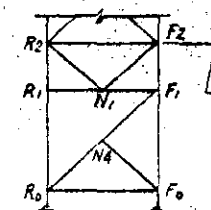


LOAD TO LIFT = 2800 Kips
 Sheave Load:
 Span 2800 x 8 = 350"
 Counterweight = 350
 Ropes & Fastening = 15
 Sheave & Bearing = 45
 Operating Force = 20
Total = 780 Kips/Sheave

Bearing Loads:
 Bearing at G1/G1A = 380 Kips
 Bearing at G2/G2A = 400 Kips



Bracing above this point same as on East Tower except omit N2/N3

TOWER TOP					
	Longitudinal sheave girders		Floor str.		
	G1, G1A	G2, G2A	S1	S2	
Dead Load	45	51	36	26	130
Sheave Load	702	350	740	370	
Impact 30% Sheave Load	140	70	148	74	
Wind Shear Impact	887	431	924	470	1300
Counterweight impact			2060	229	
Dead Load on Floor			2300	280	
Net section @ 20 Ksi	533	1110			78
Modulus Required @ 23 Ksi					
Gross Area of 3/2 Hrs		38		40	
Web required @ 15 Ksi					
web	82 x 1/2	82 x 1/2			
Flanges	14 x 1/2	14 x 1/2		27 W	
Section Modulus	1400	1280		242	
Web Area Gross	46.13	46.13			
Material				A 36	

FRONT COLUMN BRACING

SIDE ELEVATION BRACING EAST TOWER

REAR COLUMN BRACING

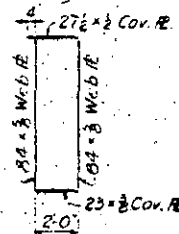
SIDE ELEVATION BRACING WEST TOWER

Member	FRONT COLUMN						REAR COLUMN					
	F1	F2	F3	F4	F5	F6	R1	R2	R3	R4	R5	R6
Dead Load	335	348	471	479	568	728						
Sheave Load	1440	1440	1440									
Impact	288	288	288									
Wind	143	2076	2199	479	560	728						
10° Longitudinal	36	135	295	36	135	204						
15° Longitudinal	46	326	635	96	326	465						
10° Transverse	25	56	137	11	19	43						
15° Transverse	27	49	115	25	47	107						
20° Transverse	62	82	82									
25° Transverse	136	136	136									
30° Transverse			706			236						
35° Transverse			610			290						
Gravity Load Moments	1290		36	490	157							
Wind Stress	1963	2076	2356	479	892	835						
Moment	1890		362	490		740						
Section	18x54 (19x54) 18x36 (18x36)						24x25 (24x25) 24x18 (24x18)					
Dead Load Stress	33	116	183.6	61	48.5	60						
Wind Stress	22	357	26	373	314	33						
Allowable stress	100	13.4	18.3	6.3	19.6	9.86						
Area required	197	112	146	55.0	43.5	84.5						
Material	A 36						A 36					

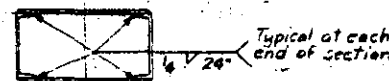
Member	FRONT BRACING						REAR BRACING					
	Portal			Above portal			Portal			Above portal		
	F1, F2	F3, F4	Diagonals	F5, F6	F1, F2	Diagonals	R1, R2	R3, R4	Diagonals	R5, R6	R1, R2	Diagonals
Control House Load	-37		±55			±63			±17			±19
Transverse Wind	+63/+118	-134/-23	±38	-62/-42	±65	+63/+25	-105/-24	±47	-40/-29	±43		±43
Bending Moment							16.54	22				
Design Stress	-160	-152	±113	-62	±128	-103	-155	-112/+144	-40	±62		
Moment							56	22				
L/R	56	56	40.5	64	102	56	47	40.5	64	106		
Allowable Stress	15.0	15	15.5	13.9	12.6	9.0	10.2	19.4	13.9	12.6		
Area	20	20	20	20	20	20		22	22	20		
Acquired	10.2	9.0	7.3	4.5	18.1	11.4	15.2	5.8	2.9	5.1		
Section	2-12I 25 2 Cover RA = (30x16) B						2-12I 25 2-2x25-2x25 (24-12) B					
Area	14.64						14.64					
Material	A 36						A 36					

Member	SIDE BRACING					
	F1, F2	F3, F4	N1, N2	N3, N4	F5, F6	F1, F2
Control House Load						±26
Dead Load	±90	±43			±42	
Wind	±260		-199/-175	-23	±114	±145
Bending Moment			68.5		±141	±50
Design Stress	±351	-45	-199/-175	-23	±156	-145/-102
Moment			68.5			
L/R	40	46	30	30	31.6	32.2
Allowable Stress	15.5	15.3	15.7	15.7	14.8	14.5
Area	26.6	20	20	20	20	20
Acquired	14.64	14.64	14.64	14.64	14.64	14.64
Material	A 36					

Member	COLUMN REACTIONS (KIPS)		
	Front Column	East Column	West Column
Dead Load	-552	-555	-808
Sheave Load	-1440	-120	-
Total Static Load	-1992	-675	-808
Sheave Load Impact	-288	-24	-
Live Load on Tower Floor	-99	-99	-
L.L. on Tower Floor Impact	-26	-26	-
Maximum Load 1/2 Wind	-2280	-600	-808
Minimum Load 1/2 Wind	-1007	-545	-678
10° Longitudinal Wind	±318	±318	±271
15° Longitudinal Wind	±678	±678	±478
Total Maximum Load	±2670	±1353	±1486
Total Minimum Load	-3229	-1333	0
10° Wind Longitudinal	±57	±57	±57
15° Wind Transverse	±59	±21	±21
15° Wind Longitudinal	±108	±108	±108
15° Wind Transverse	±54	±54	±54



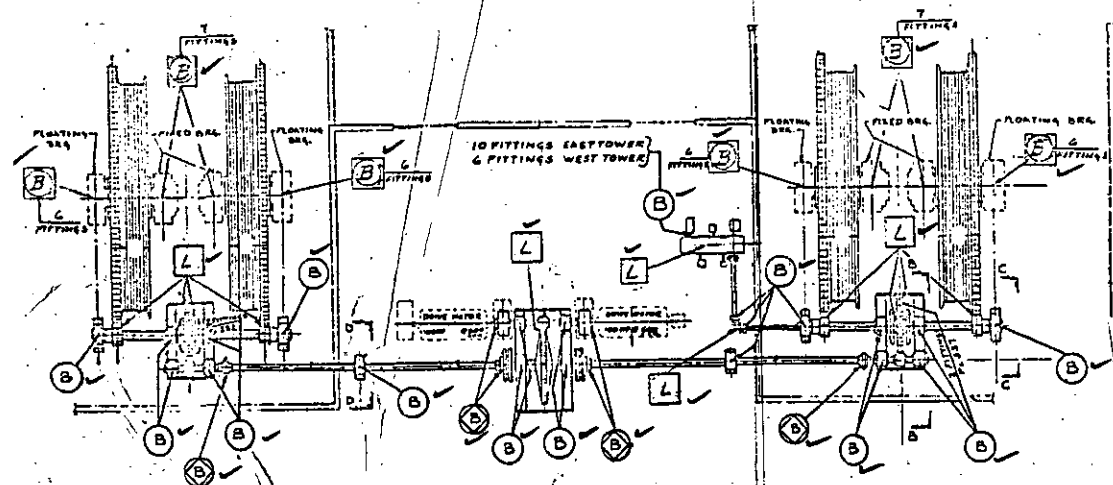
SECTION A-A
F4 F5



DETAIL W
Additional Welds At Ends

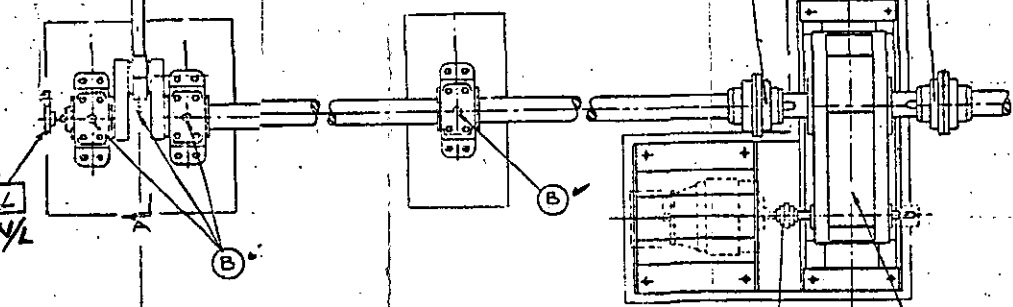
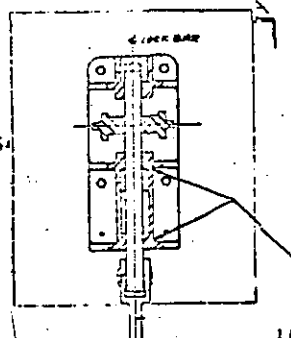
BR. N^o 17-25-10
NEW HAMPSHIRE Co.

	Hydraulic fitting		Mobil - Mobilux EP-2
	Grease fill plug	B	Phillips - Philube EP-2
	Oil fill plug cap or access cover		Exxon - Lidok EP-2
	Spur bevel gears brush application		Mobil - Sovarex LO
	Oil can application	C	Phillips - Philube LO
	Button fitting or flat fitting		Exxon - Lidok EP-0
	Cap fitting Brush application	E	Mobil - Mobilgear 634
	Brush application		Phillips - APGO-140
	Screw fitting		Exxon - Spartan EP-5
	Lock fitting	L	Mobil - Mobiltac E
			Phillips - Philstick D-3
			Exxon - Surett Fluid 50

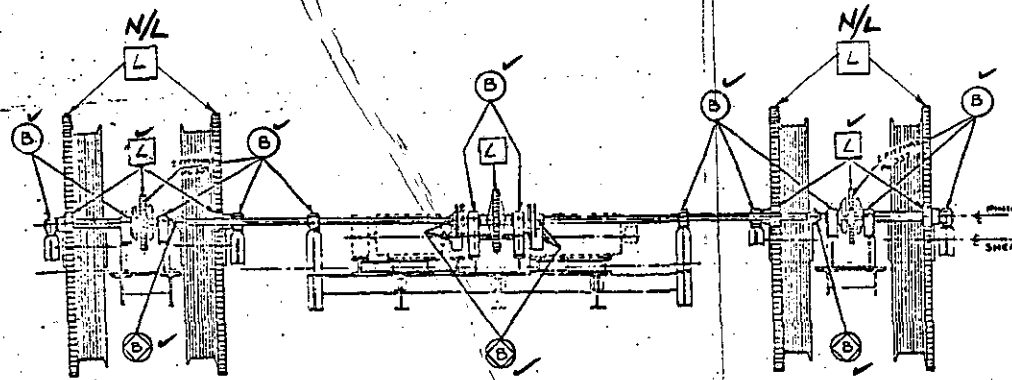
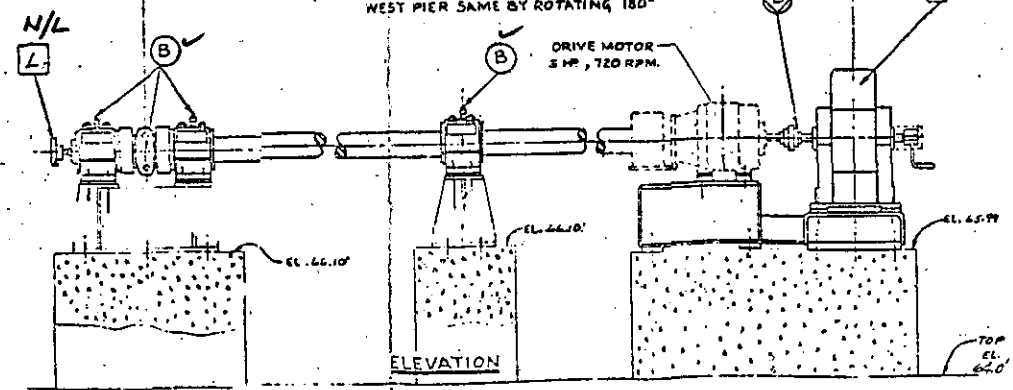


PLAN VIEW OPERATING MACHINERY
EAST TOWER
(WEST TOWER OPP HAND EXCEPT AS NOTED)

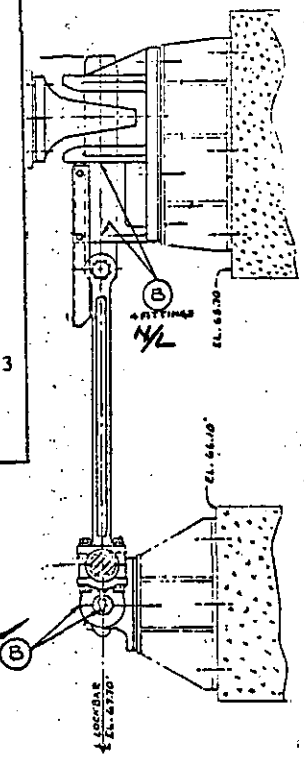
N/L INDICATES NEEDS LUBRICATION



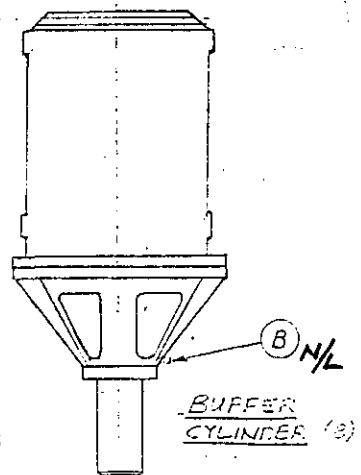
PLAN VIEW-LOCK MACHINERY
EAST PIER SHOWN
WEST PIER SAME BY ROTATING 180°



ELEVATION VIEW



SECTION A-A



BUFFER CYLINDER (B)

12/76