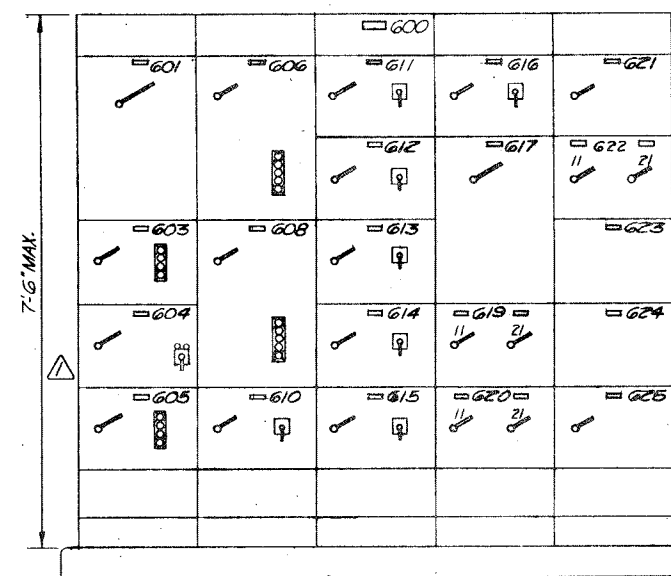
Work this drawing with drawings (.5-G-181, 182, 187 and 189.

FOR CONSTRUCTION DETAILS SEE "CONTRACTOR FURNISHED" DRAWINGS

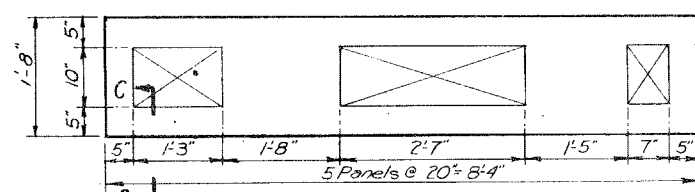
12' 0 1 2 3 4 5 6 7 8 9 10 FT

10-1-65	REVISED TO SHOW "AS-BUILT" CONDITIONS.			
1	10-10-58	Addendum No. 2	HKR	GON
KEY	DATE	REVISION INDICATED BY	BY	CHKD APP
ERIK FLOOR & ASSOCIATES, INC.		CORPS OF ENGINEERS U.S. ARMY		
ENGINEERS		OFFICE OF THE DISTRICT ENGINEER		
CHICAGO, ILL.		GARRISON DISTRICT		
		RIVERDALE, N.D.		
MISSOURI RIVER IMPROVEMENT				
FORT PECK DAM—SECOND POWER PLANT				
MECHANICAL				
HEATING AND VENTILATING				
FRESH AIR INTAKE—CABLE TUNNEL				
DESIGNED	BY	CHKD		
DRAWN	BY	CHKD		
SUPERV	BY	CHKD		
SUBMITTED	BY	CHKD		
APPROVAL RECOMMENDED		APPROVAL RECOMMENDED		SEPTEMBER 1958
H.K. Boomer		J.L. P. Michael		
CHIEF, DESIGN BRANCH		CHIEF, ENGINEERING DIVISION		
APPROVED		APPROVED		
Lynn H. Rine		Lynn H. Rine		
COL. C. OF E. DISTRICT ENGINEER		COL. C. OF E. DISTRICT ENGINEER		
DA-59-175		SCALE: 1/2" = 1'-0"		SPEC. NO.
		DRAWING NUMBER		5577.5-G-193.2
		SHEET		OF

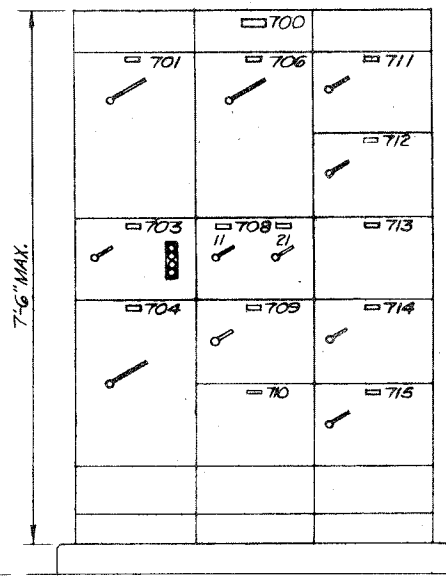
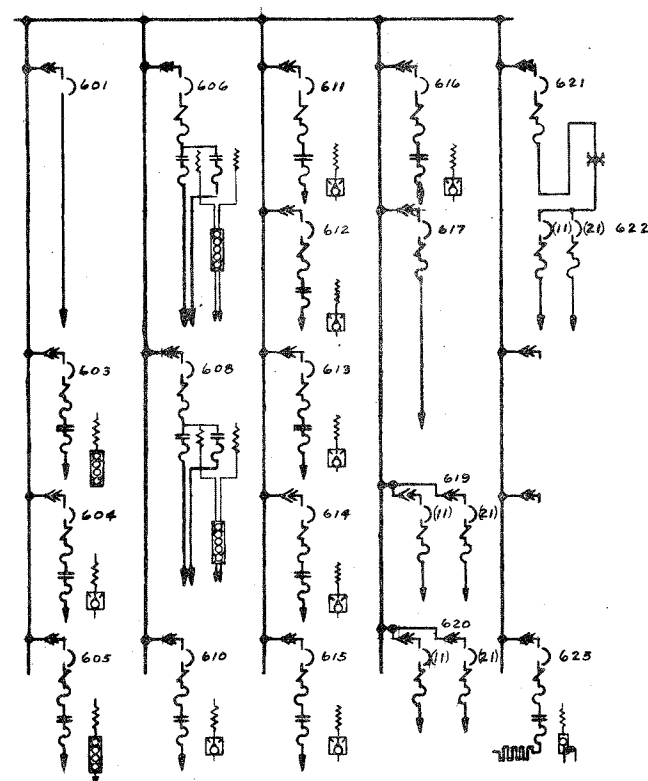
POWERHOUSE AND SWITCHYARD-CONTRACT RECORD DWG



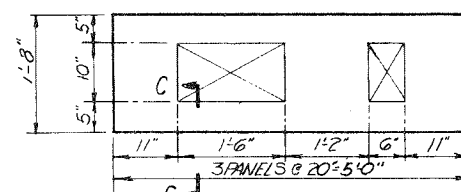
FRONT ELEVATION



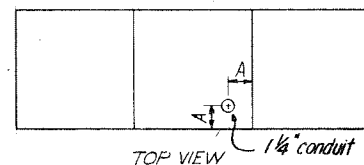
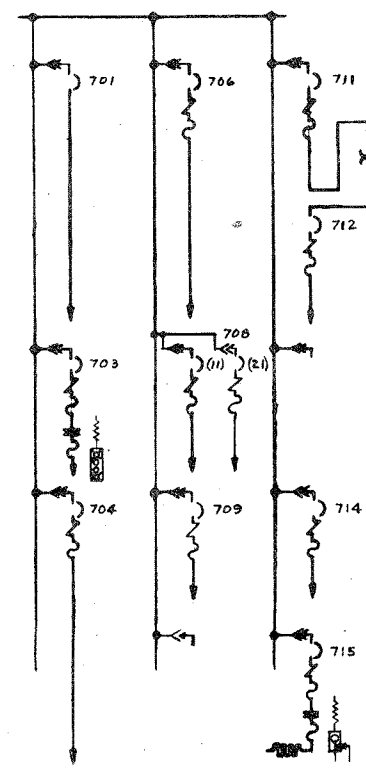
PLAN-FLOOR TRENCH
460V MOTOR CONTROL CENTER 6



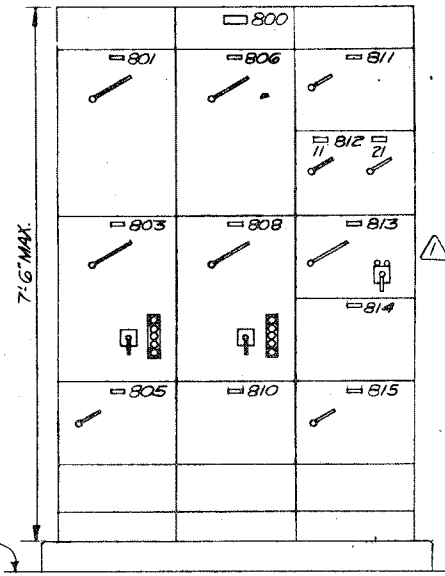
FRONT ELEVATION



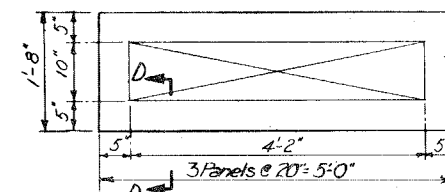
PLAN-FLOOR TRENCH
460V MOTOR CONTROL CENTER 7



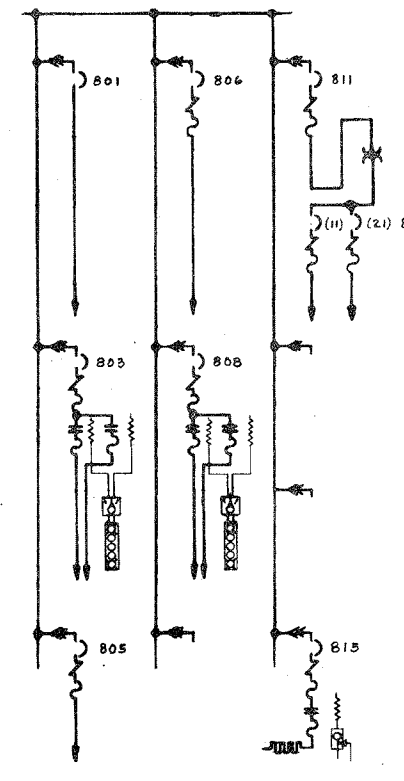
TOP VIEW 1/4" conduit



FRONT ELEVATION



PLAN-FLOOR TRENCH
460V MOTOR CONTROL CENTER 8



ENGRAVING SCHEDULE				
REF. NO.	FIRST LINE	SECOND LINE	THIRD LINE	
600	Motor	Control Center	6	A1
700	Motor	Control Center	7	A1
800	Motor	Control Center	8	A1

ENGRAVING SCHEDULE				
REF. NO.	FIRST LINE	SECOND LINE	THIRD LINE	DET.

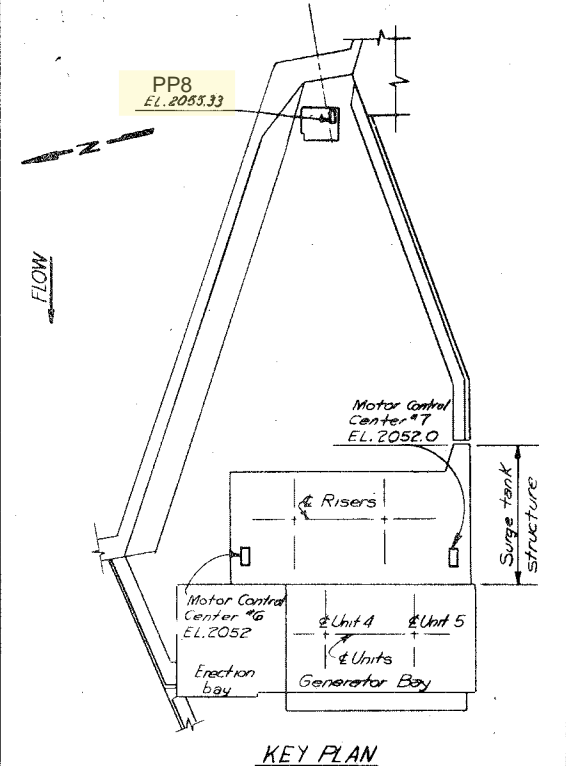
460V MOTOR CONTROL CENTER 6				
601		460v Swgr. Fdr. 12		A2
603	Supply fan		S-1	A2
604	Supply fan		S-5	A2
605	Exhaust fan		E-1	A2
606		Fan E-3a		A2
608		Fan E-3b		A2
610		Fan E-2a		A2
611		Fan E-2b		A2
612		Fan E-2c		A2
613		Fan E-2d		A2
614		Fan E-2e		A2
615		Fan E-2f		A2
616		Fan E-2g		A2
617	Main Heater		M1	A2
618	Booster Heaters		9a & 9b	A2
619	Booster Heaters		9c to 9h	A2
620	Main Heater		M5	A2
621	Booster Heater		B10	A2
622		Transformer		A2
622 1/2		Filter Drive		A2
623		EP Valve		A2
624		(Future)		A2
625		Space Heater		A2

460V MOTOR CONTROL CENTER 7				
701		460v Swgr. Fdr. 12		A2
703	Supply fan		S2	A2
704	Main Heater		M2	A2
706	Motor Control	Center	8 Feeder	A2
708 1/2	Booster Heaters		7a & 7b	A2
709 2/2	Booster Heaters		7c to 7h	A2
709	Booster Heater		B8	A2
710		(Future)		A2
711		Transformer		A2
712		Filter Drive		A2
713		(Future)		A2
714		Gallery Heaters		A2
715		Space Heaters		A2

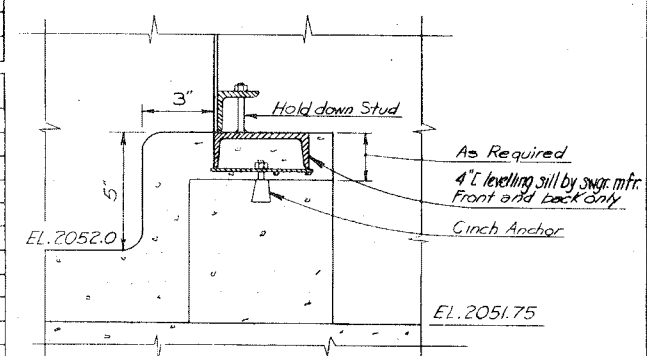
460V MOTOR CONTROL CENTER 8				
801	Motor Control	Center	8 Feeder	A2
803	Supply Fan		S3	A2
805	Main Heater		M4	A2
806	Main Heater		M3	A2
808	Supply Fan		S-4	A2
810		(Future)		A2
811		Transformer		A2
812 1/2		Filter Drive		A2
812 2/2		Filter Drive		A2
813	Penstock Drain		Heater	A2
814		(Future)		A2
815		Space Heater		A2

NOTES

1. Work this dwg. with 55775-H-28 & 55775-H-19
2. For circuit breaker ratings, see dwg. 55775-H-19.
3. Motor control centers will be furnished to the contractor by the Government for installation under this contract.

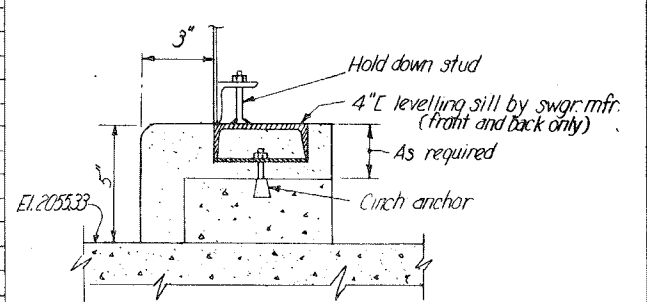


KEY PLAN



SECTION C-C

SCALE 3'-10"



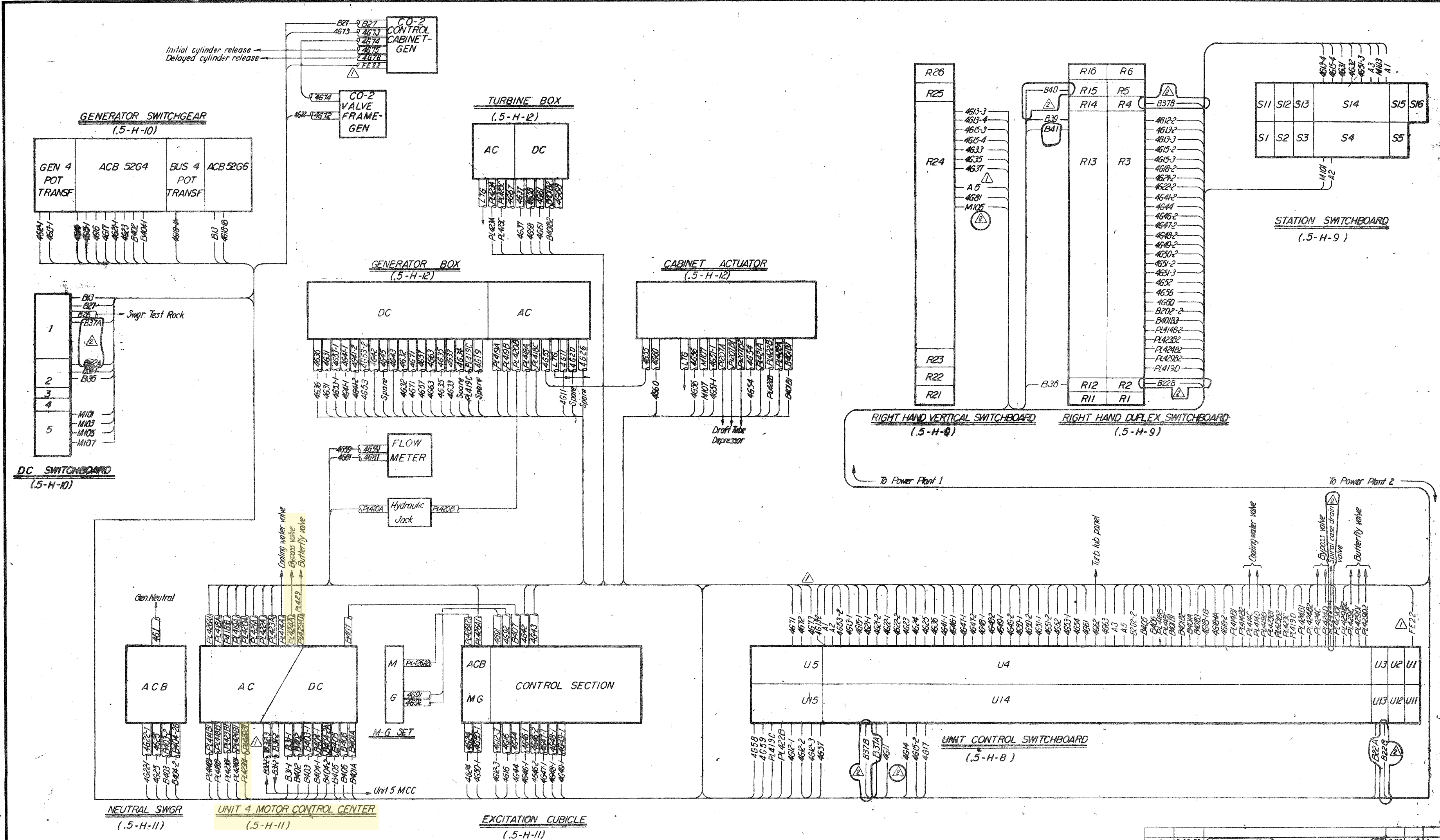
SECTION D-D

SCALE 3'-10"

PAYMENT ITEMS

69

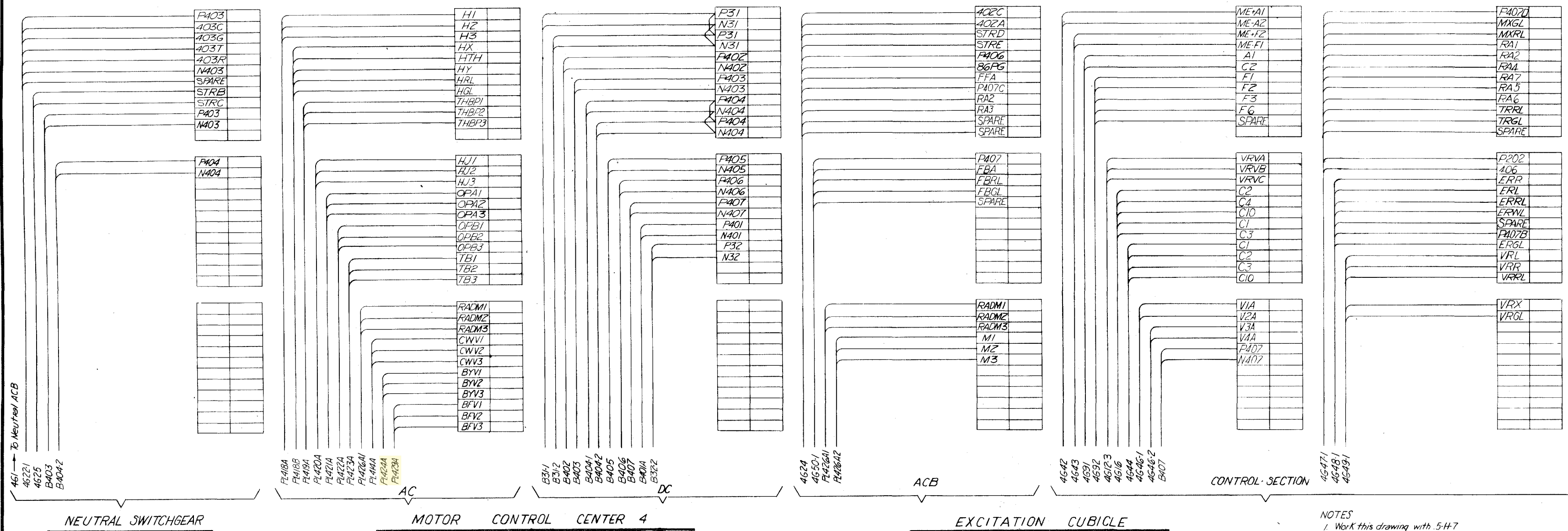
11-7-58		Addendum No. 4		H.K. FLOOR & ASSOC. INC.	
KEY	DATE	REVISION INDICATED BY	BY	CHKD.	APP.
ERIK FLOOR & ASSOCIATES, INC.			CORPS OF ENGINEERS U.S. ARMY		
ENGINEERS			OFFICE OF THE DISTRICT ENGINEER		
CHICAGO, ILL.			GARRISON DISTRICT		
			RIVERDALE, N.D.		
MISSOURI RIVER IMPROVEMENT					
FORT PECK DAM—SECOND POWER PLANT					
POWERHOUSE					
ELECTRICAL					
STATION SERVICE SYSTEM					
SWITCHGEAR — SHEET 4					
DESIGNED	BY	CHKD.			
DRAWN	7L	SE			
SUPERVISED					
SUBMITTED					
APPROVAL RECOMMENDED					
APPROVED					
SEPTEMBER 1958					
DRAWING NUMBER			SPEC. NO.		
55775-H-30					
SHEET			OF		



- REFERENCE DRAWINGS**
- Main Power System - One Line Diagram 5577-5-H-1
 - Main Control System - One Line Diagram 5-H-2
 - Schematic Diagrams 5-H-3, 4, 5, 6
 - Control Switchboards 5-H-23, 24, 25
 - Station Service System - One Line Diagrams 5-H-15, 16
 - Schematic Diagrams 5-H-17, 18
 - Power and Control Cable Schedules 5-H-41 to 53
 - Control and Station Service Conduit 5-H-63 to 80

- NOTES**
1. Connection diagram indicates only the main unit wiring for unit 4. Unit 5 wiring for the main unit connections is similar.
 2. Inter-panel and intra-panel connections within the switchboards are not shown.

2	3-25-59	(Minor corrections)	W.H.B.	D.R.E.	678
1	11-7-59	Addendum No. 4	W.H.B.	678	678
KEY	DATE	REVISION INDICATED BY Δ	BY	CHKD.	APP.
ERIK FLOOR & ASSOCIATES, INC. ENGINEERS CHICAGO, ILL.			CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, MD.		
DESIGNED BY CHN			APPROVAL RECOMMENDED		
DRAWN BY RFP			APPROVED		
SUPERVISED BY H. H. Erickson			SCALE: NONE		
SUBMITTED			DATE: 5577-5-H-1		
APPROVED			POWERHOUSE AND SWITCHYARD - CONTRACT		



NOTES
 1. Work this drawing with 5-H-7
 2. This drawing indicates only the external main unit wiring for Unit 4 and it is not intended to indicate all the external wiring.

KEY		DATE	REVISION INDICATED BY Δ	BY	CHKD	APP.
ERIK FLOOR & ASSOCIATES, INC. ENGINEERS CHICAGO, ILL.			CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, N.D.			
MISSOURI RIVER IMPROVEMENT FORT PECK DAM—SECOND POWER PLANT ELECTRICAL MAIN CONTROL SYSTEM CONNECTION DIAGRAM—SHEET 5						
DESIGNED	BY	CHKD	APPROVAL RECOMMENDED			
DRAWN	7L	08	APPROVED			
SUPERV.	08		APPROVED			
ERIK FLOOR & ASSOCIATES, INC.			APPROVAL RECOMMENDED		SEPTEMBER 1958	
CHIEF DESIGN BRANCH			CHIEF ENGINEERING DIVISION		DRAWING NUMBER	
APPROVED			APPROVED		55775-H-II	
COL. C. D. E. DISTRICT ENGINEER			COL. C. D. E. DISTRICT ENGINEER		SHEET OF	

CABLE NO.	CONDUIT	CONDUCTOR	FUNCTION	FROM	TO	ROUTINGS OR REMARKS
NO.	SIZE	LENGTH	NO.	SIZE	LENGTH	
MOTOR CONTROL CENTER 1						
						See MCC2, MCC3 & DC Swbd.
MOTOR CONTROL CENTER 2						
PL208A	PL208A	1	14	3-1/2	12	72 Air compressor 3 feeder
PL208B	PL208B	1	19	2-1/2	19/25	58 Air compressor 3 control
PL208C	PL208C	1	14	2-1/2	19/25	48 Air compressor 3 control
PL209	PL209	1	30	3-1/2	12	144 Transfer pump 1 feeder
PL209-1	PL209-1	1	30	3-1/2	12	144 do
PL209-2	PL209-2	1	30	3-1/2	12	144 do
PL210	PL210	1	30	3-1/2	12	174 Transfer pump 2 feeder
PL210-1	PL210-1	1	30	3-1/2	12	174 do
PL210-2	PL210-2	1	30	3-1/2	12	174 do
PL212-1	PL212-1	1	48	3-1/2	4	174 Oil purifier power recept.
PL212-2	PL212-2	1	2	3-1/2	4	12 Drier oven recept.
PL214A	PL214A	1	30	3-1/2	12	120 MG Set 1 motor feeder
PL214A1	PL214A1	1	12	3-1/2	12	65 MG Set 1 motor feeder
PL214B	PL214B	1	10	10-1/2	19/25	200 MG Set 1 control
PL216A	PL216A	1	20	3-1/2	4	90 Air compressor 1 feeder
PL216B	PL216B	1	19	2-1/2	19/25	58 Air compressor 1 control
PL216C	PL216C	1	20	2-1/2	19/25	60 Air compressor 1 and 2 control
PL218A	PL218A	1	16	3-1/2	4	78 Air compressor 2 feeder
PL218B	PL218B	1	19	2-1/2	19/25	58 Air compressor 2 control
PL218C	PL218C	1	16	2-1/2	19/25	52 Air compressors 1 and 2 control
MOTOR CONTROL CENTER 3						
PL303A	PL303A	1	13	3-1/2	2	69 Unwatering pump 1 feeder
PL303B	PL303B	1	28	2-1/2	19/25	76 Unwatering pump 1 control
PL308A	PL308A	1	14	3-1/2	2	72 Unwatering pump 2 feeder
PL308B	PL308B	1	26	2-1/2	19/25	72 Unwatering pump 2 control
PL311A	PL311A	1	24	2-1/2	19/25	68 Unwatering pump alternator
PL311B	PL311B	1	24	2-1/2	19/25	68 Drain pump alternator
PL311C1	PL311C1	1	46	4-1/2	19/25	224 Unwatering pump low flow alarm horn initia.
PL311C2	PL311C2	1	2	2-1/2	19/25	24 do
PL312A	PL312A	1	14	3-1/2	12	72 Drain pump 1 feeder
PL312B	PL312B	1	24	2-1/2	19/25	68 Drain pump 1 control
PL313A	PL313A	1	17	3-1/2	12	81 Drain pump 2 feeder
PL313B	PL313B	1	22	2-1/2	19/25	64 Drain pump 2 control
PL314A	PL314A	1	35	3-1/2	12	135 MG Set 2 motor feeder
PL314A1	PL314A1	1	15	3-1/2	12	75 MG Set 2 motor feeder
PL314B	PL314B	1	12	10-1/2	19/25	220 MG Set 2 control
PL316	PL316	1	9	1-3/4	8	159 Elevator feeder
PL3161	PL3161	1	9	1-3/4	8	159 do
PL3162	PL3162	1	9	1-3/4	8	159 do
PL317	PL317	1	8	1-3/4	10	401 Manlift feeder
PL3171	PL3171	1	8	1-3/4	10	401 do
PL3172	PL3172	1	8	1-3/4	10	401 do
PL318A	PL318A	1	10	1-3/4	10	566 Sump pump 2 feeder
PL318A1	PL318A1	1	10	1-3/4	10	566 do
PL318A2	PL318A2	1	10	1-3/4	10	566 do
PL318B	PL318B	1	10	1-3/4	10	566 Sump pump 2 control
PL318B1	PL318B1	1	10	1-3/4	10	566 do
PL318B2	PL318B2	1	10	1-3/4	10	566 do
PL318B3	PL318B3	1	10	1-3/4	10	566 Sump pump 2 control & float switch
PL318B4	PL318B4	1	10	1-3/4	10	566 Sump pump 2 float switch
PL319A	PL319A	1	10	1-3/4	10	562 Sump pump 1 feeder
PL319A1	PL319A1	1	10	1-3/4	10	562 do
PL319A2	PL319A2	1	10	1-3/4	10	562 do
PL319B	PL319B	1	10	1-3/4	10	562 Sump pump 1 control
PL319B1	PL319B1	1	10	1-3/4	10	562 do
PL319B2	PL319B2	1	10	1-3/4	10	562 do
PL319B3	PL319B3	1	10	1-3/4	10	562 Sump pump 1 control & float switch
PL319B4	PL319B4	1	10	1-3/4	10	562 Sump pump 1 float switch

CABLE NO.	CONDUIT	CONDUCTOR	FUNCTION	FROM	TO	ROUTINGS OR REMARKS
NO.	SIZE	LENGTH	NO.	SIZE	LENGTH	
MOTOR CONTROL CENTER 4 (UNIT AUXILIARIES)						
PL413	PL413	1	8	-	-	Spore
PL414A	PL414A	1	84	4-1/2	12	576 Gen. cooling water valve feeder
PL414B1	PL414B1	2 1/2	8	-	-	Gen. cooling water valve control
PL414B2	PL414B2	2 1/2	8	-	-	do
PL414C	PL414C	1	72	1-1/2	19/25	680 Gen. cooling water valve control (Plant 1)
PL414D	PL414D	1	72	1-1/2	19/25	680 Gen. cooling water valve test
PL414E	PL414E	1	72	1-1/2	19/25	680 Gen. cooling water valve limit switches
PL418A	PL418A	1	36	3-1/2	8	138 Gen. housing heater feeder
PL418B	PL418B	1 1/2	8	1-1/2	19/25	62 Gen. housing heater control
PL418C	PL418C	1 1/2	8	1-1/2	19/25	62 Gen. housing heater thermostats
PL418D	PL418D	1 1/2	35	-	-	do
PL419A	PL419A	1	36	3-1/2	12	138 Gen. thrust bearing oil pump control
PL419B	PL419B	1	36	3-1/2	12	138 Gen. thrust bearing oil pump feeder
PL419C	PL419C	2	35	1-1/2	19/25	71 Gen. thrust bearing oil pump interlocks
PL419D	PL419D	2	35	1-1/2	19/25	71 do
PL420A	PL420A	1	32	3-1/2	12	126 Hydraulic jack feeder
PL420B	PL420B	1	55	2-1/2	19/25	130 Hydraulic jack control (limit switch)
PL421A	PL421A	1 1/2	30	3-1/2	6	120 Box oil pump 4A feeder
PL422A	PL422A	1 1/2	30	3-1/2	6	120 Box oil pump 4B feeder
PL422B	PL422B	1 1/2	12	1-1/2	19/25	30 Box oil pressure switches
PL423A	PL423A	1	32	3-1/2	12	126 Turbine brg. AC oil pump feeder
PL423B1	PL423B1	2	8	-	-	Turbine brg. AC oil pump control
PL423B2	PL423B2	2	8	-	-	do
PL423C	PL423C	1 1/2	25	-	-	Turbine brg. AC oil pump test
PL424A	PL424A	1	72	3-1/2	12	246 By-pass valve feeder
PL424B1	PL424B1	2	8	-	-	By-pass valve control
PL424B2	PL424B2	2	8	-	-	do
PL424C	PL424C	1 1/2	72	7-1/2	19/25	574 By-pass valve local control
PL424D	PL424D	1 1/2	80	6-1/2	19/25	540 By-pass valve limit switch & interlock
PL424E	PL424E	1 1/2	108	1-1/2	19/25	720 Drain valve interlock & limit switch
PL426A1	PL426A1	1	8	3-1/2	10	54 Rot. amp. drive motor feeder
PL426A2	PL426A2	1	8	3-1/2	10	54 do
PL427	PL427	1	8	-	-	Spore
PL429A	PL429A	2	8	1-3/4	8	165 Butterfly valve feeder
PL429A1	PL429A1	2	8	-	-	do
PL429A2	PL429A2	2	51	-	-	do
PL429B1	PL429B1	2	8	1-3/4	19/25	66 Butterfly control
PL429B2	PL429B2	2	8	1-3/4	19/25	66 do
PL429C	PL429C	2	32	1-3/4	19/25	136 Butterfly valve local control PB
PL429D1	PL429D1	1 1/2	51	1-3/4	19/25	205 Butterfly valve limit switch
PL429D2	PL429D2	1 1/2	51	1-3/4	19/25	205 do
PL429D3	PL429D3	2	51	1-3/4	19/25	205 Butterfly valve control relays
PL320	PL320	2 1/2	7	6-3/4	19/25	165 Control for Drain Pumps
PL321	PL321	2 1/2	7	5-3/4	19/25	150 Control for Unwatering Pumps
PL322	PL322	3/4	3	3-1/2	12	45 Grease Pump feeder for U.P.
PL323	PL323	3/4	3	3-1/2	12	45 Grease Pump feeder for D.P.

Description	Sheet No.	Cable No.
Main Unit 4	1	4 6
Main Unit 5	2	5 6
230 Kv Line, OCB, MOD	3	1Y, 2Y, 3Y, 4Y, 5Y
230 Kv Transformers	4	1Y, 2Y, 3Y, 4Y, 5Y
DC Fdcs.	5	B, Y, C
DC Pnl. (Rnn.)	6	B 200
Annunciation	6	A
Fire Protection	6	FE
Station Service Switchgear	7	MPL, FNT, FKT
Motor Control Centers 1, 2, 3 and 4	8	PL 100, PL 200, PL 300, PL 400
Motor Control Centers 4 and 5	9	B 400, PL 500, B 500
Motor Control Centers 6, 7 and 8	10, 13	PL 600, PL 700, PL 800
Dist. Pnl. 11-15 and 1-4	11	11 PL-15 PL, P100-P400
Dist. Pnl. 5	12	P1500, YAC
Recording Instruments	13	R
Salson and Instr. Bus.	13	M

NOTE

1. Work this drawing with 5577.5-H-41.
2. For payment items see 5-H-41.

4	11-27-59	Minor revision	M.E. CTR
3	8-10-59	Minor corrections	MCA J.B. CTR
2	3-25-59	Minor corrections	W.B. ONE CTR
1	10-1-58	Addendum No. 1	ONE CTR
KEY	DATE	REVISION INDICATED BY	BY CHG. APP.
ERIK FLOOR & ASSOCIATES, INC.		CORPS OF ENGINEERS U.S. ARMY	
ENGINEERS		OFFICE OF THE DISTRICT ENGINEER	
CHICAGO, ILL.		GARRISON DISTRICT	
		RIVERDALE, N.D.	
MISSOURI RIVER IMPROVEMENT			
FORT PECK DAM—SECOND POWER PLANT			
POWERHOUSE			
ELECTRICAL			
POWER AND CONTROL CABLE SCHEDULE			
SHEET 8			
DESIGNED BY HFO		APPROVAL RECOMMENDED	
DRAWN BY TL		APPROVAL RECOMMENDED	
SUPERVISED BY HFO		APPROVAL RECOMMENDED	
CHECKED BY HFO		APPROVAL RECOMMENDED	
APPROVED BY HFO		APPROVAL RECOMMENDED	
M-34 1-20-61 Revised PL 214D, PL 314B added PL 320, PL 321, PL 322, PL 323		SEPTEMBER 1959	
THIS PLAN ACCOMPANIES CONTRACT NO. DA-32-015-ENG 59-175 MODIFICATION NO. 34		SCALE: DRAWING NUMBER 5577.5-H-48	
POWERHOUSE AND SWITCHYARD—CONTRACT			

CORPS OF ENGINEERS

U. S. ARMY

CABLE NO.	CONDUIT			CONDUCTOR			FUNCTION	FROM	TO	ROUTINGS OR REMARKS
	NO.	SIZE	LENGTH	NO.	SIZE	LENGTH				
MOTOR CONTROL CENTER 4 (DC FEEDERS)										
B401A				1-9c	19/25	60	Turb. brg. oil pump control	MCC 4	UC swbd., panel U5	B 401A, Tray D
	B401A	2	7	-	-	-	do.	do.	Tray D	
B401B2				1-7c	19/25	63	Turb. brg. oil pump control	Turbine box	UC swbd., panel U5	B401B2, Tray B
	B401B2	1 1/2	28	-	-	-	do.	do.	Tray B	
B401B3				1-7c	19/25	680	do.	UC swbd., panel U5	RHD panel R3	Tray E
B402				1-2c	8	136	13.8 Kv ACB 52/G4	MCC4	Gen. swgr. ACB 52/G4	B 402, Tray C
	B402	1 1/4	6	-	-	-	do.	do.	Tray C	
B403				1-2c	8	46	13.8 Kv ACB 52/N4	MCC4	Neutral ACB 52/N4	B403-1, Tray C, B403-2
	B403-1	1 1/4	6	-	-	-	do.	do.	Tray C	
	B403-2	1 1/4	10	-	-	-	do.	Tray C	Neutral ACB 52/N4	
B404-1				1-2c	4	136	13.8 Kv ACB solenoid	MCC4	Gen. swgr. ACB 52/G4	B404-1, Tray C
	B404-1	1 1/2	6	-	-	-	do.	do.	Tray C	
B404-2				1-2c	4	46	13.8 Kv ACB solenoid	MCC4	Neutral ACB 52/N4	B404-2A, Tray C, B404-2B
	B404-2A	1 1/2	6	-	-	-	do.	do.	Tray C	
	B404-2B	1 1/2	10	-	-	-	do.	Tray C	Neutral ACB 52/N4	
B405				1-2c	19/25	60	Unit 4 automatic control	MCC4	UC swbd., panel U4	B405, Tray D
	B405	1	7	-	-	-	do.	do.	Tray D	
B406				1-2c	19/25	60	Unit 4 gov. and automatic shutdown	MCC4	UC swbd., panel U4	B406, Tray D
	B406	1	7	-	-	-	do.	do.	Tray D	
B407	B407	1 1/4	8	1-2c	19/22	18	Volt. reg. and gen. excitation	MCC4	Exciter control panel	
B408A				1-2c	19/25	60	Draft Tube Water Depressor Fdr.	MCC4	UC swbd., panel U5	B408A, Tray D
	B408A	1 1/4	7	-	-	-	do.	do.	Tray D	
B408B1	B408B1	1	45	3-1/2c	19/25	165	Draft Tube Water Depressor Control	UC swbd., panel U5	Float Switch	
B408B2	B408B2	1	75	5-1/2c	19/25	425	do.	do.	Press. Switch & Elect. Pneu. Sws.	
B408C				1-7c	19/25	680	do.	do.	RHD Panel R3	Tray C
MOTOR CONTROL CENTER 5 (UNIT AUXILIARIES)										
	PL 513	1	9	-	-	-	Spare	MCC5	Tray E	
PL 514A	PL 514A	1 1/2	30	4-1/2c	12	400	Gen. cooling water valve feeder	MCC5	Cooling water valve	Ground included in conduit
PL 514B1				1-12c	19/25	65	Gen. cooling water valve control	MCC5	UC swbd., panel U1	PL 514 B1, Tray E, 3 spare cond.
	PL 514B1	2 1/2	9	-	-	-	do.	do.	Tray E	
PL 514B2				1-7c	19/25	670	Gen. cooling water valve control	UC swbd., panel U1	RHD swbd., panel R1	Tray E
PL 514C	PL 514C	1 1/2	76	1-5c	19/25	86	Gen. cooling water valve test	UC swbd., panel U1	Test push button	
PL 514D	PL 514D	1 1/2	74	1-5c	19/25	84	Gen. cooling water valve limit switches	UC swbd., panel U1	Limit switches	
PL 518A	PL 518A	1	32	5-1/2c	8	126	Gen. housing heater feeder	MCC5	Gen. box	
PL 518B		1 1/2		1-5c	19/25	63	Gen. housing heater control	MCC5	UC swbd., panel U1	PL 518 B, Tray E
	PL 518 B		9	-	-	-	do.	do.	Tray E	
PL 518C				1-9c	19/25	100	Gen. housing heater thermostat	UC swbd., panel U1	Gen. box	PL 518C, Tray D
	PL 518 C	1 1/4	40	-	-	-	do.	Tray D	Gen. box	
PL 519D				1-7c	19/25	680	Gen. thrust brg. oil pump control	UC swbd., panel U1	RHD swbd., panel R1	Tray E
PL 519A	PL 519A	1 1/4	30	3-1/2c	12	120	Gen. thrust brg. oil pump feeder	MCC5	Gen. box	
PL 519B				1-9c	19/25	96	Gen. thrust brg. oil pump control	Gen. box	UC swbd., panel U1	PL 519 B, Tray D
	PL 519 B	2	36	-	-	-	do.	do.	Tray D	
PL 519C				1-7c	19/25	90	Gen. thrust brg. oil pump interlock	Gen. box	UC swbd., panel U1	PL 519C, Tray D
	PL 519C	2	36	-	-	-	do.	do.	Tray D	
PL 520A	PL 520A	1	33	3-1/2c	12	130	Hydraulic Jack feeder	MCC5	Hydraulic Jack	
PL 520B	PL 520B	1	42	2-1/2c	19/25	104	Hydraulic Jack control (limit switch)	Hydraulic Jack	Gen. box	
PL 521A	PL 521A	1 1/4	28	3-1/2c	6	114	Gov. oil pump 5A feeder	MCC5	Cabinet actuator	
PL 522A	PL 522A	1 1/4	28	3-1/2c	6	114	Gov. oil pump 5B feeder	MCC5	Cabinet actuator	
PL 522B	PL 522B	1 1/4	12	1-3c	19/25	30	Gov. oil pressure switches	Cabinet actuator	UC swbd., panel U1	
PL 523A	PL 523A	1	34	3-1/2c	12	132	Turb. brg. AC oil pump feeder	MCC5	Turbine box	
PL 523B1				1-7c	19/25	63	Turb. brg. AC oil pump control	MCC5	UC swbd., panel U1	PL 523 B1, Tray E
	PL 523 B1	2	9	-	-	-	do.	do.	Tray E	
PL 523B2				1-7c	19/25	670	Turb. brg. AC oil pump control	UC swbd., panel U1	RHD swbd., panel R1	Tray E

CABLE NO.	CONDUIT			CONDUCTOR			FUNCTION	FROM	TO	ROUTINGS OR REMARKS
	NO.	SIZE	LENGTH	NO.	SIZE	LENGTH				
PL 523C				1-3c	19/25	70	Turb. brg. AC oil pump test	Turbine box	UC swbd., panel U1	PL 523 C, Tray D
PL 524A	PL 524A	1 1/4	30	5-1/2c	12	270	By-pass valve feeder	MCC5	By-pass valve	
PL 524B1	PL 524B1	2	9	1-7c	19/25	63	By-pass valve control	MCC5	UC swbd., panel U1	PL 524 B1, Tray E
PL 524B2				1-7c	19/25	670	By-pass valve control	UC swbd., panel U1	RHD swbd., panel R1	Tray E
PL 524C	PL 524C	1 1/4	64	7-1/2c	19/25	518	By-pass valve local control Plant #1	UC swbd., panel U1	Local push button	
PL 524D	PL 524D	1	72	6-1/2c	19/25	512	By-pass valve limit switch & interlock	UC swbd., panel U1	Limit switch & interlock	
PL 524E	PL 524E	1 1/4	98	1-2c	19/25	110	Spiral Case Drain Valve Interlock & limit switch	UC swbd., panel U1	Spiral Case Drain Valve Interlock & limit switch	
PL 526A1	PL 526A1	1	8	3-1/2c	10	54	Rot. amp. drive motor feeder	MCC5	Controller (Exc. cubicle)	
PL 526A2	PL 526A2	1	10	3-1/2c	10	60	do.	Controller	Rot. amp. drive motor	
PL 527				1	9		Spare	MCC5	Tray E	
PL 529A				1-3c	8	180	Butterfly valve fdr.	MCC5	Butterfly valve motor	PL 529 A1, Tray E, PL 529 A2
PL 529A1	2	9					do.	do.	Tray E	
PL 529A2	2	70					do.	do.	Tray E	
PL 529B1	PL 529B1	2	9	1-5c	19/25	63	Butterfly valve control	UC swbd., panel U1	Butterfly valve motor	PL 529 B1, Tray E
PL 529B2				1-7c	19/25	670	do.	do.	Tray E	
PL 529C	PL 529C	2	50	1-9c	19/25	185	Butterfly valve local P.B.	UC swbd., panel U1	Local push button	PL 529C, Tray E
PL 529D1	PL 529D1	1 1/4	60	1-3c	19/25	195	Butterfly valve limit switch	UC swbd., panel U1	Limit switch	PL 529 D1, Tray E
PL 529D2	PL 529D2	2	60	1-9c	19/25	195	Butterfly valve control relays	Unit C swbd., panel U1	Control Relays	PL 529 D2, Tray E
PL 529D2							do.	Tray E	Control Relays	
MOTOR CONTROL CENTER 5 (DC FEEDERS)										
B501A				1-9c	19/25	63	Turb. brg. oil pump control	MCC5	UC swbd., panel U1	B501A, Tray D
B501A	2	8					do.	do.	Tray D	
B501B2				1-7c	19/25	71	Turb. brg. oil pump control	Turbine box	UC swbd., panel U1	B501B2, Tray D
B501B3	B501B2	2	28	1-7c	19/25	680	do.	do.	Tray D	
B502				1-2c	8	161	13.8 Kv ACB 52G5	MCC5	RHD panel R1	Tray E
B502	1 1/4	7					do.	do.	Tray C	
B503				1-2c	8	43	13.8 Kv ACB 52N5	MCC5	Gen. swgr. ACB 52G5	B502, Tray C
B503-1	1 1/4	7					do.	do.	Tray C	
B503-2	1 1/4	10					do.	do.	Tray C	
B504-1				1-2c	4	161	13.8 Kv solenoid	MCC5	Neutral ACB 52N5	B503-1, Tray C, B503-2
B504-1	1 1/2	7					do.	do.	Tray C	
B504-2				1-2c	4	43	13.8 kv solenoid	MCC5	Neutral ACB 52N5	B504-1, Tray C
B504-2A	1 1/2	7					do.	do.	Tray C	
B504-2B	1 1/2	10					do.	do.	Tray C	
B505				1-2c	19/25	60	Unit 5 automatic control	MCC5	Neutral ACB 52N5	B504-2A, Tray C, B504-2B
B505	1 1/4	8					do.	do.	Tray C	
B506				1-2c	19/25	60	Unit 5 gov. and automatic shutdown	MCC5	UC swbd., panel U2	B505, Tray D
B506	1 1/4	8					do.	do.	Tray D	
B507				1-2c	19/25	18	Volt. reg. and gen. excitation	MCC5	UC swbd., panel U2	B506, Tray D
B508A	B507	1 1/4	8	1-2c	19/25	60	Draft Tube Water Depressor Fdr.	MCC5	Tray D	
B508B1	B508B1	1	40	3-1/2c	19/25	150	do.	do.	Exciter control panel	B508A, Tray D
B508B2	B508B2	1	75	5-1/2c	19/25	425	Draft Tube Water Depressor Control	UC swbd., panel U1	UC swbd., panel U1	
B508C				1-7c	19/25	680	do.	do.	Tray D	

Description	Sheet No.	Cable No.
Main Unit 4	1	46
Main Unit 5	2	56
230 Kv Line, OCB, MOD	3	1Y, 2Y, 3Y, 4Y, 5Y
230 Kv Transformers	4	1Y50, 2Y50, 5Y51
DC Fdrs	5	B, YDC
DC Pnl. (Ann)	6	B200
Annunciation	6	A
Fire Protection	6	FE
Station Service Switchgear	7	MPL, FMT, FKT
Motor Control Centers 1, 2, 3, and 4	8	PL 100, PL 200, PL 300, PL 400
Motor Control Centers 4 and 5	9	B400, PL 500, B500
Motor Control Centers 6, 7, and 8	10, 13	PL 600, PL 700, PL 800
Dist. Pnl. 11-15 and 1-4	11	11 PL-15 PL, P100, P1400
Dist. Pnl. 5	12	P1500, YAC
Recording Instruments	13	R
Selsyn and Instr. Bus	13	M

NOTE:

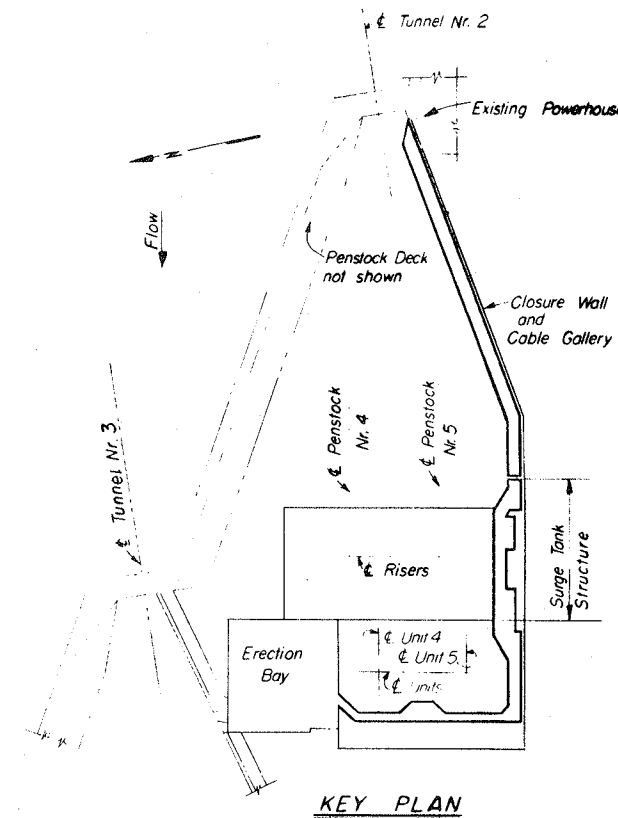
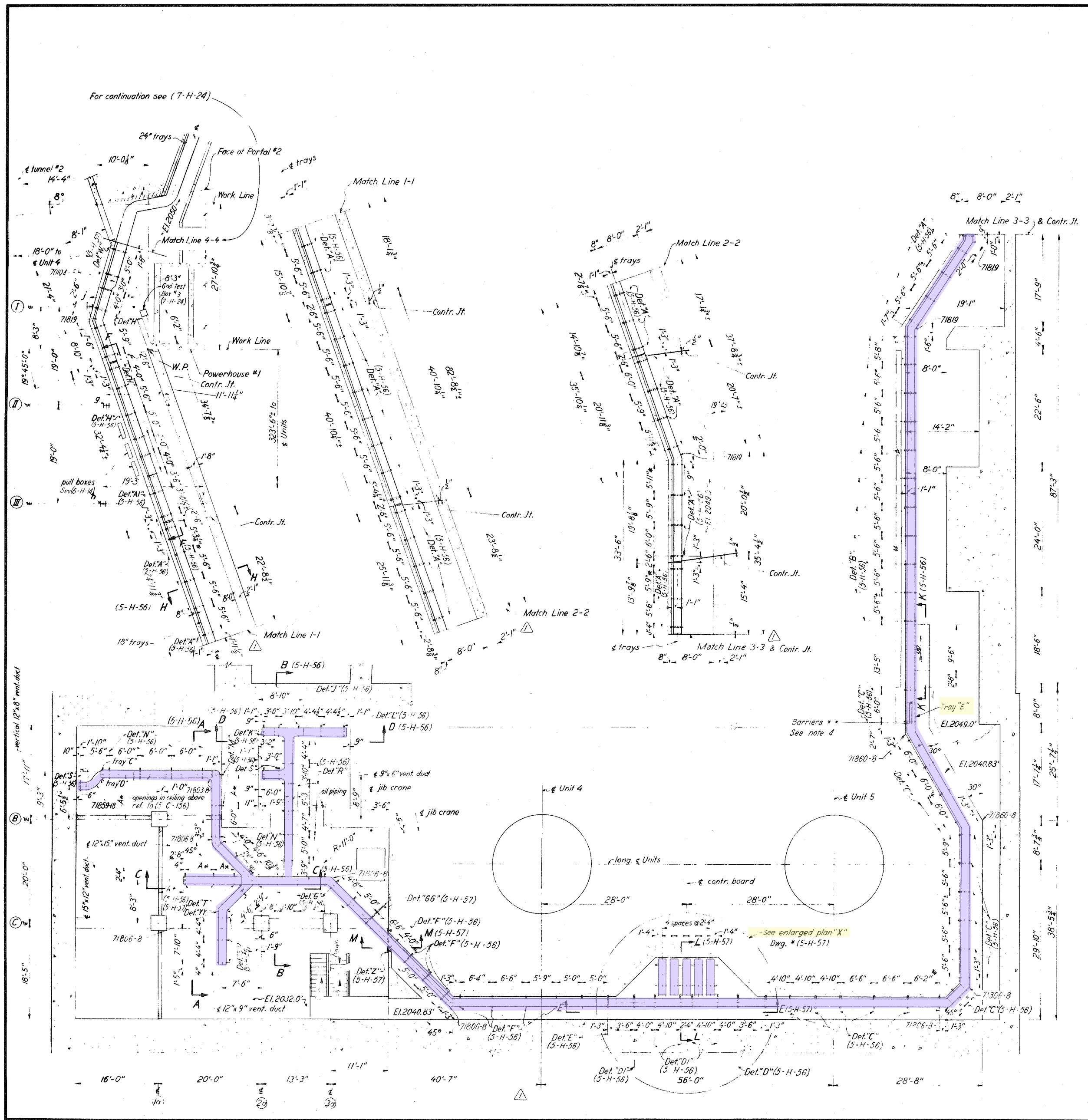
Work this drawing with 5571.5-H-41
For payment items see 5571.5-H-41

THIS DRAWING HAS BEEN REDUCED TO
ONE HALF THE ORIGINAL SCALE

M-34 1-20-61 Revised PL 521A, PL 522A, PL 523C, PL 524A

THIS PLAN ACCOMPANIES CONTRACT NO.
DA-32-015-eag. 59-175 MODIFICATION NO. 34

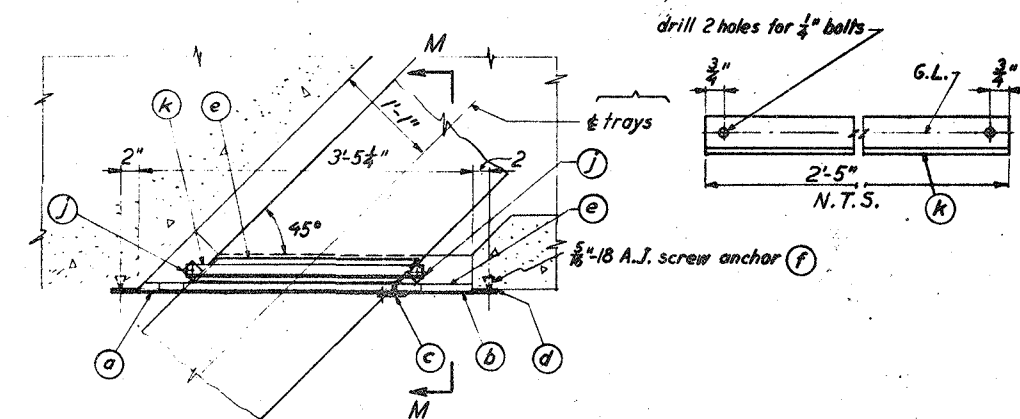
4	11-27-59	Minor corrections	TJH, CFB
3	8-10-59	Minor corrections	LLM, CFB
2	3-25-59	Minor corrections	HAZ, CFB
1	10-1-58	Addendum No. 1	TJH, GAS, HAZ
KEY	DATE	REVISION INDICATED BY	BY
ERIK FLOOR & ASSOCIATES, INC.		CORPS OF ENGINEERS U.S. ARMY	
ENGINEERS		OFFICE OF THE DISTRICT ENGINEER	
CHICAGO, ILL.		GARRISON DISTRICT	
		RIVERDALE, N.D.	
DESIGNED BY: HFO		MISSOURI RIVER IMPROVEMENT	
DRAWN BY: ZL, YF		FORT PECK DAM—SECOND POWER PLANT	
SUPERV. BY: HAZ		POWERHOUSE	
SUBMITTED BY: HAZ		ELECTRICAL	
		POWER AND CONTROL CABLE SCHEDULE	
		SHEET 9	
APPROVAL RECOMMENDED BY: HAZ		APPROVAL RECOMMENDED BY: HAZ	
APPROVED BY: HAZ		APPROVED BY: HAZ	
DATE: 11-27-59		DATE: 11-27-59	
SCALE: 1"=10'		SCALE: 1"=10'	
DRAWING NUMBER: 5571.5-H-49		DRAWING NUMBER: 5571.5-H-49	
SHEET 9 OF 9		SHEET 9 OF 9	
POWERHOUSE AND SWITCHYARD—CONTRACT			

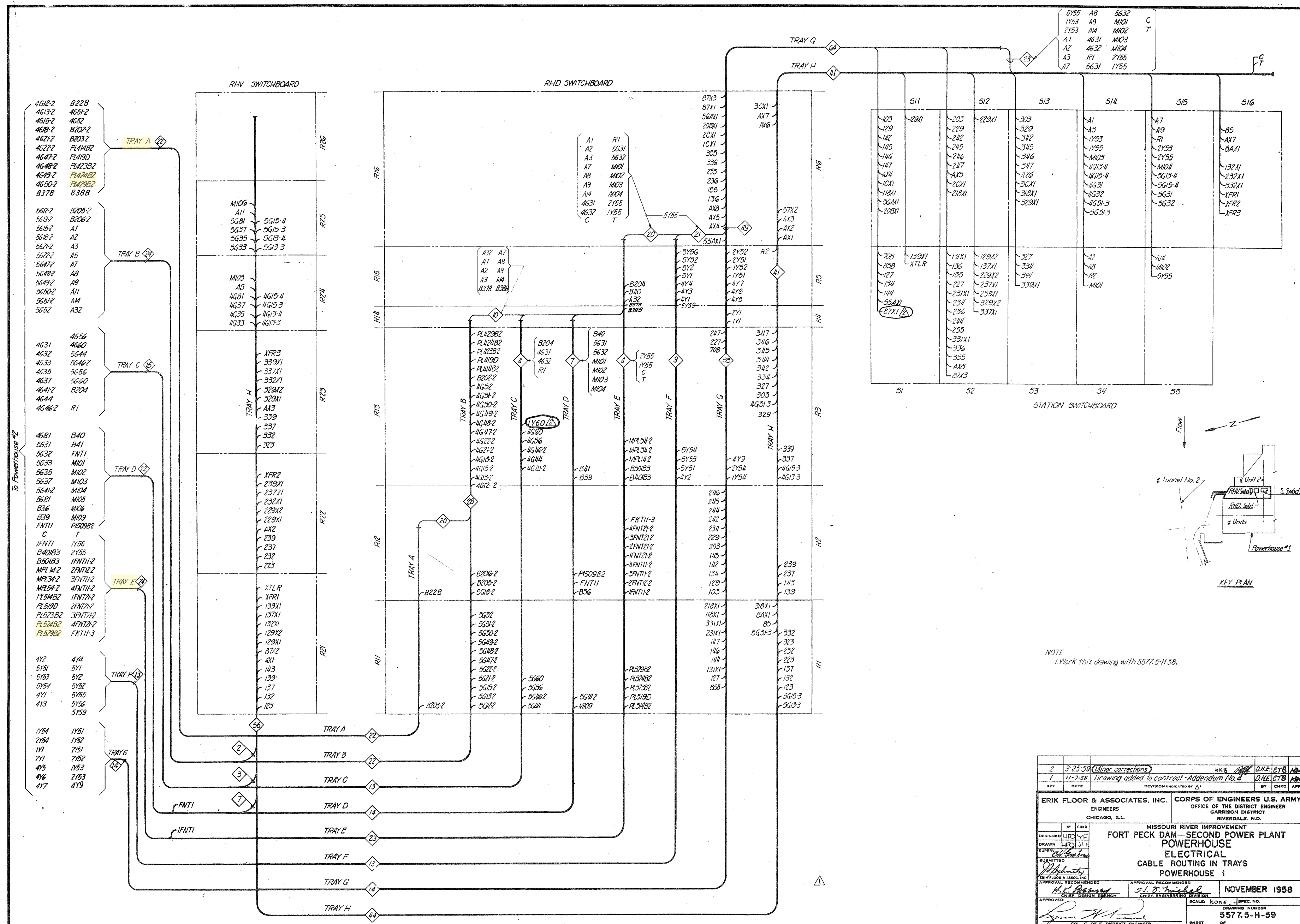


- NOTES:
1. Work this Dwg. with (5-H-56), (5-H-57), (7-H-22), (7-H-23) & (7-H-24)
 2. Dimensions marked by asterisk (*) must be checked in field.
 3. For general notes see drawings (5-H-56) or (5-H-57)
 4. Tray "E" have 2 barriers starting at 30° flat elbow (mark **) and continuing to Powerhouse 1.
- PAYMENT ITEMS:

1		10-10-58	Addendum No. 2	4428	J.P.B. CTB	APR
KEY	DATE	REVISION INDICATED BY		BY	CHKD.	APP.
ERIK FLOOR & ASSOCIATES, INC. ENGINEERS CHICAGO, ILL.				CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, N.D.		
MISSOURI RIVER IMPROVEMENT FORT PECK DAM—SECOND POWER PLANT ELECTRICAL CABLE TRAY ARRANGEMENT PLAN—SHEET 1						
DESIGNED	J.B.	BY	CHKD.			
DRAWN	J.P.B.					
SUPERV.	J.P.B.					
SUBMITTED	J.P.B.					
APPROVAL RECOMMENDED		APPROVAL RECOMMENDED		SEPTEMBER 1958		
H.R. BARNES CHIEF DESIGN BRANCH		H.M. MICHEL CHIEF ENGINEERING DIVISION		DRAWING NUMBER 5577.5-H-55		
APPROVED:		APPROVED:		SHEET OF		
COL. C. OF E. DISTRICT ENGINEER		COL. C. OF E. DISTRICT ENGINEER				

POWERHOUSE AND SWITCHYARD—CONTRACT





NOTE
1. Work this drawing with 5577.5-H-58.

2	3-25-59	Minor corrections	WKB	ONE	CTB	APR
1	11-7-58	Drawing added to contract - Addendum No. 2	ONE	CTB	APR	
KEY	DATE	REVISION INDICATED BY	BY	CHKD	APP	
ERIK FLOOR & ASSOCIATES, INC. ENGINEERS CHICAGO, ILL.			CORPS OF ENGINEERS U.S. ARMY OFFICE OF THE DISTRICT ENGINEER GARRISON DISTRICT RIVERDALE, ILL.			
DESIGNED BY CHKD DRAWN BY CHKD SUPERV BY CHKD SUBMITTED BY CHKD APPROVAL RECOMMENDED BY CHKD APPROVED BY CHKD						
FORT PECK DAM—SECOND POWER PLANT ELECTRICAL CABLE ROUTING IN TRAYS POWERHOUSE 1						
NOVEMBER 1958						
DRAWING NUMBER 5577.5-H-59						
SHEET OF						