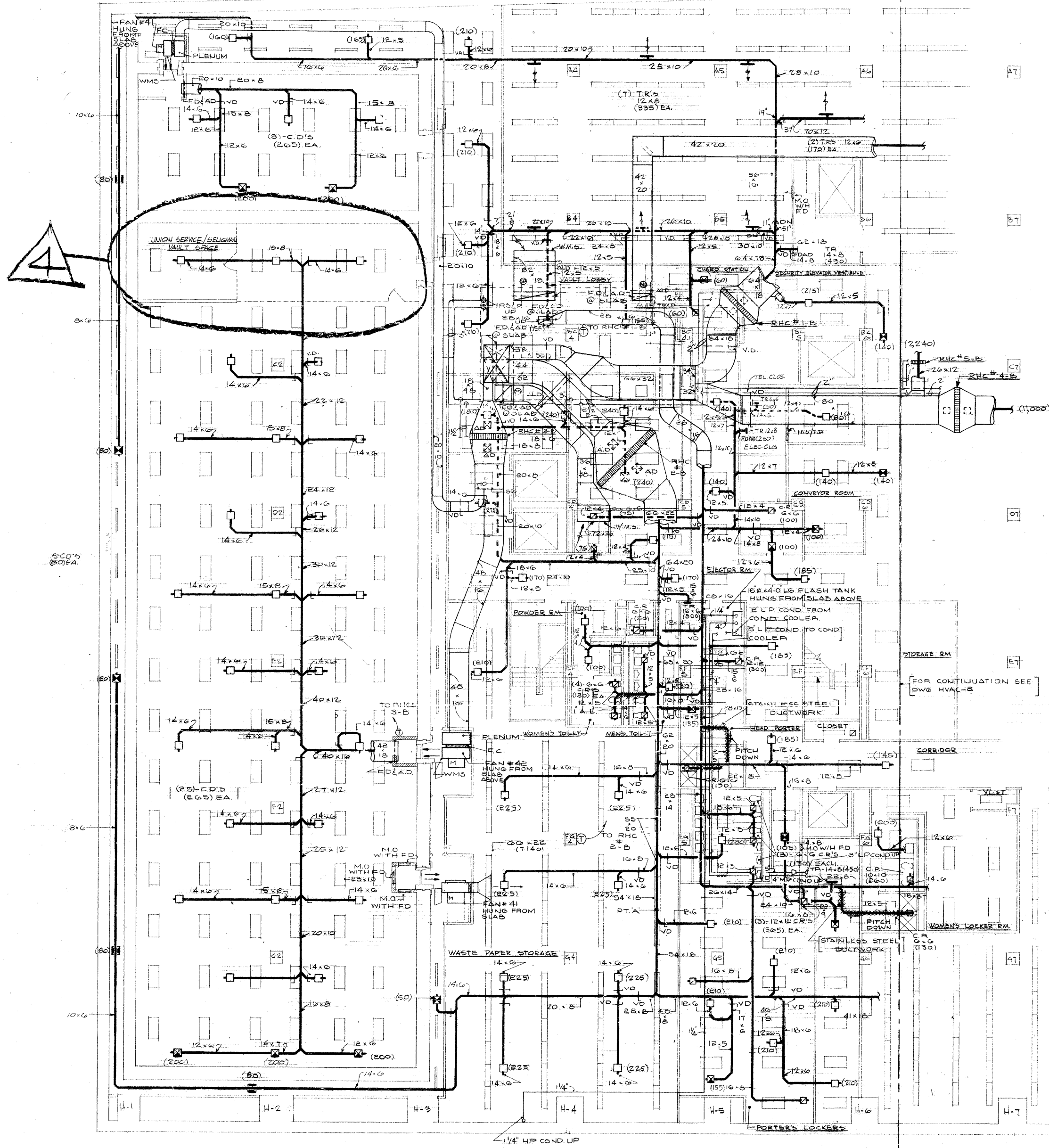


NOTES

- 1 ALL C.D.'S SHALL BE SIZE 1208 UNLESS OTHERWISE NOTED.
- 2 INSULATE ALL DUCTWORK DOWN-STREAM OF PT.'A' PER SPEC PARA 15C.G.4.C.1(C).
- 3 SEE DWG HVAC-45 FOR GENERAL NOTES APPLICABLE TO ALL DRAWINGS.
- 4 SEE DWG HVAC-45 FOR MOTOR CONTROL CENTER AND STARTER NOTES.
- 5 SEE DWG HVAC-45 FOR MISC AUTO CONTROL NOTES.
- 6 SEE DWG HVAC-41 FOR KEY TO SYMBOLS.
- 7 ALL C.D.'S SHALL BE 22-10 UNLESS OTHERWISE NOTED.



REVISIONS		
NO.	DATE	DESCRIPTION
1	6-12-72	GENERAL REVISION
2	9-19-72	REVISED CIRCLED AREA
3		REVISED CIRCLED AREA
4	3-12-74	REVISED DIFFUSED LOCATION FOR UNION SERVICE/DELIGMAN VAULT SPACE.

ISSUED TO NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES R.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
912 THIRD AVENUE N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. 10022

JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

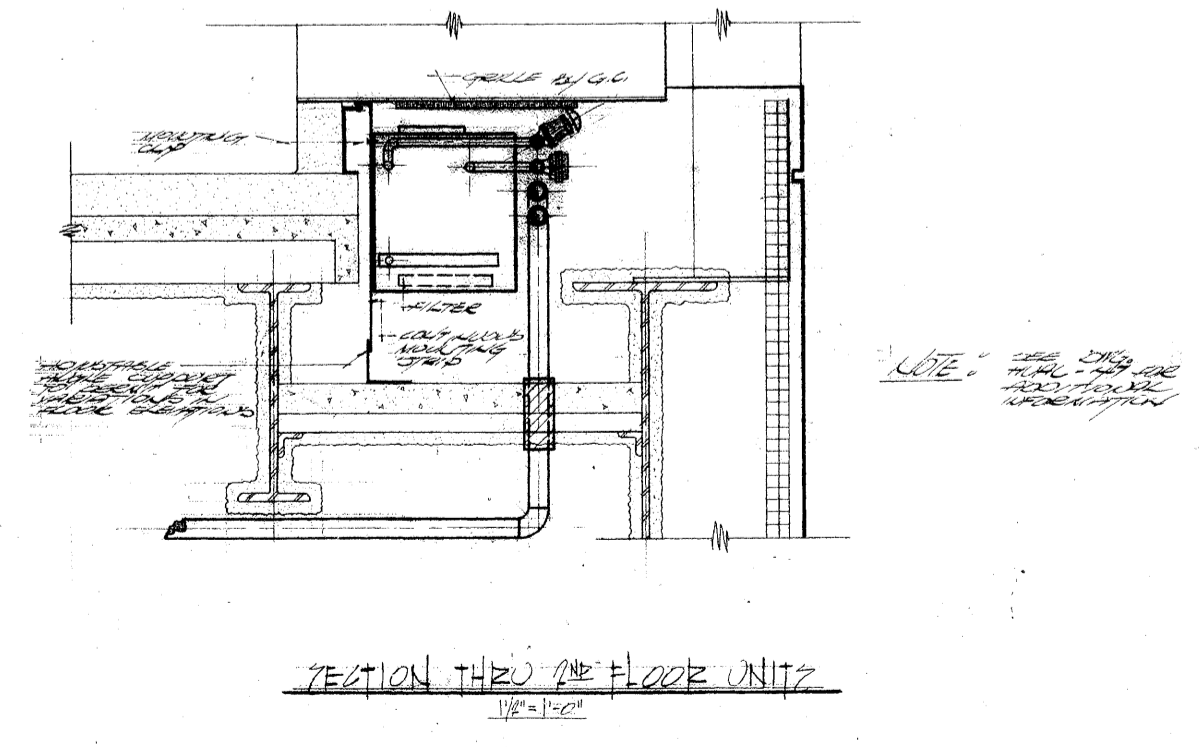
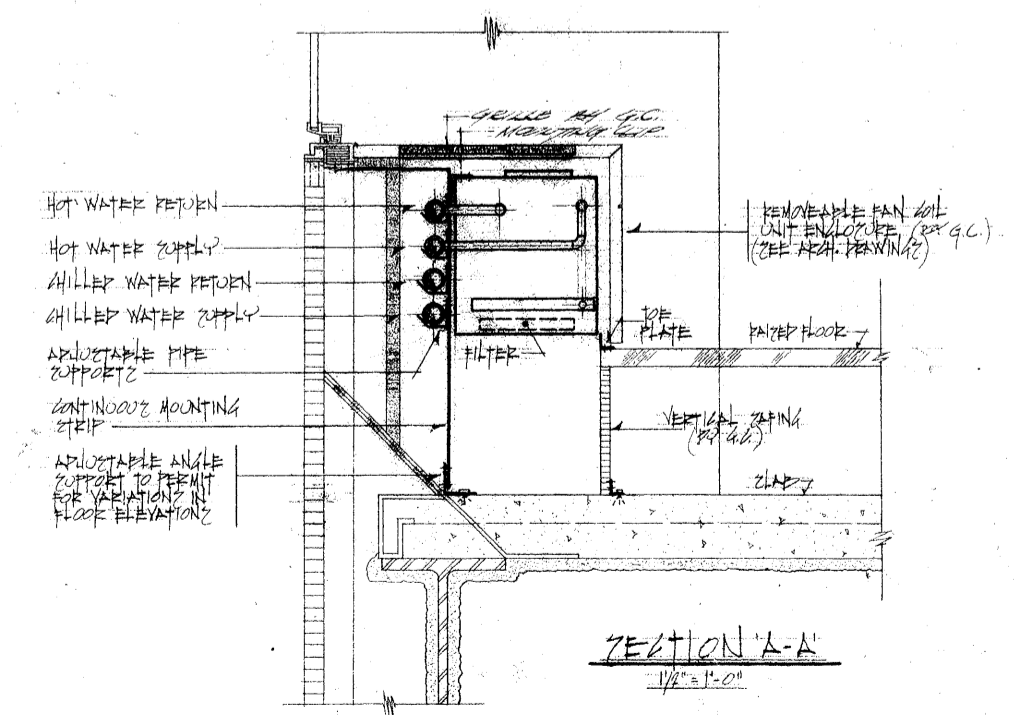
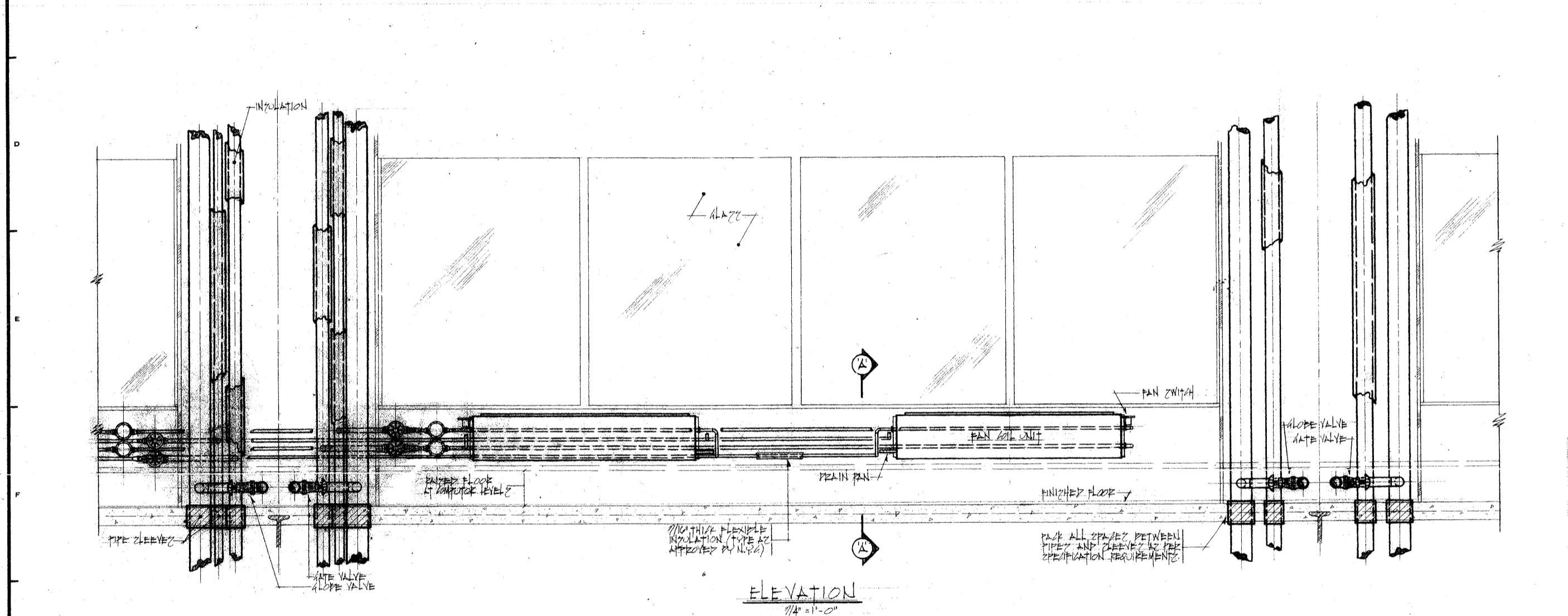
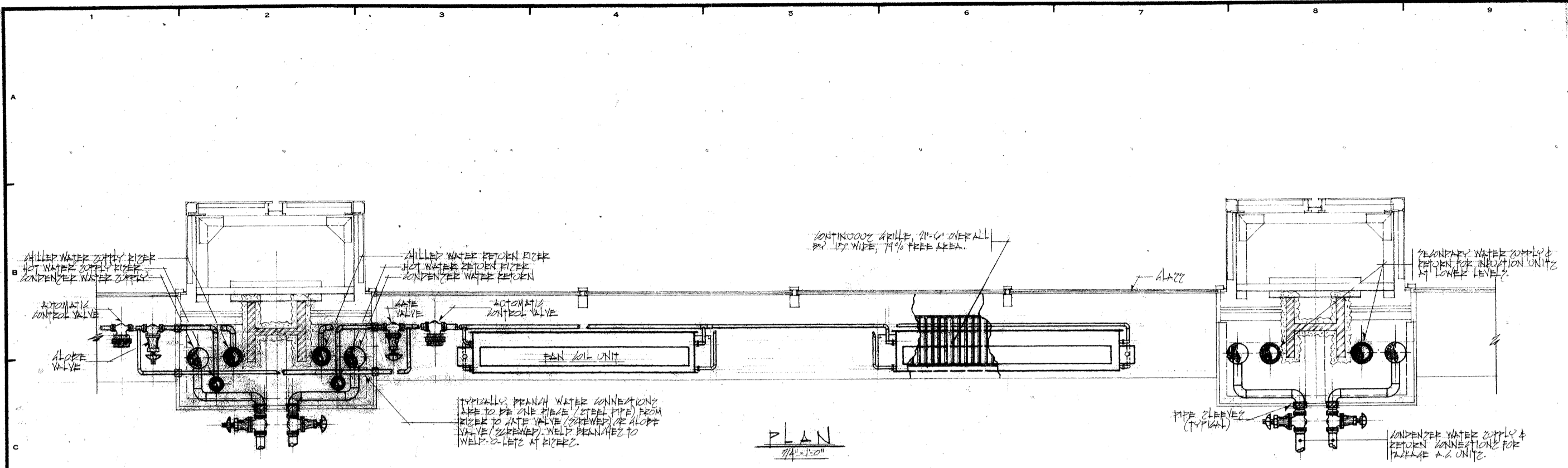
SUB-CELLAR PLAN SOUTH LEVEL 'B'

PROJECT NUMBER
7101

DRAWING NUMBER
HVAC-1

DATE
1-7-72

SCALE
1/8" = 1'-0"



REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.

**BANKERS TRUST
PLAZA**

**A FISHER BROTHERS
PROJECT**

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C.
ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER
ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

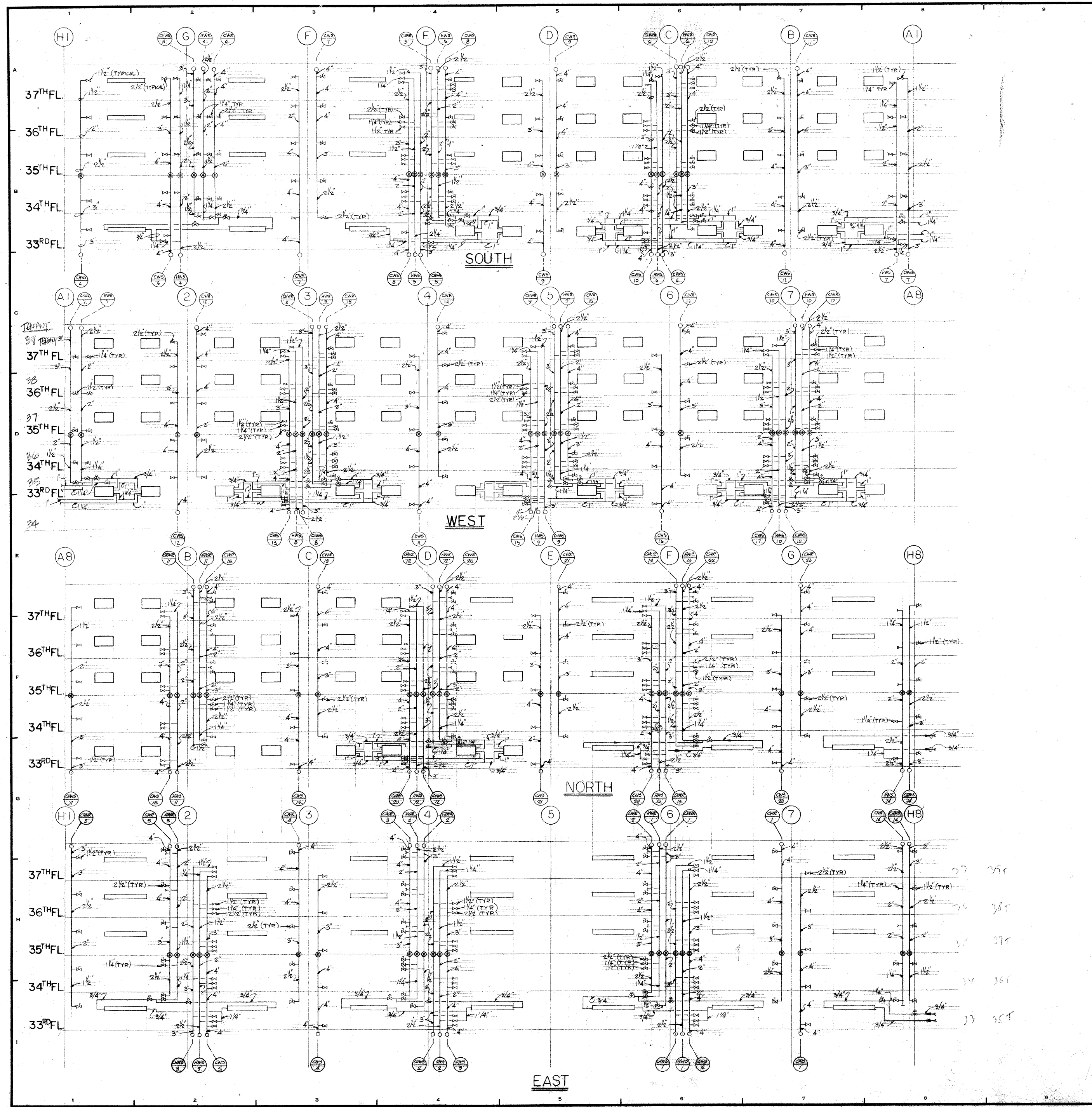
THE OFFICE OF JAMES RUDERMAN
STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. N. Y. 10022

J. A. ROS, BAUM & BOLLES
MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

**FAN COIL UNIT
DETAILS**

	PROJECT NUMBER
	7101
	DRAWING NUMBER
	HVAC-46
DATE	1-27-57
SCALE	AS NOTED

1/6 of



REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.

**BANKERS TRUST
PLAZA**

**A FISHER BROTHERS
PROJECT**

GREENWICH AND LIBERTY ST. N. Y. N. Y.

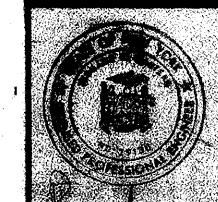
**SHREVE, LAMBA HARMON ASSOCIATES P.C.
ARCHITECTS**
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

**PETERSON AND BRICKBAUER
ASSOCIATED ARCHITECTS**
919 THIRD AVENUE N. Y. N. Y. 10022

**THE OFFICE OF JAMES RUDERMAN
STRUCTURAL ENGINEERS**
513 MADISON AVENUE N. Y. N. Y. 10022

**J. A. ROS, BAUM & BOLLES
MECH. & ELEC. ENGINEERS**
345 PARK AVENUE N. Y. N. Y. 10022

**PERIMETER RISER DIAG.
33RD TO 37TH FLOORS**



PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-47
DATE	4-26-72
SCALE	NONE

47

267201

PRV NO.	LOCATION	SERVICE	INLET PRESS. P.S.I.G.	OUTLET PRESS. P.S.I.G.	CAPACITY LBS./HR.	SIZE (INCHES)	TYPE	REMARKS
1	30th FL. MEZ	HVAC 20th FL.	125	70	30000	4	DDL	REVISED # I
2			70	10	30000	4	DDL	
3			125	70	7000	2	DDL	
4			70	10	7000	2	DDL	
5	30th FL. MEZ	HVAC 20th FL.	125	70	35000	4	DDL	REVISED # II
6			70	10	35000	5	DDL	
7			125	70	9000	2	DDL	
8			70	10	9000	2 1/2	DDL	
9	5th FL. MEZ	WATER	125	-	-	2 1/2	DDL	SAFETY CRIT-OFF VALVE
10	5th FL. MEZ	WATER	125	25	3600	1 1/2	DDL	
11	5th FL. M.E.R.	ZUM-ZUM 1ST FLOOR	125	-	-	2 1/2	DDL	SAFETY CRIT-OFF VALVE
12	5th FL. M.E.R.	ZUM-ZUM 1ST FLOOR	125	12	200	1/2	DDL	

NOTES: DAYS 1, 2, 3, 4, 6, 7, 8 & 10 SHALL BE FURNISHED WITH HAND JIGS FOR ALUMINUM BRASS.

Nº	LOCATION	SIZE	CFM	Nº MET'D.	MIN. FT. OF ACQUICKING LINES	REMARKS
1-8	30th FL. MEZ	72x18	1310	11	10'-0"	
9-10	30th FL. MEZ	72x18	9810	11		
11-12	17th FL. MEZ	72x18	1055	2		
13-14	17th FL. MEZ	72x18	1055	2		
15-16	17th FL. MEZ	72x18	1055	2		
17-18	17th FL. MEZ	72x18	1055	2		
19-20	17th FL. MEZ	72x18	1055	2		
21-22	17th FL. MEZ	72x18	1055	2		
23-24	17th FL. MEZ	72x18	1055	2		
25-26	17th FL. MEZ	72x18	1055	2		
27-28	17th FL. MEZ	72x18	1055	2		
29-30	17th FL. MEZ	72x18	1055	2		
31-32	17th FL. MEZ	72x18	1055	2		
33-34	17th FL. MEZ	72x18	1055	2		
35-36	17th FL. MEZ	72x18	1055	2		
37-38	17th FL. MEZ	72x18	1055	2		
39-40	17th FL. MEZ	72x18	1055	2		
41-42	17th FL. MEZ	72x18	1055	2		
43-44	17th FL. MEZ	72x18	1055	2		
45-46	17th FL. MEZ	72x18	1055	2		
47-48	17th FL. MEZ	72x18	1055	2		
49-50	17th FL. MEZ	72x18	1055	2		
51-52	17th FL. MEZ	72x18	1055	2		
53-54	17th FL. MEZ	72x18	1055	2		
55-56	17th FL. MEZ	72x18	1055	2		
57-58	17th FL. MEZ	72x18	1055	2		
59-60	17th FL. MEZ	72x18	1055	2		
61-62	17th FL. MEZ	72x18	1055	2		
63-64	17th FL. MEZ	72x18	1055	2		
65-66	17th FL. MEZ	72x18	1055	2		
67-68	17th FL. MEZ	72x18	1055	2		
69-70	17th FL. MEZ	72x18	1055	2		
71-72	17th FL. MEZ	72x18	1055	2		
73-74	17th FL. MEZ	72x18	1055	2		
75-76	17th FL. MEZ	72x18	1055	2		
77-78	17th FL. MEZ	72x18	1055	2		
79-80	17th FL. MEZ	72x18	1055	2		
81-82	17th FL. MEZ	72x18	1055	2		
83-84	17th FL. MEZ	72x18	1055	2		
85-86	17th FL. MEZ	72x18	1055	2		
87-88	17th FL. MEZ	72x18	1055	2		
89-90	17th FL. MEZ	72x18	1055	2		
91-92	17th FL. MEZ	72x18	1055	2		
93-94	17th FL. MEZ	72x18	1055	2		
95-96	17th FL. MEZ	72x18	1055	2		
97-98	17th FL. MEZ	72x18	1055	2		
99-100	17th FL. MEZ	72x18	1055	2		
101-102	17th FL. MEZ	72x18	1055	2		
103-104	17th FL. MEZ	72x18	1055	2		
105-106	17th FL. MEZ	72x18	1055	2		
107-108	17th FL. MEZ	72x18	1055	2		
109-110	17th FL. MEZ	72x18	1055	2		
111-112	17th FL. MEZ	72x18	1055	2		
113-114	17th FL. MEZ	72x18	1055	2		
115-116	17th FL. MEZ	72x18	1055	2		
117-118	17th FL. MEZ	72x18	1055	2		
119-120	17th FL. MEZ	72x18	1055	2		
121-122	17th FL. MEZ	72x18	1055	2		
123-124	17th FL. MEZ	72x18	1055	2		
125-126	17th FL. MEZ	72x18	1055	2		
127-128	17th FL. MEZ	72x18	1055	2		
129-130	17th FL. MEZ	72x18	1055	2		
131-132	17th FL. MEZ	72x18	1055	2		
133-134	17th FL. MEZ	72x18	1055	2		
135-136	17th FL. MEZ	72x18	1055	2		
137-138	17th FL. MEZ	72x18	1055	2		
139-140	17th FL. MEZ	72x18	1055	2		
141-142	17th FL. MEZ	72x18	1055	2		
143-144	17th FL. MEZ	72x18	1055	2		
145-146	17th FL. MEZ	72x18	1055	2		
147-148	17th FL. MEZ	72x18	1055	2		
149-150	17th FL. MEZ	72x18	1055	2		
151-152	17th FL. MEZ	72x18	1055	2		
153-154	17th FL. MEZ	72x18	1055	2		
155-156	17th FL. MEZ	72x18	1055	2		
157-158	17th FL. MEZ	72x18	1055	2		
159-160	17th FL. MEZ	72x18	1055	2		
161-162	17th FL. MEZ	72x18	1055	2		
163-164	17th FL. MEZ	72x18	1055	2		
165-166	17th FL. MEZ	72x18	1055	2		
167-168	17th FL. MEZ	72x18	1055	2		
169-170	17th FL. MEZ	72x18	1055	2		
171-172	17th FL. MEZ	72x18	1055	2		
173-174	17th FL. MEZ	72x18	1055	2		
175-176	17th FL. MEZ	72x18	1055	2		
177-178	17th FL. MEZ	72x18	1055	2		
179-180	17th FL. MEZ	72x18	1055	2		
181-182	17th FL. MEZ	72x18	1055	2		
183-184	17th FL. MEZ	72x18	1055	2		
185-186	17th FL. MEZ	72x18	1055	2		
187-188	17th FL. MEZ	72x18	1055	2		
189-190	17th FL. MEZ	72x18	1055	2		
191-192	17th FL. MEZ	72x18	1055	2		
193-194	17th FL. MEZ	72x18	1055	2		
195-196	17th FL. MEZ	72x18	1055	2		
197-198	17th FL. MEZ	72x18	1055	2		
199-200	17th FL. MEZ	72x18	1055	2		
201-202	17th FL. MEZ	72x18	1055	2		
203-204	17th FL. MEZ	72x18	1055	2		
205-206	17th FL. MEZ	72x18	1055	2		
207-208	17th FL. MEZ	72x18	1055	2		
209-210	17th FL. MEZ	72x18	1055	2		
211-212	17th FL. MEZ	72x18	1055	2		
213-214	17th FL. MEZ	72x18	1055	2		
215-216	17th FL. MEZ	72x18	1055	2		
217-218	17th FL. MEZ	72x18	1055	2		
219-220	17th FL. MEZ	72x18	1055	2		
221-222	17th FL. MEZ	72x18	1055	2		
223-224	17th FL. MEZ	72x18	1055	2		
225-226	17th FL. MEZ	72x18	1055	2		
227-228	17th FL. MEZ	72x18	1055	2		
229-230	17th FL. MEZ	72x18	1055	2		
231-232	17th FL. MEZ	72x18	1055	2		
233-234	17th FL. MEZ	72x18	1055	2		
235-236	17th FL. MEZ	72x18	1055	2		
237-238	17th FL. MEZ	72x18	1055	2		
239-240	17th FL. MEZ	72x18	1055	2		
241-242	17th FL. MEZ	72x18	1055	2		
243-244	17th FL. MEZ	72x18	1055	2		
245-246	17th FL. MEZ	72x18	1055	2		
247-248	17th FL. MEZ	72x18	1055	2		
249-250	17th FL. MEZ	72x18	1055	2		
251-252	17th FL. MEZ	72x18	1055	2		
253-254	17th FL. MEZ	72x18	1055	2		
255-256	17th FL. MEZ	72x18	1055	2		
257-258	17th FL. MEZ	72x18	1055	2		
259-260	17th FL. MEZ	72x18	1055	2		
261-262	17th FL. MEZ	72x18	1055	2		
263-264	17th FL. MEZ	72x18	1055	2		
265-266	17th FL. MEZ	72x18	1055	2		
267-268	17th FL. MEZ	72x18	1055	2		
269-270	17th FL. MEZ	72x18	1055	2		
271-272	17th FL. MEZ	72x18	1055	2		
273-274	17th FL. MEZ	72x18	1055	2		
275-276	17th FL. MEZ	72x18	1055	2		
277-278	17th FL. MEZ	72x18	1055	2		
279-280	17th FL. MEZ	72x18	1055	2		
281-282	17th FL. MEZ	72x18	1055	2		
283-284	17th FL. MEZ	72x18	1055	2		
285-286	17th FL. MEZ	72x18	1055	2		
287-288	17th FL. MEZ	72x18	1055	2		
289-290	17th FL. MEZ	72x18	1055	2		
291-292	17th FL. MEZ	72x18	1055	2		
293-294	17th FL. MEZ	72x18	1055	2		
295-296	17th FL. MEZ	72x18	1055	2		
297-298	17th FL. MEZ	72x18	1055	2		
299-300	17th FL. MEZ	72x18	1055	2		

Nº	LOCATION	COOLED WATER IN SHELL SECONDARY WATER				COOLING WATER IN TUBES CHILLED WATER				MODEL Nº	MIN. CURFACE SQ. FT.	REMARKS				
		G.P.M.	INLET WATER TEMP. °F	OUTLET WATER TEMP. °F	TRAVEL TIME MIN.	G.P.M.	INLET WATER TEMP. °F	OUTLET WATER TEMP. °F	TRAVEL TIME MIN.							
C-1	30th FL. MEZ	60	60	50	10	10005	42	60	16	300	4	22	165	WC-44-1000	1000	
C-2	30th FL. MEZ	180	59.7	60	12	10005	42	60	12	300	4	24	180	WC-44-1000	1800	
C-3	30th FL. MEZ	180	50	45	4	125	42	45	8							

RETURN AND EXHAUST FANS
(BUFFALO FORGE AS STD.)

FAN NO.	SERVICE	LOCATION	CFM	STATIC PRESS. IN WATER	CLASS	MAX. O.V. R.P.M.	DISCHARGE DIRECTION	ARRGT.	FAK RPM	FAN ROTATION	WIDTH INLET	WHEEL DIAMETER	FAN		MIN. MOTOR HP	MOTOR R.P.M.	MOTOR LOCATION	AD. POSITION O' CLOCK	BHP	VARIABLE INLET VALVES	VIBRATION ISOLATION	REMARKS	
													TYPE	SIZE									
F-1	D.O.	5th fl. M.E.R.	10000	1/2	I	1600	TH	3	200	CU	200	80%	20	1600	50	1150	Z	9	34.3	YES	A	I	
F-2	D.O.		10000	1/2	I	1600	TH	3	200	CU	200	80%	20	1600	50	1150	Z	9	34.3	YES	A	I	
F-3	D.O.		10000	1/2	I	1600	TH	3	200	CU	200	80%	20	1600	50	1150	Z	9	34.3	YES	A	I	
F-4	D.O.		95000	1/2	I	1700	TH	3	375	CU	200	75%	20	1600	40	1150	Z	9	32.5	YES	A	I	
F-5	TOILET EXHAUST		44000	1/2	I	1700	TH	3	400	CU	200	66%	20	1600	30	1150	Z	9	22.6	NO	A	I	
F-6	ELEV. M.R. EXHAUST		11900	1/2	I	1600	TH	-	105	CU	200	30.8%	20	1600	5	1150	M3	-	4.2	NO	1	II	
F-7	LOOKING EXHAUST		6500	1/2	I	1500	TH	-	80	CU	200	20.8%	20	1600	5	1150	M3	-	2.1	NO	1	II	
F-8	M.E.R. EXHAUST		20000	1/2	I	1500	TH	-	35	CU	200	20.8%	20	1600	5	1150	M3	-	4.1	NO	1	II	
F-9	M.E.R. EXHAUST		20000	1/2	I	1500	TH	-	35	CU	200	20.8%	20	1600	5	1150	M3	-	4.1	NO	1	II	
F-10	CALL # RETURN	35th fl. M.E.R.	12000	1/2	I	1800	TH	3	274	CU	200	81%	20	1600	50	1150	Z	3	42.5	NO	A	I	
F-11	CALL # RETURN		12000	1/2	I	1800	TH	3	274	CU	200	81%	20	1600	50	1150	Z	3	42.5	NO	A	I	
F-12	CALL # RETURN		12000	1/2	I	1800	TH	3	274	CU	200	81%	20	1600	50	1150	Z	3	42.5	NO	A	I	
F-13	M.E.R. EXHAUST		40000	1/2	I	1500	TH	3	352	CU	200	49%	20	1600	10	1150	Z	9	7.5	NO	A	I	
F-14	TOILET EXHAUST		45000	1/2	I	1500	TH	3	422	CU	200	66%	20	1600	30	1150	Z	9	13.0	NO	A	I	
F-15	ELEV. M.R. EXHAUST		23000	1/2	I	1500	TH	3	160	CU	200	49%	20	1600	72	1150	Z	9	5.6	NO	A	I	
F-16	ELEV. M.R. EXHAUST		5000	1/2	I	1900	TH	3	540	CCW	200	44%	20	1600	10	1150	M	3	6.8	NO	2 1/2	II	
F-17	COMPUTER ROOM EXHAUST		14000	1/2	I	1800	TH	3	708	CCW	200	26%	20	1600	72	1150	M	3	5.4	NO	2 1/2	II	
F-18	GENERATOR ROOM EXHAUST	35th fl. M.E.R.	10500	1/2	I	1600	TH	9	570	CCW	200	33%	20	1600	5	1150	Z	9	1.75	NO	1/2	I	SEE 2nd FLOOR PLAN FOR EXHAUST SYSTEM
F-19	TRADING OBSERVATION ROOM EXHAUST	35th fl.	45000	1/2	I	-	-	-	209	-	-	72%	20	1600	5	1150	-	-	3.8	NO	-	-	
F-20	ELEV. M.R. EXHAUST	ROOF	5000	1/2	I	-	-	-	1080	-	-	24%	20	1600	-	-	-	-	10	-	-	-	
F-21	EXHAUST	ROOF	60000	3/4	I	1700	TH	9	416	CU	200	75%	20	1600	50	1150	Z	9	35.8	NO	3	II	150' EXHAUST SYSTEM
F-22	ELEV. M.R. EXHAUST	20th fl. M.E.R.	10450	3/4	I	1200	TH	-	787	CCW	200	38%	20	1600	3	1150	M3	-	2.4	NO	1	II	
F-23	ELEV. M.R. EXHAUST	18th floor	10800	3/4	I	1200	TH	-	775	CCW	200	38%	20	1600	3	1150	M3	-	2.55	NO	1	II	
F-24	EXHAUST	18th floor	12000	3/4	I	1300	TH	-	778	CCW	200	38%	20	1600	3	1150	M3	-	3.0	NO	1	II	
F-25	EXHAUST	18th floor	8000	3/4	I	1400	TH	-	784	CCW	200	38%	20	1600	3	1150	M3	-	1.92	NO	1	II	
F-26	EXHAUST	18th floor	8000	3/4	I	1400	TH	-	784	CCW	200	38%	20	1600	3	1150	M3	-	1.92	NO	1	II	
F-27	EXHAUST	18th floor	8000	3/4	I	1400	TH	-	784	CCW	200	38%	20	1600	3	1150	M3	-	1.92	NO	1	II	
F-28	EXHAUST	18th floor	11500	3/4	I	1300	TH	-	1112	CCW	200	38%	20	1600	72	1150	M3	-	5.5	NO	1	II	
F-29	OUTER CORN. EX. EXH.		17200	1/2	I	1300	TH	-	723	CCW	200	38%	20	1600	10	1150	M3	-	6.40	NO	1	II	
F-30	WESTERN CORN. EXH.		5400	1/2	I	1475	TH	-	1457	CCW	200	38%	20	1600	3	1150	M3	-	2.3	NO	1	II	
F-31	NORTHERN CORN. EXH.		260	1/2	I	1500	TH	-	1740	CCW	200	12%	20	1600	12	1150	M3	-	10.0	NO	1	II	
F-32	CORNER CORN. EXH.	LEVEL 4	11000	3/4	I	1700	TH	-	777	CCW	200	38%	20	1600	5	1150	M3	-	2.6	NO	1	II	
F-33	CORNER CORN. EXH.	LEVEL 4	11000	3/4	I	1700	TH	-	777	CCW	200	38%	20	1600	5	1150	M3	-	2.6	NO	1	II	
F-34	EXHAUST		2000	3/4	I	1600	TH	-	1515	CCW	200	12%	20	1600	1	1150	M3	-	7.6	NO	1	II	
F-35	EXHAUST		11500	3/4	I	1300	TH	-	798	CCW	200	38%	20	1600	5	1150	M3	-	2.8	NO	1	II	
F-36	VAULT EXHAUST	LEVEL 13	1200	1/2	I	1400	TH	9	577	CCW	200	12%	20	1600	2	1150	M	3	2.2	NO	1	II	
F-37	VAULT EXHAUST		1200	1/2	I	1400	TH	9	600	CCW	200	12%	20	1600	2	1150	M	3	1.25	NO	1	II	
F-38	VAULT EXHAUST		6800	1/2	I	1350	TH	9	540	CCW	200	30%	20	1600	1/2	1150	M	3	1.8	NO	1	II	
F-39	U.P.S. EMERGENCY VENTL.	35th FLOOR	10000	1/2	I	-	-	-	275	-	-	84%	20	1750	-	-	-	-	NO	-	-	-	
F-40	COMMUNICATION RM VENTL.	M.E.R.	3400	1/2	I	1400	TH	-	1048	CCW	200	38%	20	1750	3/4	1150	M3	-	5.5	NO	1	II	
F-41	MAO-TAI RESTAURANT	ROOF	20,000	1 1/2	I	1800	TH	9	400	CCW	200	40%	20	1750	16	1150	M	3	8.8	NO	3	II	SEE 2nd FLOOR PLAN FOR EXHAUST SYSTEM
F-42	MOTOR GENERATOR ROOM EMERGENCY EXHAUST	35th FLOOR	25,000	1 1/2	I	-	-	-	742	-	-	42%	20	1750	-	-	-	-	NO	-	-	-	SEE 2nd FLOOR PLAN FOR EXHAUST SYSTEM
F-43	RADIO EQUIPMENT ROOM	31st fl.	520	1/2	I	-	-	-	120	-	-	84%	20	1750	-	-	-	-	NO	-	-	-	SEE 2nd FLOOR PLAN FOR EXHAUST SYSTEM

AUTOMATIC CONTROL VALVE PRESS. DROP

SERVICE	PRESS. DROP P.S.I.
LOW PRESSURE STEAM VALVES	9
SECONDARY WATER VALVES AT INDUCTION UNITS	7
HOT WATER HEATING BY-PASS VALVES	2.5
CHILLED WATER VALVES AT AIR COOLING COILS & SEC. ON-DARY WATER COOLERS	9
SEC. WATER INTERIOR REHEAT AND CHILLED WATER BY-PASS VALVES	25-30
HOT WATER VALVES AT AIR HEATING COILS	8

STEAM TRAP SIZING

ALL STEAM TRAPS ON AIR HEATING COILS & HEAT EXCHANGERS SHALL BE SIZED FOR A PRESSURE DROP OF 0.25 PSI AT THE SCHEDULED APPARATUS STEAM FLOW WHERE REQUIRED MULTIPLE TRAPS IN PARALLEL SHALL BE USED.

REVISIONS

NO.	DATE	DESCRIPTION
1	11-18-72	REVISED AS SHOWN
2	6-25-72	DELETED FAN #39
3	11-18-74	REVISED SCHEDULE FOR FAN #43
4	8-11-80	ADDED FAN #49

ISSUED TO	NO.	DATE	PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
315 MADISON AVENUE N.Y. N.Y. 10022

JAROS, BAUM & BOLLES MECH & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

SCHEDULE SHEET No 3

PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-43
DATE	1-7-72
SCALE	NONE

CHILLED WATER PLANT

MACHINE NO.	LOCATION	COMPRESSOR		CHILLER				REFRIGERANT CONDENSER				STEAM TURBINE		STEAM CONDENSER				HOT WELL PUMPS		REMARKS															
		TONS	MAX BHP	WATER G.P.M.	INLET WATER TEMP. °F	OUTLET WATER TEMP. °F	WATER PRESS. P.S.I.	WORKING PRESS. P.S.I.G.	WATER G.P.M.	INLET BE TEMP. °F	MAX. PRESS. P.S.I.G.	WORKING PRESS. P.S.I.G.	WATER G.P.M.	INLET WATER TEMP. °F	OUTLET WATER TEMP. °F	WORKING PRESS. P.S.I.G.	STEAM CONDENSER	WATER G.P.M.	INLET WATER TEMP. °F		OUTLET WATER TEMP. °F														
1	5th fl. M.E.R.	1250	1365	21	2500	54	42	18.0	1005	10.0	200	2500	87	101.5	28.0	100.0	200	125	14.5	1428	2500	101.5	117	300	25	10050	28.0	85	12.0	10'	2	40	100	3	24" NIP
2	5th fl. M.E.R.	1250	1368	21	2500	54	42	18.0	1005	10.0	200	2500	87	101.5	28.0	100.0	200	125	14.5	1428	2500	101.5	117	300	25	10050	28.0	85	12.0	10'	2	40	100	3	24" NIP
3	5th fl. M.E.R.	1250	1365	21	2500	54	42	18.0	1005	10.0	200	2500	87	101.5	28.0	100.0	200	125	14.5	1428	2500	101.5	117	300	25	10050	28.0	85	12.0	10'	2	40	100	3	24" NIP

REMARKS: MACHINE #1 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #2 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #3 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #4 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #5 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #6 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #7 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #8 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4001-38-60. MACHINE #9 - 35th fl. M.E.R. - CHILLED WATER TO 5th fl. M.E.R. @ 4

STEAM REHEAT COILS (AEROFIN TYPE 'B' AS STD.)											
TRAP NO.	LOCATION	SERVICE	SYSTEM	CFM	ENT. TEMP. °F	LV. °F	DB °F	MAX. AIR TEMP. °F	TOTAL LBS. STEAM COIL	NO. OF SECTIONS	REMARKS
1	5th Fl. NEB	COOL. COILS	3	1800	120	122	180	27.6	12.2	107	826
2		NEET COILS	3	2000	120	122	180	27.6	14.0	810	826
3		NEET COILS	4	1800	120	122	180	27.6	15.8	748	826
4		NEET COILS	4	2000	124	122	180	24.6	14.0	810	826
5	5th Fl. NEB	COOL. COILS	11	2800	120	121	180	33.4	14.7	610	826
6		NEET COILS	11	2800	120	121	180	29	15.8	715	826
7		NEET COILS	12	2800	120	122	180	33.4	15.4	718	826
8		NEET COILS	2	2300	124	123	180	27	15.8	715	826
9	5th Fl. NEB	NEET'S COILS	2	750	74	75	123	53	10	17	118
10	5th Fl. M.E.R.	LOBBY SYST.	6	24,180	90	114	1730	37 1/4	22.0	5-0	71
11	26th Fl. M.E.R.	COMPUTER P.A.	13	24,000	80	75	1075	38 1/4	16.3	710	51

SOUND TRAP SCHEDULE										
TRAP NO.	SYSTEM	LOCATION	TYPE	CFM	SIZE	MAX. PD IN H ₂ O	NO. REQ.	REMARKS		
1	0-1	5th Fl. NEB	B	2400	120" x 36"	.20	1	100% RISE		
2	0-2		B	12450	182" x 36"	.20	1	100% RISE		
3	3-3		E	18200	32" x 64"	.20	1	100% RISE		
4	5-3		E	2000	32" x 64"	.20	1	NEET COIL		
5	5-4		E	2360	32" x 64"	.30	1	50% RISE		
6	0-4		E	2000	36" x 68"	.15	1	50% RISE		
7	5-5		B	3200	84" x 36"	.20	1	100% RISE		
8	5-5		B	6670	84" x 36"	.20	1	100% RISE		
9	0-6		B	34180	72" x 36"	.20	7	100% RISE		
10	0-7		B	19180	144" x 72"	.20	1	100% RISE		
11	5-8		B	105255	76" x 20"	.20	1	100% RISE		
12	0-9	5th Fl. NEB	B	145000	84" x 36"	.22	1	100% RISE		
13	0-10		B	145000	76" x 14"	.22	1	100% RISE		
14	5-11		E	21000	36" x 72"	.15	1	100% RISE		
15	0-11		E	23000	32" x 64"	.30	1	NEET COIL		
16	5-12		E	27000	42" x 84"	.15	1	50% RISE		
17	0-12		E	23000	36" x 68"	.27	1	50% RISE		
18	0-7	6th FLOOR	B	35000	76" x 36"	.20	1	100% RISE		

- ### KEY OF SYMBOLS
- X- HIGH PRESSURE STEAM
 - X-X- MEDIUM PRESSURE STEAM
 - L- LOW PRESSURE STEAM
 - X-X-X- HIGH AND MEDIUM PRESSURE COND.
 - H- LOW PRESSURE CONDENSATE
 - P- PUMPED CONDENSATE
 - E- EXPANSION LINE
 - D- DRAIN LINE
 - V- VENT
 - CHWS CHILLED WATER SUPPLY
 - CHWR CHILLED WATER RETURN
 - CWS CONDENSER WATER SUPPLY
 - CWR CONDENSER WATER RETURN
 - HWS HOT WATER SUPPLY
 - HWNR HOT WATER RETURN
 - IRS INTERIOR REHEAT SUPPLY
 - IRR INTERIOR REHEAT RETURN
 - SESS SECONDARY WATER SUPPLY (see heat zone)
 - SESR SECONDARY WATER RETURN (see heat zone)
 - NWSS SECONDARY WATER SUPPLY (see heat zone)
 - NWSR SECONDARY WATER RETURN (see heat zone)
 - G-V GATE VALVE
 - L-V LUBRICATED VALVE
 - A-CV AUTOMATIC CONTROL VALVE
 - S-V SOLENOID VALVE
 - P-RV PRESSURE REDUCING VALVE
 - C-V CHECK VALVE
 - S-TV STRAINER WITH BLOW OFF VALVE
 - L-AS LOW PRESSURE ASSEMBLY
 - M-HS MEDIUM HIGH PRESSURE DRIP ASSEMBLY
 - E-J EXPANSION JOINT
 - A-ANCHOR
 - B-J BALL JOINT
 - UH UNIT HEATER
 - T THERMOSTAT
 - RH REHEAT COIL
 - PH PREHEAT COIL
 - CC COOLING COIL
 - FC FLEXIBLE CONNECTION
 - CD CEILING DIFFUSER
 - CR (G) CEILING REGISTER (GRILLE)
 - TR (G) TOP REGISTER (GRILLE)
 - BR (G) BOTTOM REGISTER (GRILLE)
 - TR (G) TRANSFER GRILLE
 - FL-TM FUSIBLE LINK TOP REGISTER
 - RB REGISTER BODY
 - VD VOLUME DAMPER
 - FD FIRE DAMPER
 - AD ACCESS DOOR
 - ALD AUTOMATIC LOUVER DAMPER
 - MLWS METAL LOUVER WIRE SCREEN
 - FAI FRESH AIR INTAKE
 - MAI MANUAL AIR VALVE
 - AL ACUSTIC LINING
 - AL (H) D'OR LOUVER (SQ. FT.)
 - UC UNDERCUT
 - UP SUPPLY AIR DUCT (UP)
 - DN SUPPLY AIR DUCT (DOWN)
 - UP EXHAUST OR RETURN AIR DUCT (UP)
 - DN EXHAUST OR RETURN AIR DUCT (DOWN)
 - BI BLACK IRON
 - WI WIRE MESH
 - EV EXHAUST VALVE
 - VI VARIABLE INLET VANES
 - ES ELECTRIC STRIP HEATER
 - CB CIRCUIT BREAKER
 - MG MAGNETIC STARTER (MANUAL)
 - AG MAGNETIC STARTER (AUTOMATIC)
 - STA START STOP BUTTONS (MOMENTARY)
 - RSTA REMOTE START REMOTE STOP
 - SPARTER SPARTER
 - INTERPOSING RELAY
 - HOA HAND OFF AUTOMATIC SWITCH
 - TRANSFORMER CONTROL SWITCH
 - NORMALLY OPEN AUXILIARY CONTACT
 - NORMALLY CLOSED AUXILIARY CONTACT
 - F/S FUSEIBLE SWITCH
 - SLOT LIGHT
 - MA MANUAL STARTER (14-6JA-110V)
 - LPC LOCAL AUTO CONTROL PANEL
 - NCC MOTOR CONTROL CENTER
 - BU BUTTERFLY VALVE
 - VIV VARIABLE INLET VANES
 - MOP MASONRY OPENING (3#)
 - SD SMOKE DETECTOR
 - S.S. STAINLESS STEEL

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	DESIGNED AND CHECKED
2	10-24-72	ADDED 10# 10-11
3	11-13-73	ADDED SCHEDULE FOR A.C. UNIT# 21-1 THRU 21-4.
4	1-30-74	DELETED A.C. UNIT # 21-4

PACKAGED AIR CONDITIONING UNITS																							
AC. UNIT NO.	SERVICE	LOCATION	CFM	COOLING CAPACITY BTU/HR		ENTERING COIL TEMP (AIR)		CONDENSER				FAN		HUMIDIFIER		REMARKS							
				TOTAL	SENSIBLE	ENT. DB	ENT. WB	ENT. WAT. TEMP. °F	COND. WAT. TEMP. °F	COND. WAT. PRESS. PSIG	COND. WAT. FLOW GPM	EXT. AIR IN. %	MIN. MOTOR HP	FAN BHP	1.05/HR		KW						
21-1	THRU 21-8	COMPUTER ROOM	8200	19200	159800	72	60	85	95	45A	110	125	3	20	5	4	23.0	7.0	150W	BLAZER	460V-3Ø-60V	76.0	52.0
21-1	THRU 21-8	COMPUTER ROOM	8200	19200	159800	72	60	85	95	45A	110	125	3	20	5	4	23.0	7.0	150W	BLAZER	460V-3Ø-60V	76.0	52.0

CONVERTORS (YULA AS STD.)													
HX NO.	SERVICE	LOCATION	GPM	LIQUID SIDE		STEAM SIDE		REMARKS					
				INLET TEMP. °F	OUTLET TEMP. °F	STEAM PRESS. PSIG	STEAM TEMP. °F						
1	HOT WATER	5th Fl. NEB	800	180	200	130	200	2	180	13	108	171	212
2	HOT WATER	5th Fl. NEB	1000	180	180	55	180	15	150	15	105	145	212
3	HOT WATER	5th Fl. NEB	800	180	180	55	180	15	150	15	105	145	212
4	HOT WATER	5th Fl. NEB	300	180	200	29	180	12	100	12	100	145	212
5	HOT WATER	5th Fl. NEB	500	180	180	55	180	14	105	14	105	145	212
6	HOT WATER	5th Fl. NEB	585	180	180	55	180	16	105	16	105	145	212
7	HOT WATER	5th Fl. NEB	780	180	180	55	180	16	105	16	105	145	212

SMOKE VENT TABULATION						
ITEM	MAX. AREA (SQ. FT.)	x 3 1/2%	AREA OF VENT DUCT (SQ. FT.)	LOCATION OF VENT DUCT	HOW VENTED (TERMINUS)	REMARKS
STAIR #1	310		10.9	SMOKE HATCH @ ROOF	SMOKE HATCH	
STAIR #2	370		13.0	SMOKE HATCH @ ROOF	SMOKE HATCH	
STAIR #3	110		3.9	4th FLOOR	INTO SHAFT #1	
ESCALATOR #1 & 2	510		17.9	4th FLOOR	INTO SHAFT #1	
SHAFT #1	540		18.6	19th FLOOR	INTO SHAFT #5	
SHAFT #2	140		4.9	18th FLOOR	INTO SHAFT #1	
SHAFT #3	400		14.0	19th FLOOR	INTO SHAFT #6	
SHAFT #4	115		4.1	SMOKE HATCH @ ROOF	SMOKE HATCH	
SHAFT #5	160		5.6	SMOKE HATCH @ ROOF	SMOKE HATCH	
SHAFT #6	1450		51.0	SMOKE HATCH @ ROOF	SMOKE HATCH	
TX #1	52		1.9	16th FLOOR	INTO SHAFT #1	
TX #2	16		.66	27th FLOOR	INTO SHAFT #5	
TX #3	23		.8	37th FLOOR	INTO SHAFT #4	
TX #4	14		.49	37th FLOOR	INTO SHAFT #5	

ALL SMOKE VENTS ARE AT LEAST 3 1/2% OF THE MAXIMUM SHAFT AREA AT ANY FLOOR, BUT IN NO CASE LESS THAN 1/2 SQ. FT. ALL VENT DUCTS ARE ENCLOSED BY CONSTRUCTION HAVING THE SAME FIRE RESISTANCE RATING AS THAT REQUIRED FOR THE SHAFT ENCLOSURE (C 26 504.6.4)

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. N. Y. 10022

JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

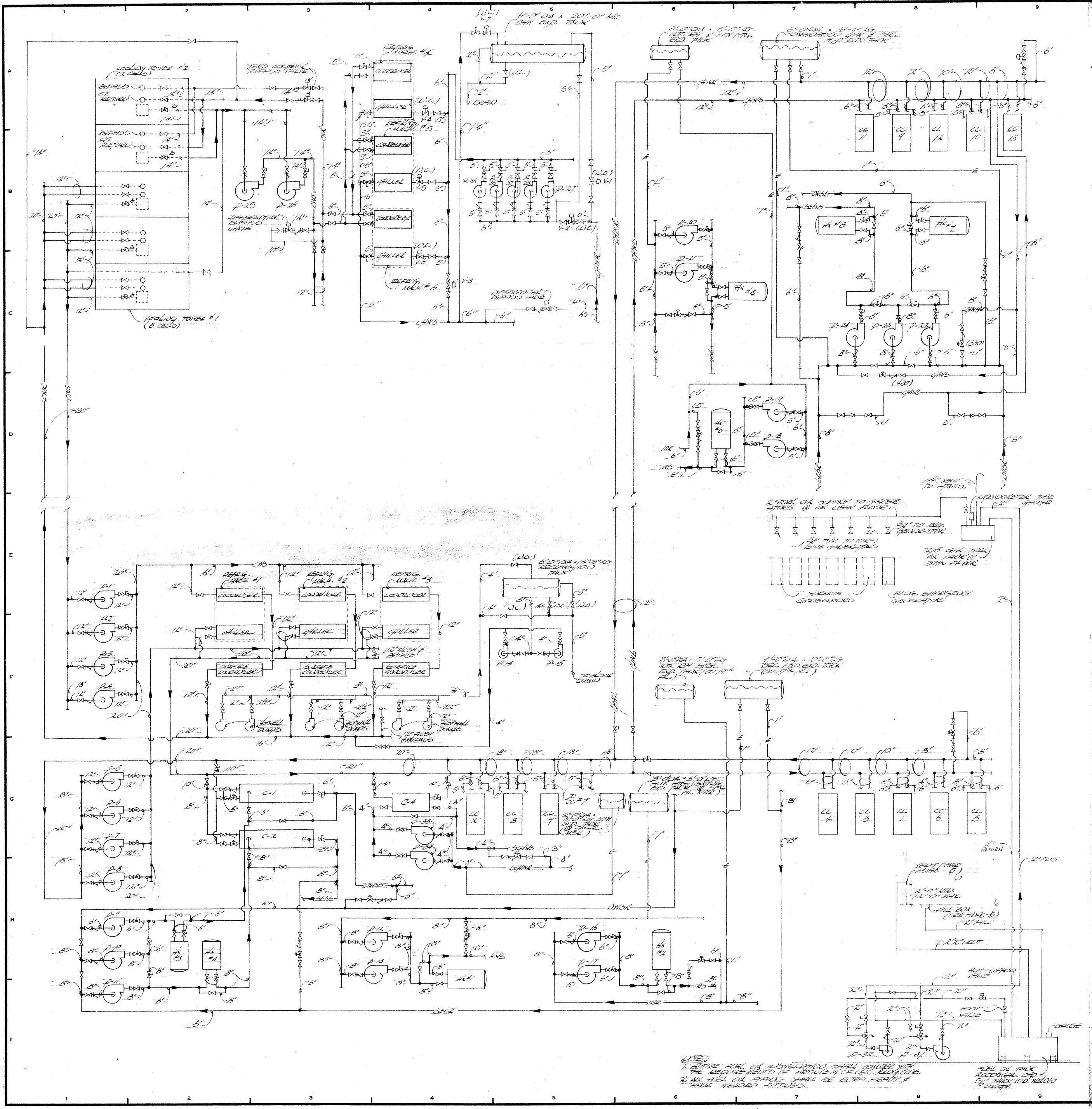
SCHEDULE SHEET NO. 1

PROJECT NUMBER
7101

DRAWING NUMBER
HVAC-41

DATE
1-7-72

SCALE
NONE



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AND CALLED
2	4-26-72	REVISED COOL WATER PIP FOR FREE COOLING SYSTEM
3	3-27-73	DELETED COOLERS C-2A, C-4, P-29, P-30 AND ASSOCIATED PIPING
4	4-9-73	REVISED PIPING AS CIRCLED

ISSUED TO: NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
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919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
315 MADISON AVENUE N. Y. N. Y. 10022

JAROS, BAUM & BOLLES MECHANICAL ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

FLOW DIAGRAM

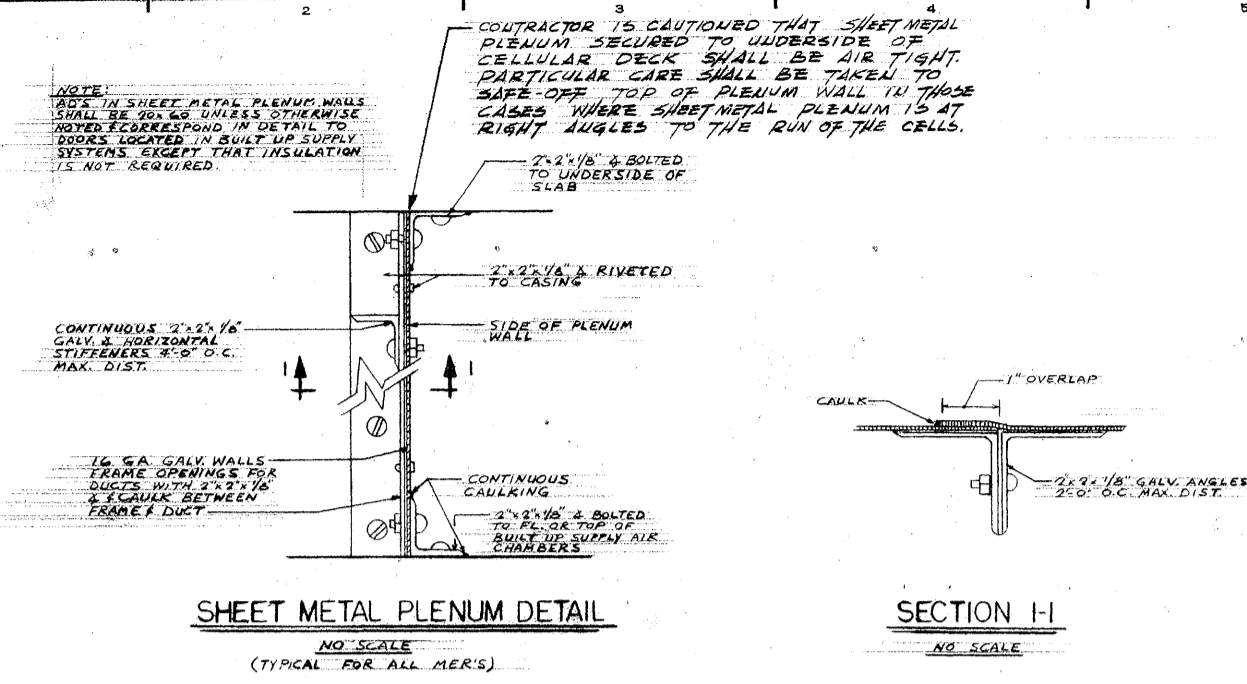
PROJECT NUMBER
7101

DRAWING NUMBER
HVAC-40

DATE
1-7-72

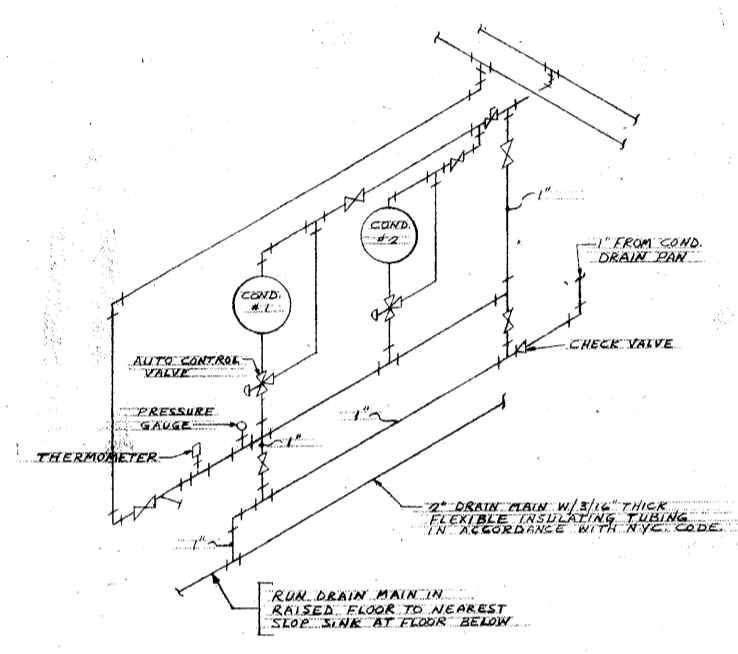
SCALE
NONE

6

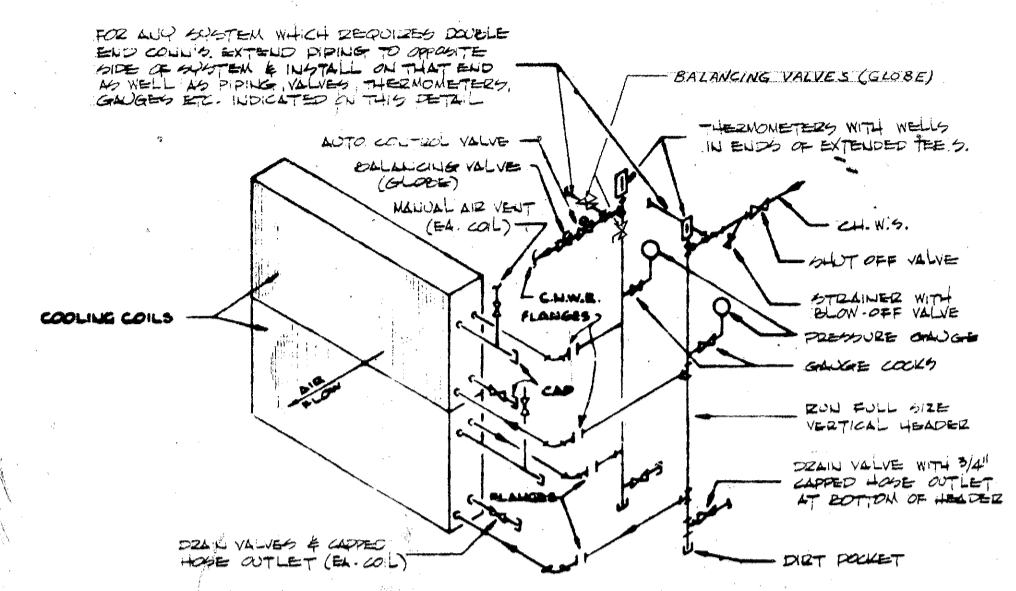


SHEET METAL PLENUM DETAIL
NO SCALE
(TYPICAL FOR ALL MER'S)

SECTION I-I
NO SCALE

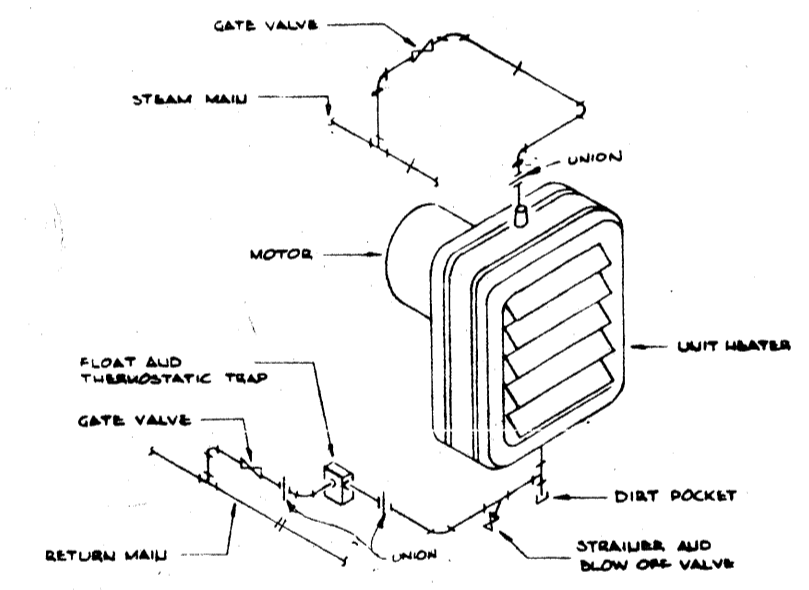


SCHEMATIC PIPING DIAGRAM FOR COMPUTER A.C. UNITS
NTS

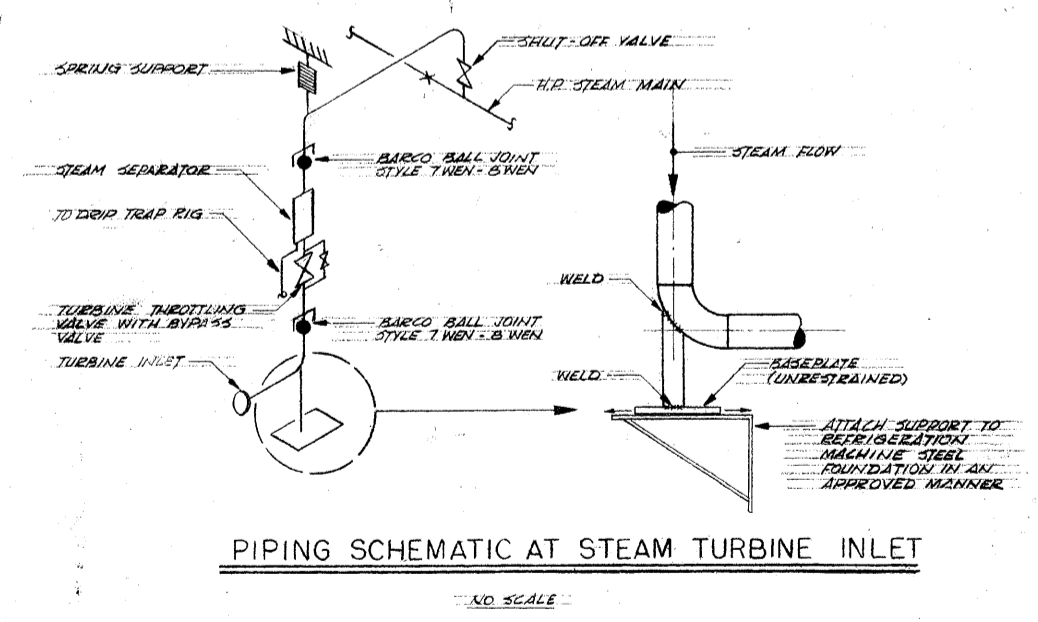


- 1- ALL VERTICAL HEADERS TO RUN FULL SIZE FROM BRANCH CONNECTION TO CH. W.S. RISERS.
- 2- ALL HORIZONTAL RUNOUTS BETWEEN COIL & VERTICAL HEADERS SHALL BE COIL CONNECTION SIZE
- 3- PRESS. CH. GAUGES & THERMOMETERS ARE NOT REQUIRED FOR HOT WATER COILS. HOWEVER, PROVIDE REQUIRED GAUGE COCK & WELLS FOR INSPECTION OF PORTABLE GAUGES & THERMOMETERS

HOT WATER & CHILLED WATER COIL PIPING CONNECTIONS



UNIT HEATER PIPING CONNECTIONS



PIPING SCHEMATIC AT STEAM TURBINE INLET
NO SCALE

REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

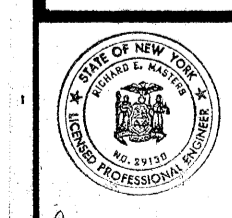
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
315 MADISON AVENUE N. Y. N. Y. 10022

J A R O S , B A U M & B O L L E S MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

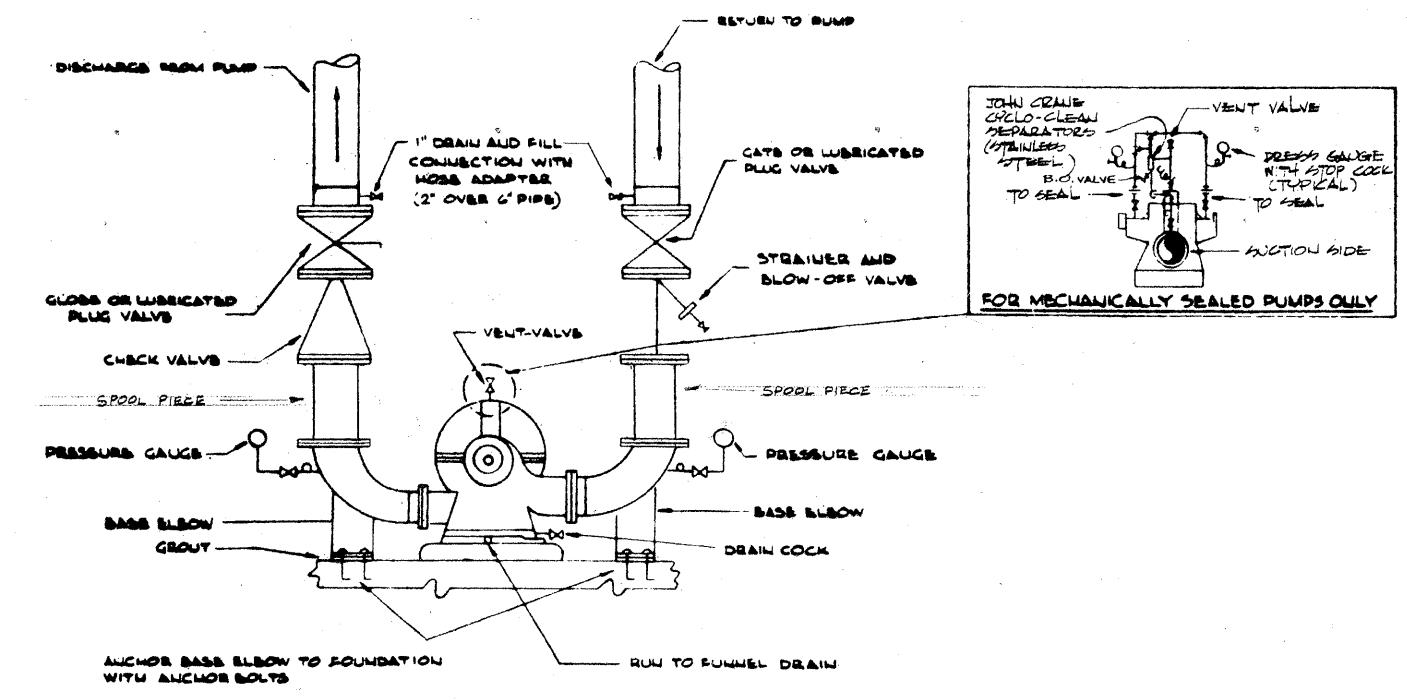
DETAIL SHEET N°5



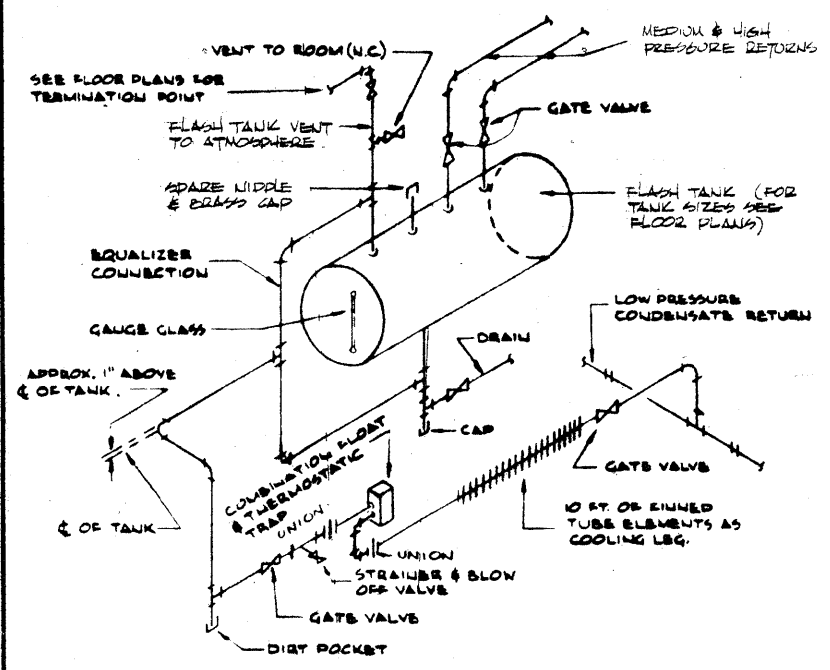
PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-39
DATE	1-7-72
SCALE	NONE

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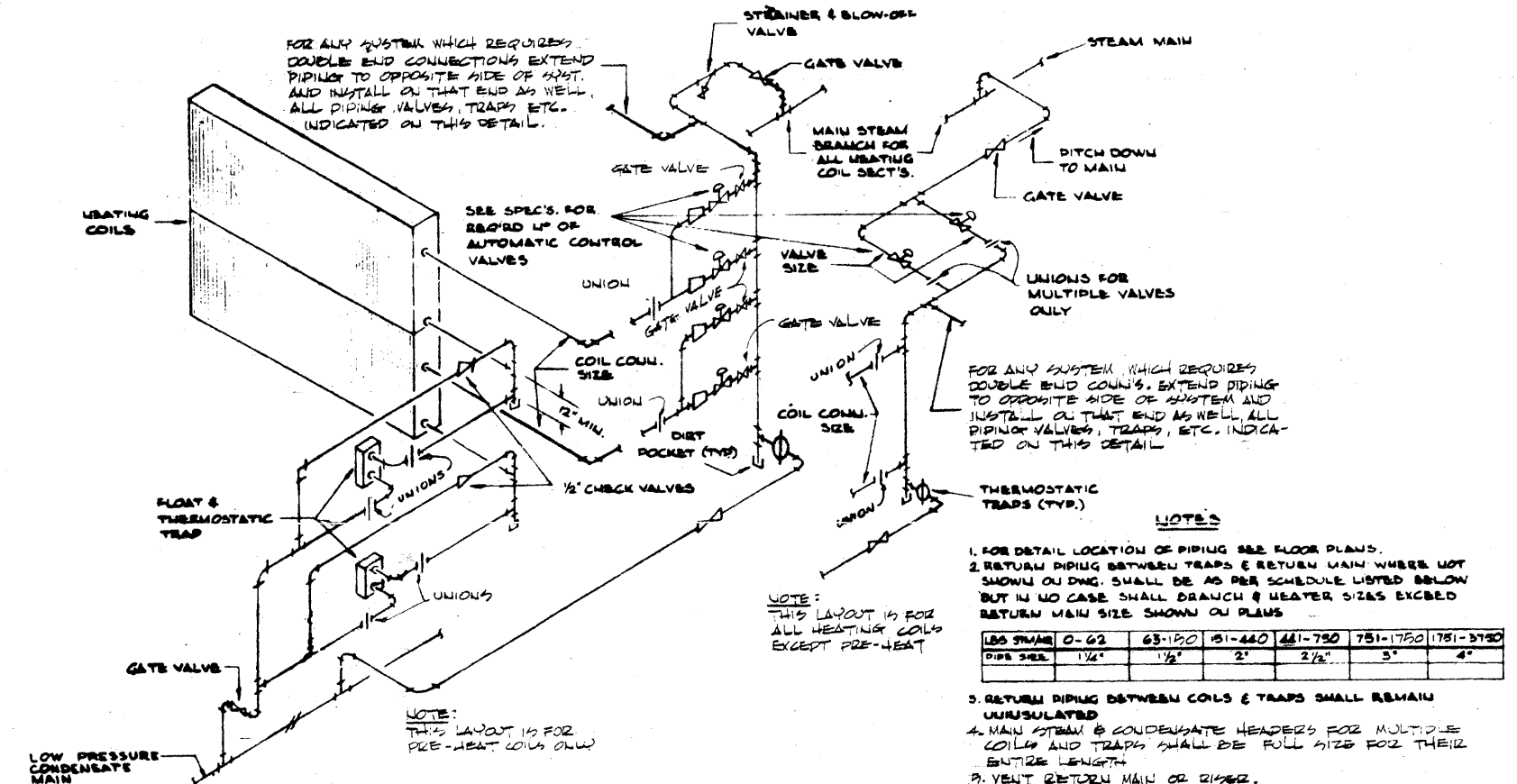
REVISIONS		
NO.	DATE	DESCRIPTION



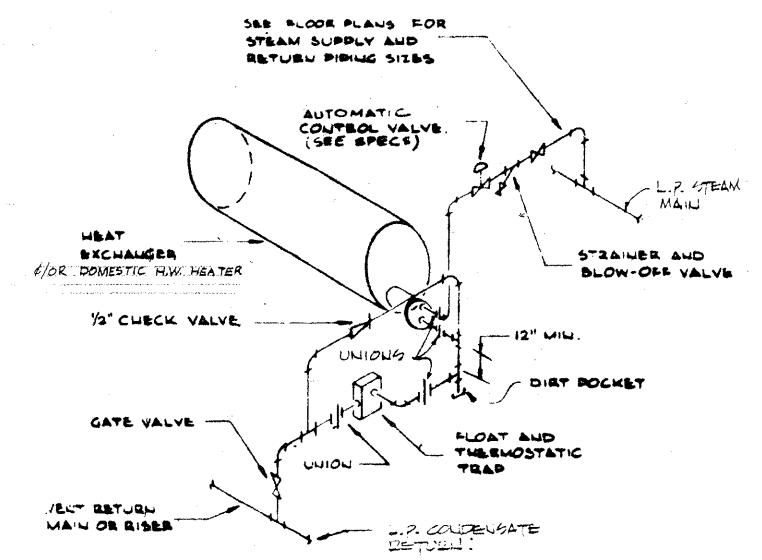
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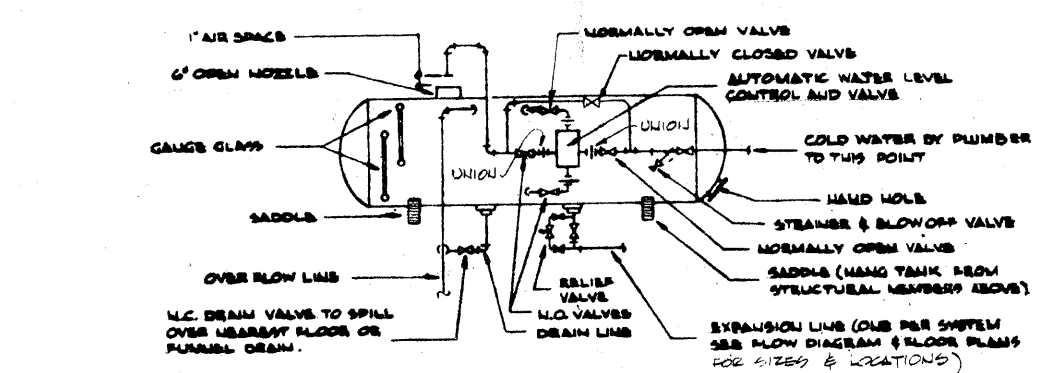
FLASH TANK CONNECTIONS



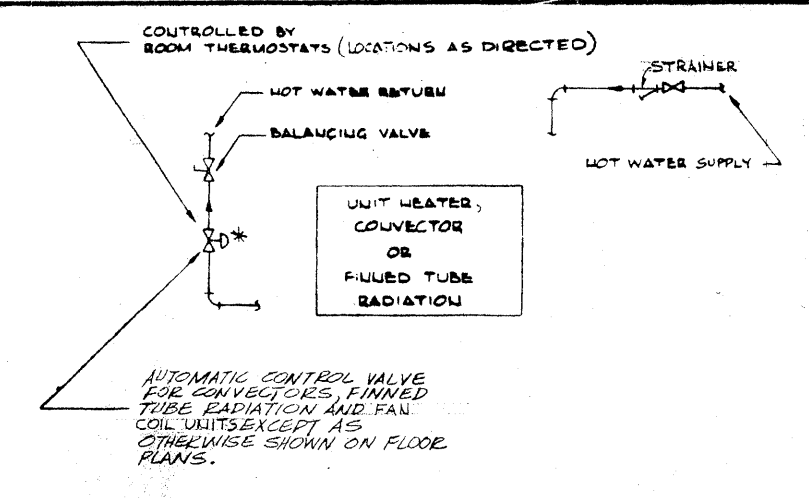
HORIZONTAL AIR HEATING PIPING CONNECTIONS (NON-FREEZE TYPE)



HOT WATER HEAT EXCHANGER CONNECTIONS



OPEN EXPANSION TANK



SCHEMATIC PIPING ARRANGEMENT FOR UNIT HEATERS & CONVECTORS

ISSUED TO: NO. DATE: PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. N. Y. 10022

J. A. ROSS, BAUM & BOLLES MECHANICAL ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

DETAIL SHEET N^o4

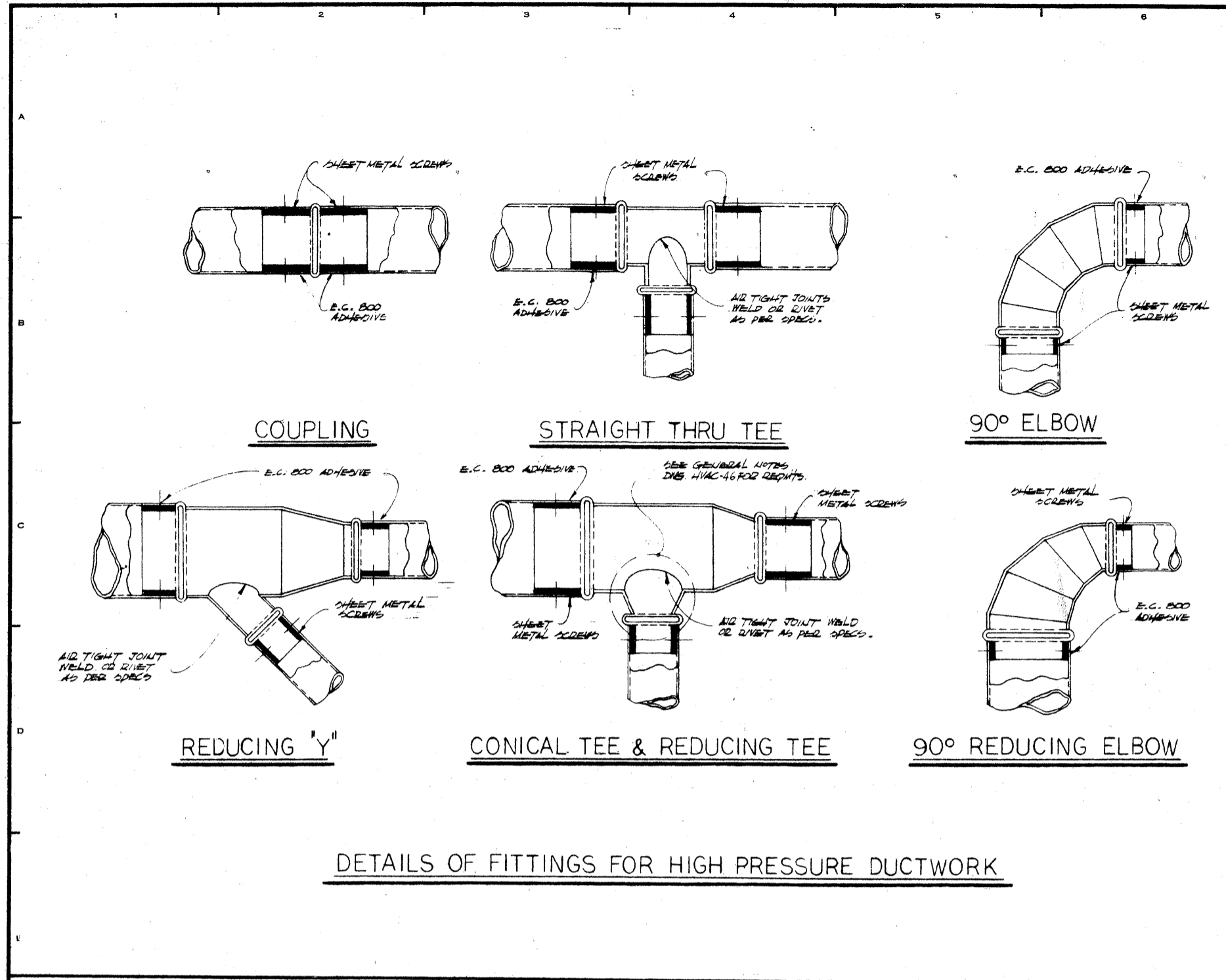
PROJECT NUMBER: 7101

DRAWING NUMBER: HVAC 38

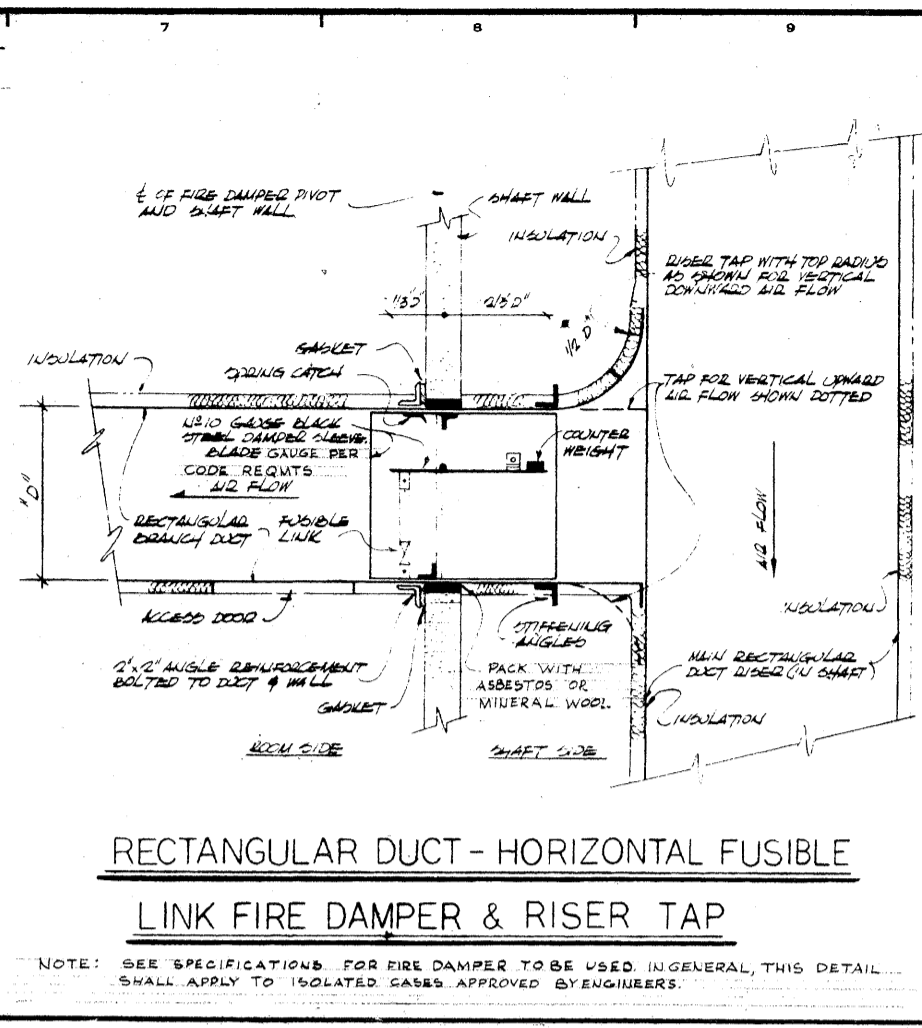
DATE: 1-7-72

SCALE: NONE

38

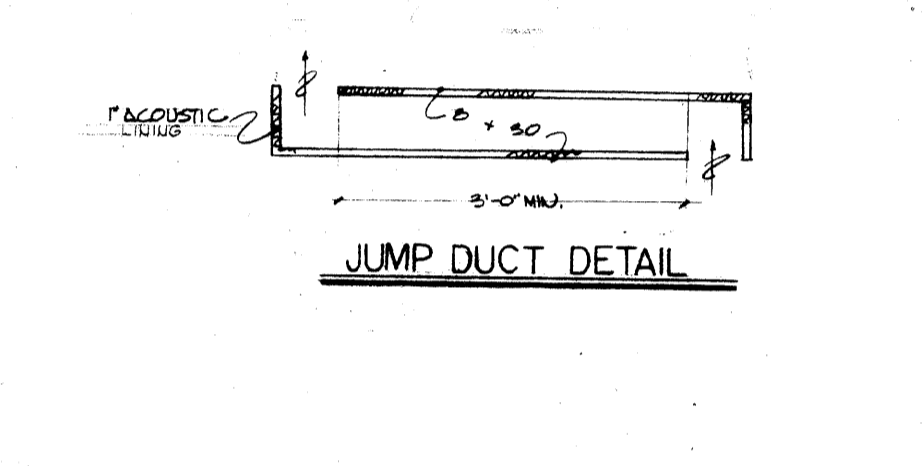


DETAILS OF FITTINGS FOR HIGH PRESSURE DUCTWORK



RECTANGULAR DUCT - HORIZONTAL FUSIBLE LINK FIRE DAMPER & RISER TAP

NOTE: SEE SPECIFICATIONS FOR FIRE DAMPER TO BE USED. IN GENERAL, THIS DETAIL SHALL APPLY TO ISOLATED CASES APPROVED BY ENGINEERS.



JUMP DUCT DETAIL

REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

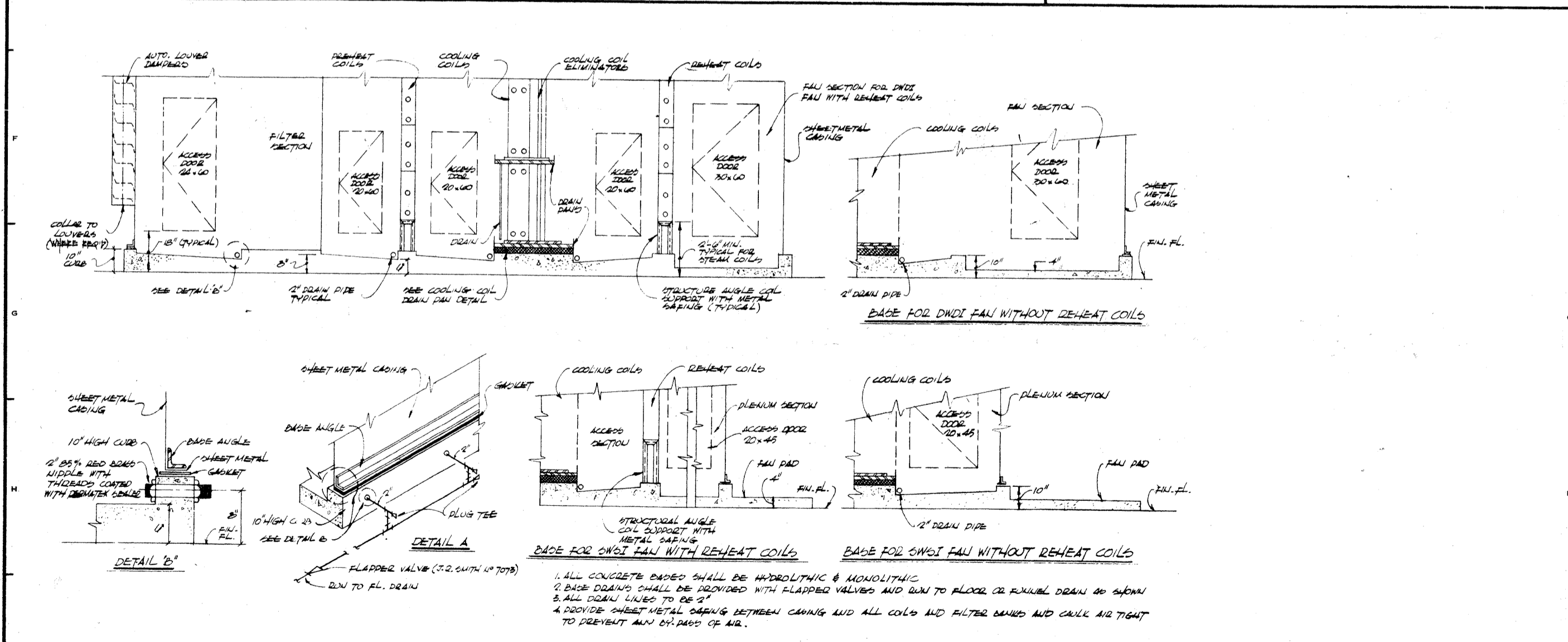
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
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515 MADISON AVENUE N. Y. N. Y. 10022

JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

DETAIL SHEET No. 3

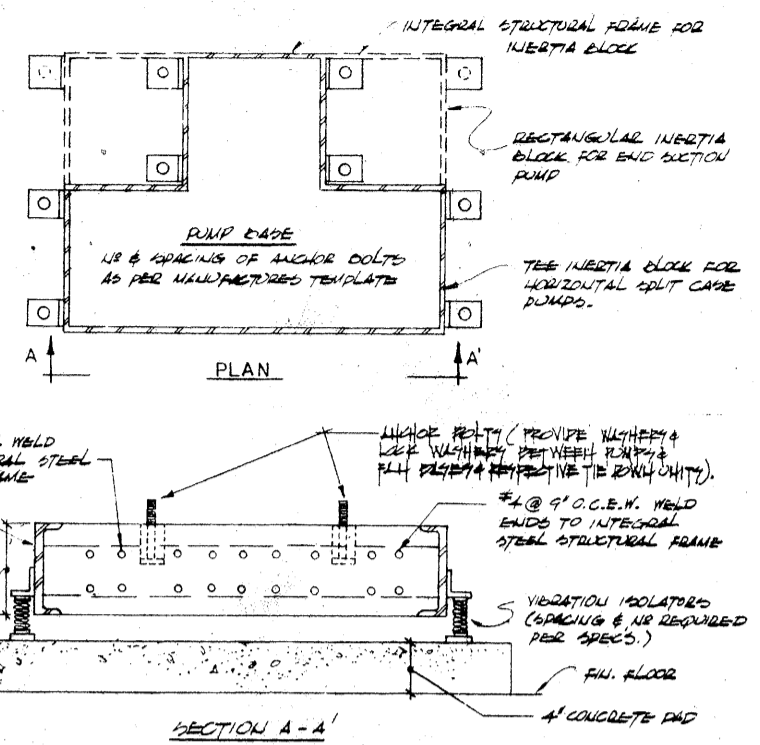


JOB ASSEMBLED AIR CONDITIONING UNIT BASE

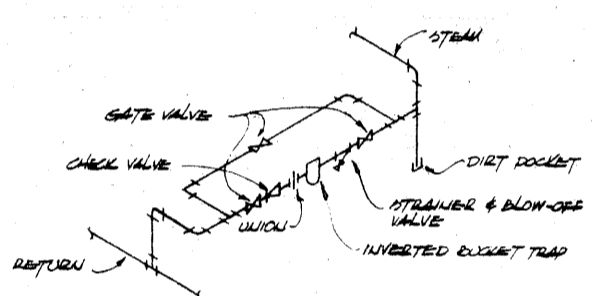
1. ALL CONCRETE BASES SHALL BE HYDROTIGHT & MONOLITHIC.
2. BASE DRAINING SHALL BE PROVIDED WITH FLAPPED VALVES AND RUN TO FLOOR OR EXTERIOR DRAIN AS SHOWN & ALL DRAIN LINES TO BE 1/2\"/>
- 3. PROVIDE SHEET METAL CASING BETWEEN CASING AND ALL COILS AND FILTER BANKS AND CAULK AIR TIGHT TO PREVENT ANY LEAKAGE OF AIR.

	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-37
	DATE	1-7-72
	SCALE	NONE

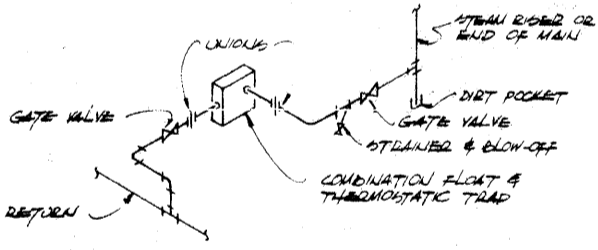
32



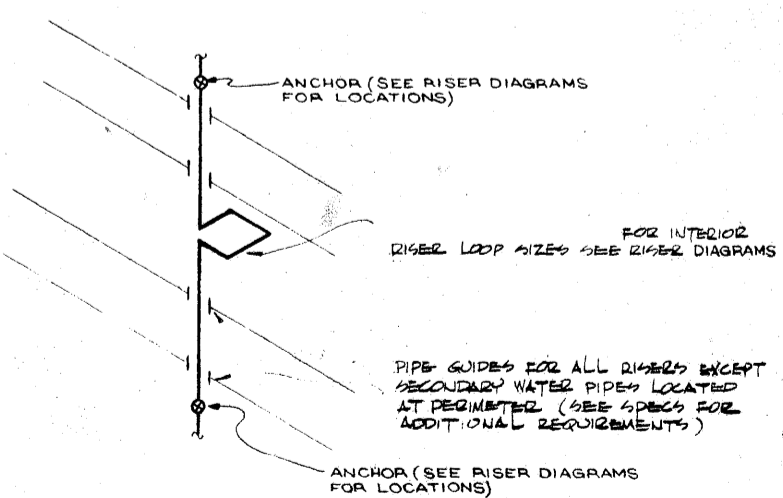
TYPICAL PUMP ISOLATION BASE



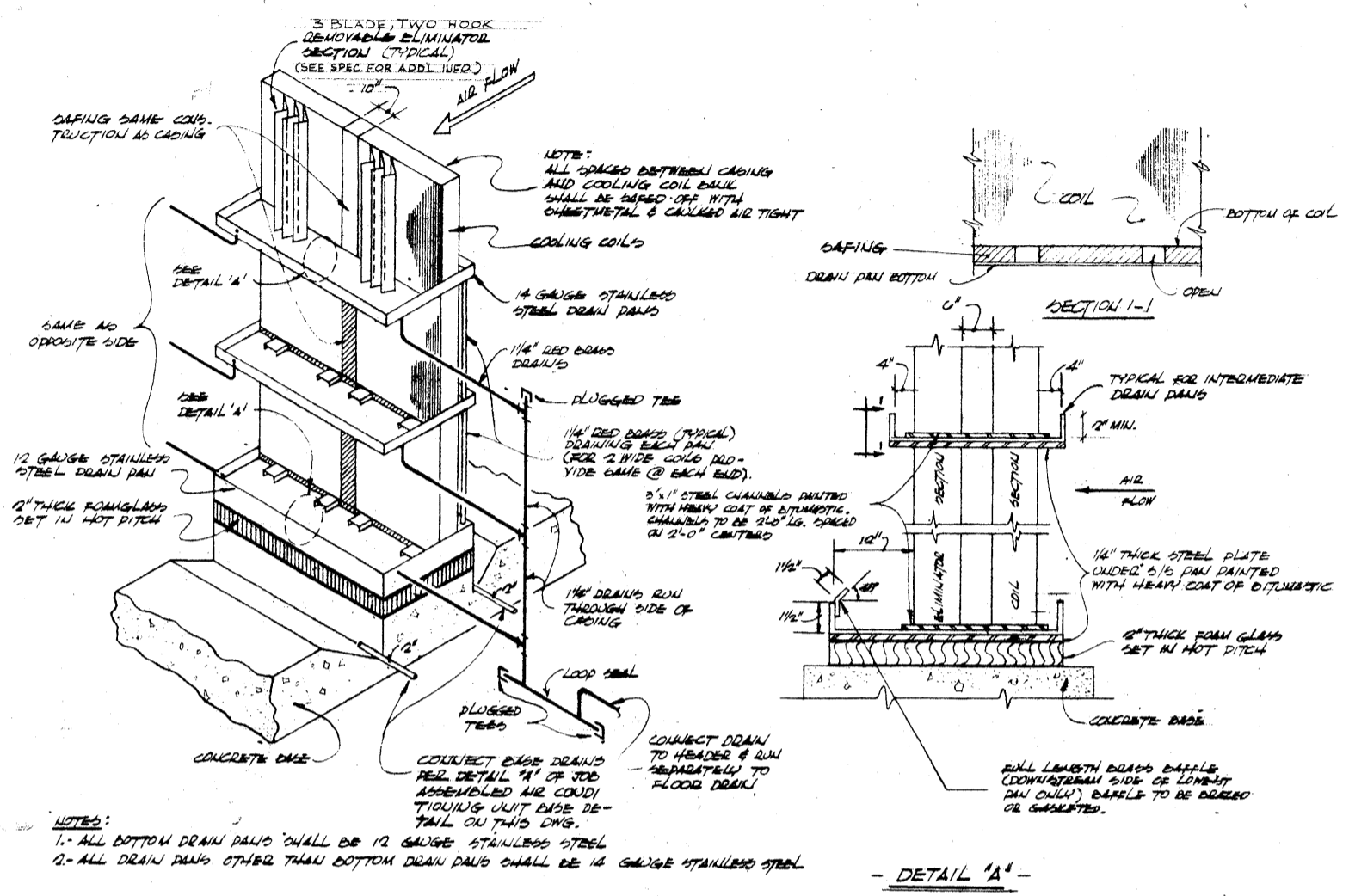
MEDIUM AND HIGH PRESSURE DRIP CONNECTIONS



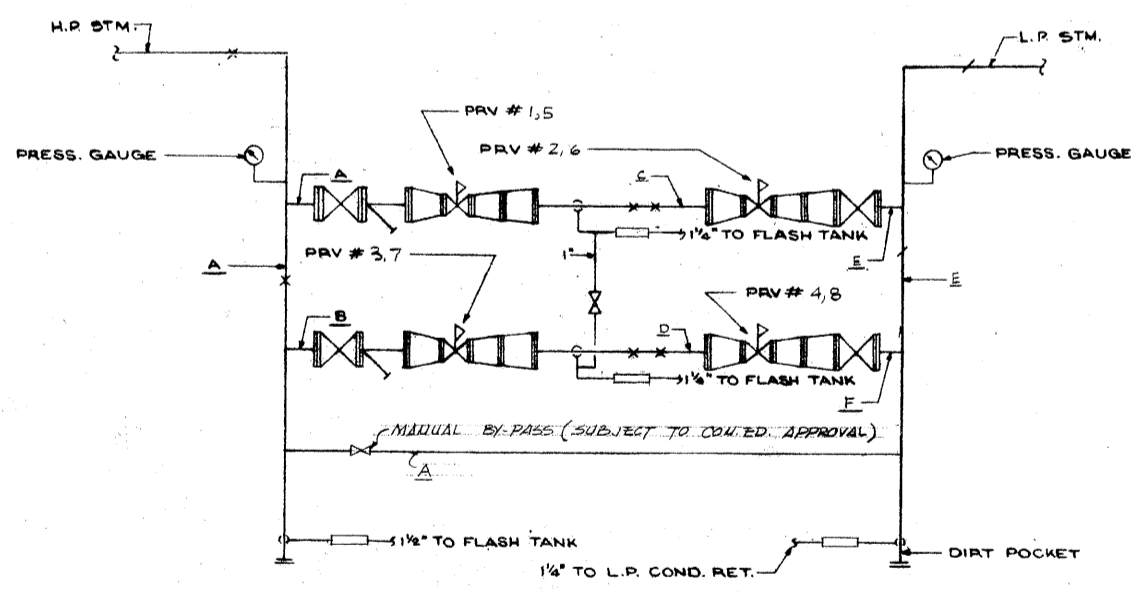
LOW PRESSURE DRIP CONNECTIONS



TYPICAL SCHEMATIC WATER RISER EXPANSION LOOP



COOLING COIL ELIMINATOR AND DRAIN PAN DETAIL



PRV PIPE SIZES (INCHES)

PRV LOCATION	A	B	C	D	E	F
I 5 TH FLOOR M.E.R.	8	4	10	6	14	8
II 5 TH FLOOR M.E.R.	8	5	10	6	14	8

PRV RIG DETAIL

REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

DETAIL SHEET NO. 1

PROJECT NUMBER
7101

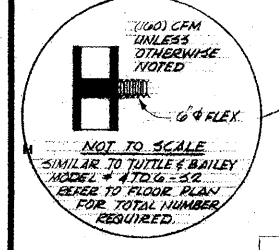
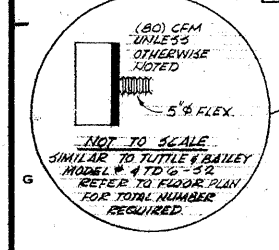
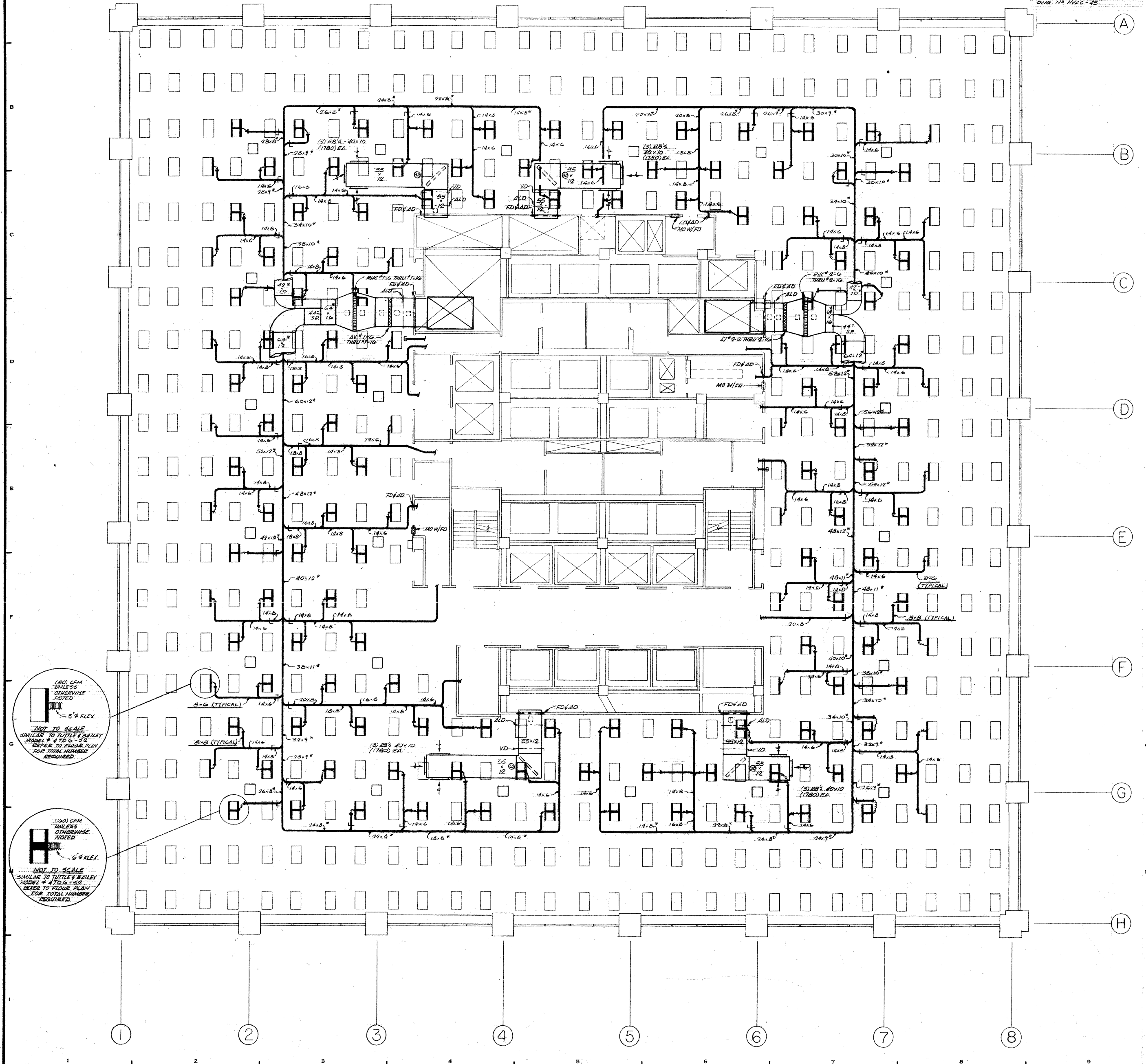
DRAWING NUMBER
HVAC-35

DATE
1-17-72

SCALE
NONE

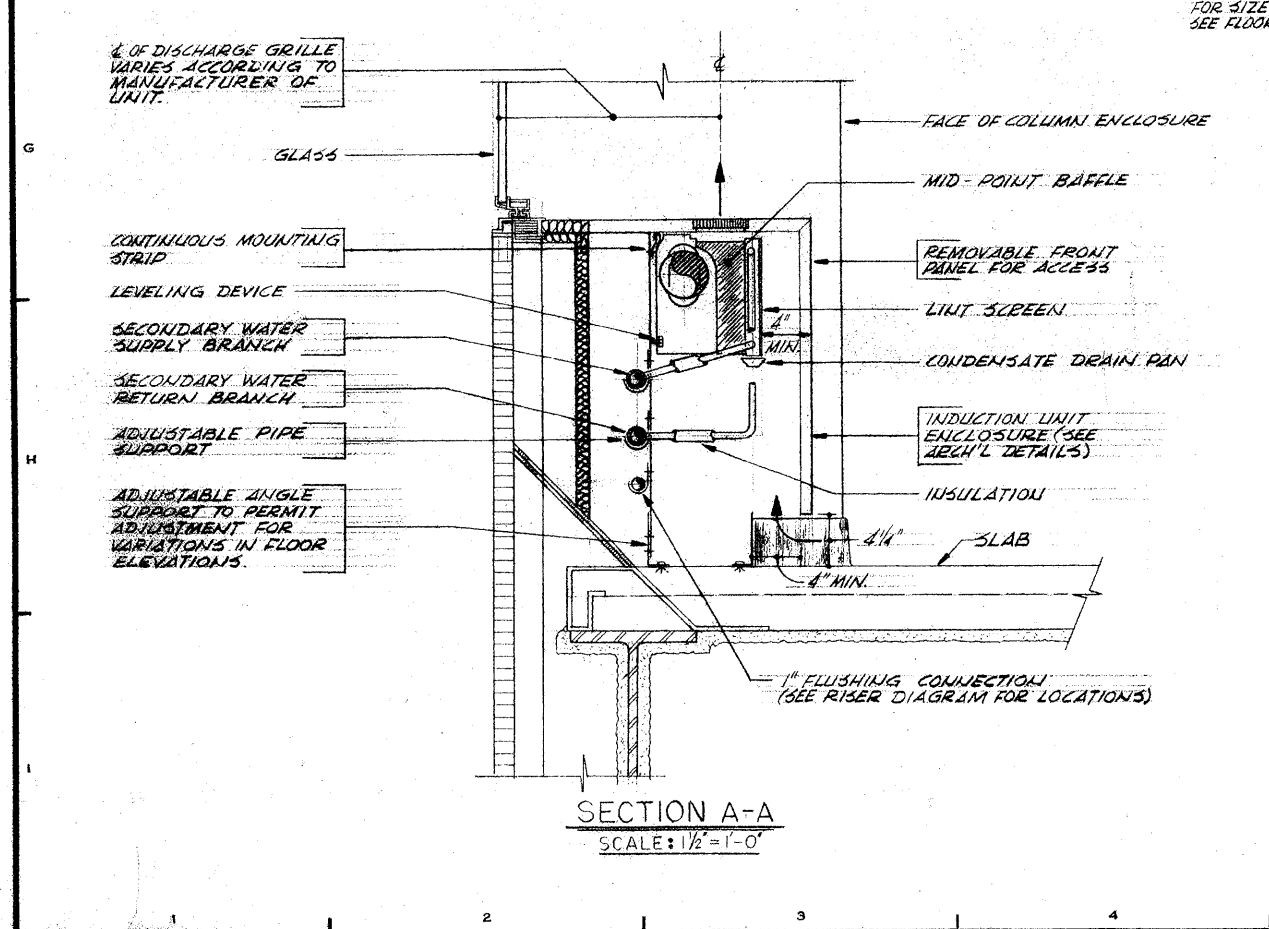
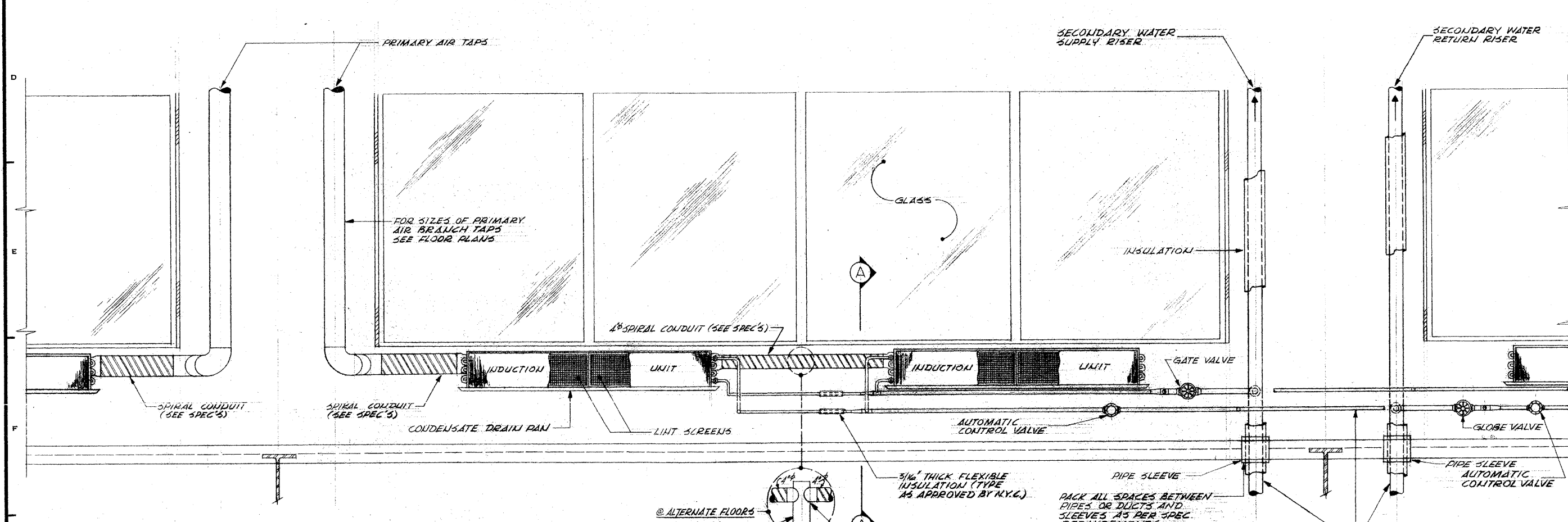
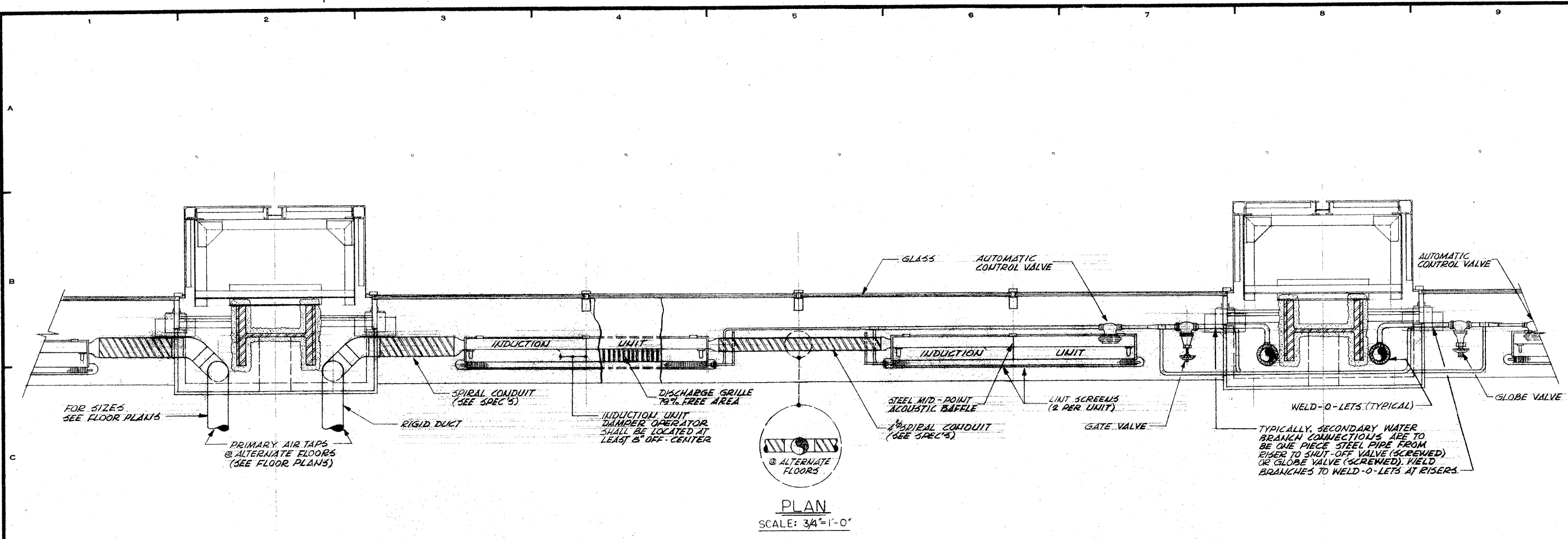
35

NOTES:
 1. SEE DWG. NO. HVAC-41 FOR INDUCTION UNITS, THERMO-STATS, COILS, DUCTWORK, ETC.
 2. ALL BRANCH DUCTWORK SERVING DOUBLE DIFFUSER SHALL BE 8" x 8".
 3. ALL BRANCH DUCTWORK SERVING DOUBLE DIFFUSER SHALL BE 8" x 8".
 4. SEE GENERAL NOTE #12 ON DWG. NO. HVAC-45.



ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N. Y. N. Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS 475 PARK AVENUE SOUTH N. Y. N. Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS 919 THIRD AVENUE N. Y. N. Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS 515 MADISON AVENUE N. Y. N. Y. 10022			
JAROS, BAUM & BOLLES MECHANICAL ENGINEERS 345 PARK AVENUE N. Y. N. Y. 10022			
TYPICAL FLOOR PLAN ALTERNATE NO 10			
	PROJECT NUMBER	7101	
	DRAWING NUMBER	HVAC - 34	
	DATE	1-7-72	
	SCALE	1/8" = 1'-0"	

34



REVISIONS		
NO.	DATE	DESCRIPTION

ISSUED TO	NO.	DATE	PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

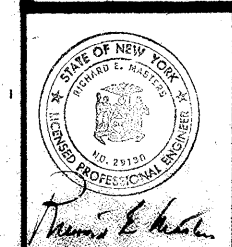
SHREVE, LAMB & HARMON ASSOCIATES P.C.
ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
315 MADISON AVENUE N.Y. N.Y. 10022

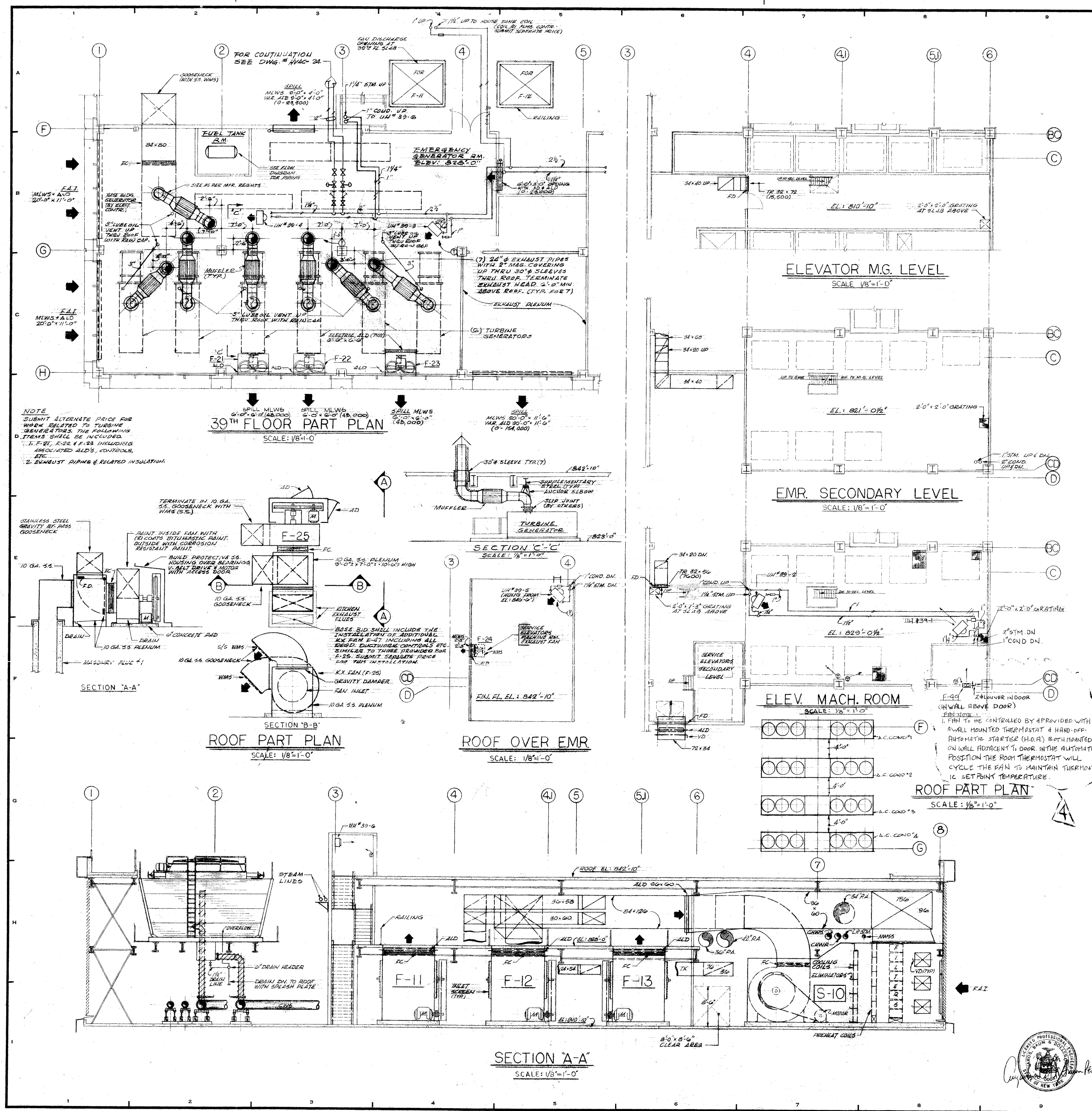
JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

INDUCTION UNIT DETAIL



PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-33
DATE	1-7-72
SCALE	AS NOTED

33



REVISIONS		
NO	DATE	DESCRIPTION
1	2-18-72	REVISED AS CIRCLED
2	3-12-73	REVISED (LOCATION) OF GENIE FOR EXHAUST & FIXED SLEEVE LOCATIONS THRU ROOF BY DIMENSION.
3	9-28-73	ADDED SECT. C-C & 3" LUBE OIL VENTS THRU ROOF.
4	8-11-80	ADDED F-49 FOR NEW ELEVATOR ROOM.

ISSUED TO: NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
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PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. N. Y. 10022

JAROS, BAUM & BOLLES MECH. ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

PART PLANS, EMR'S & SECTIONS

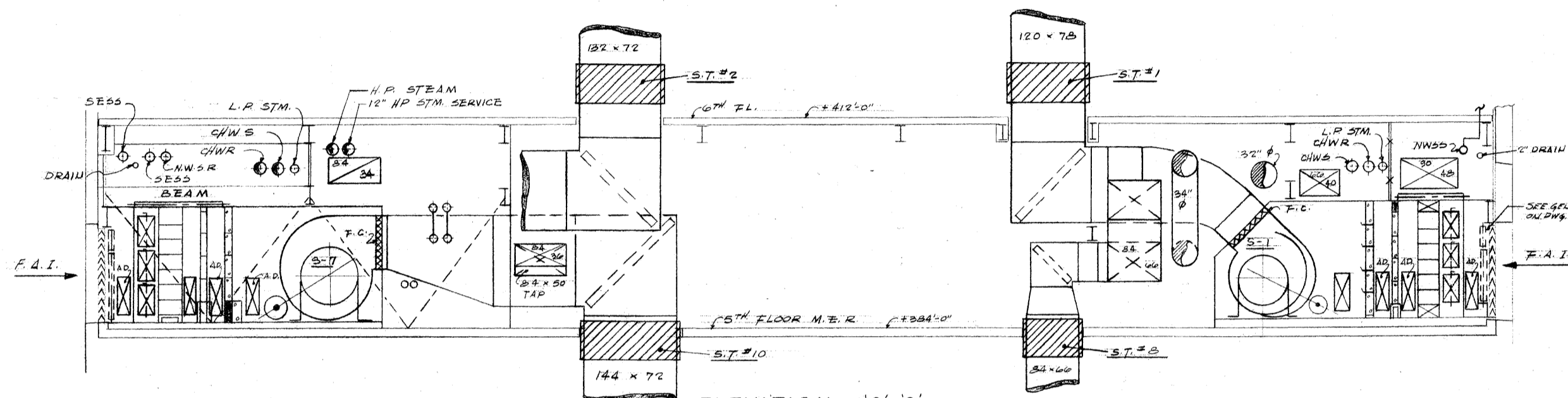
PROJECT NUMBER
7101

DRAWING NUMBER
HVAC-32

DATE
1-7-72

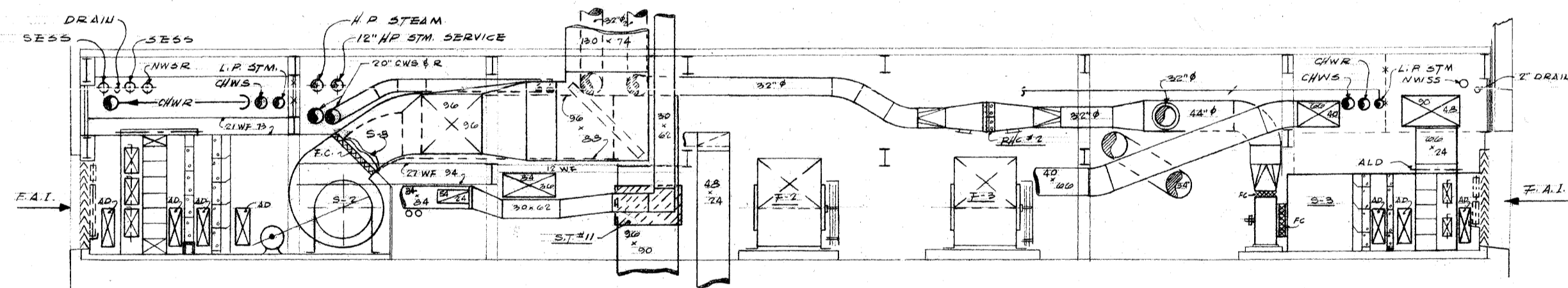
SCALE
1/8"=1'-0"





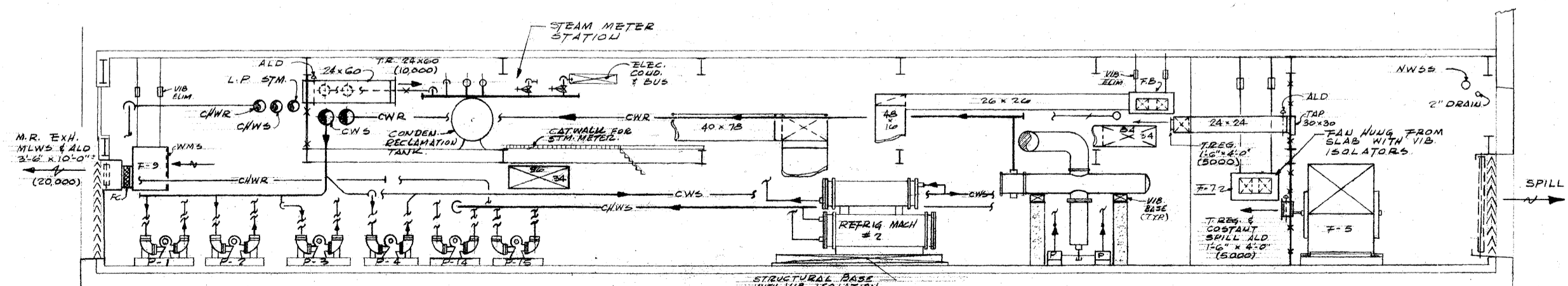
ELEVATION C-C

SCALE: 1/8"=1'-0"



ELEVATION B-B

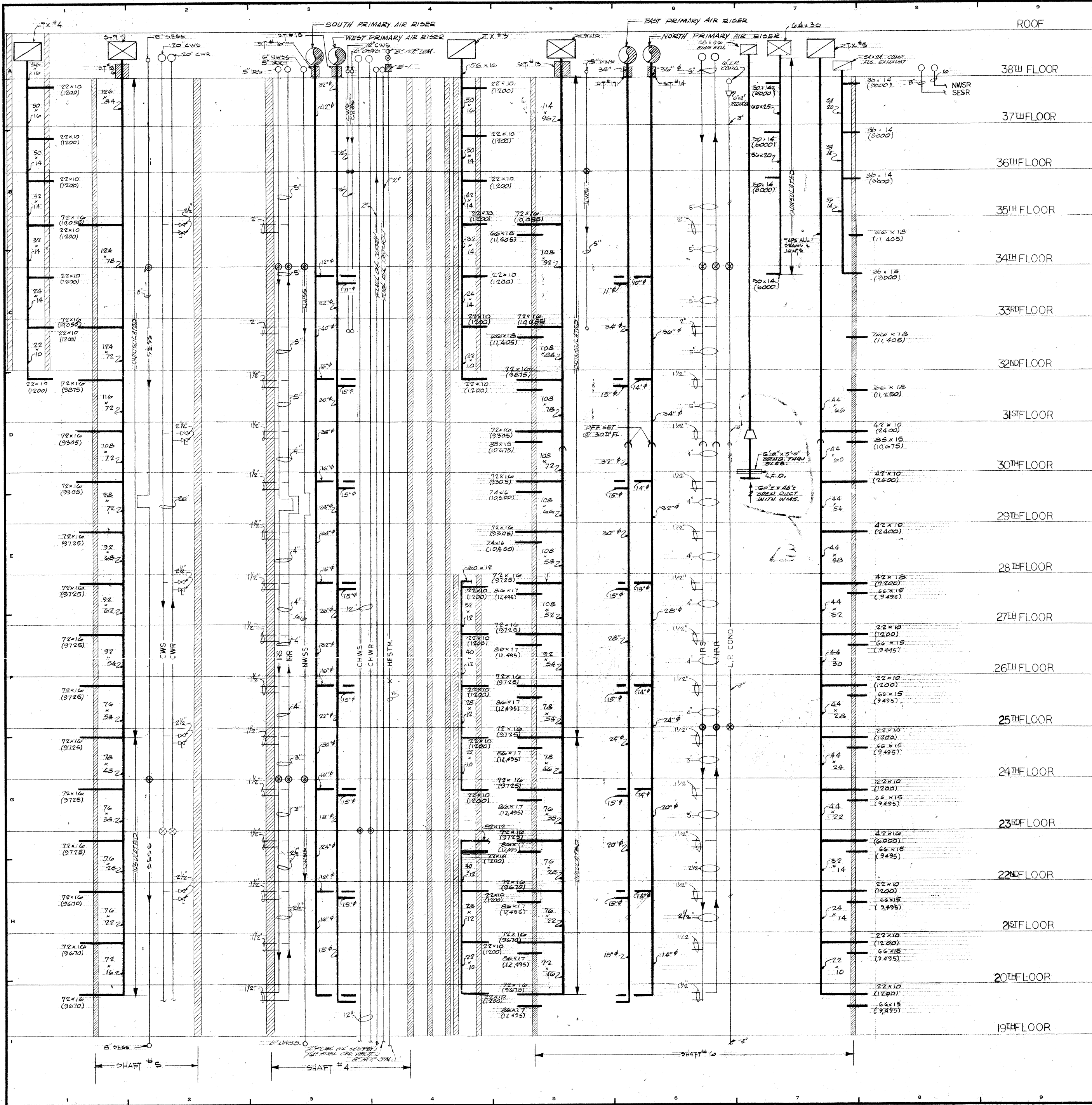
SCALE: 1/8"=1'-0"



ELEVATION A-A

SCALE: 1/8"=1'-0"

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY, ST. N. Y. N. Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C.			
ARCHITECTS			
475 PARK AVENUE SOUTH N. Y. N. Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N. Y. N. Y. 10022			
THE OFFICE OF JAMES RUDERMAN			
STRUCTURAL ENGINEERS			
515 MADISON AVENUE N. Y. N. Y. 10022			
JAROS, BAUM & BOLLES			
MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N. Y. N. Y. 10022			
5TH FLOOR M.E.R. ELEVATIONS			
	PROJECT NUMBER	7101	
	DRAWING NUMBER	HVAC-31	
	DATE	7-7-72	
	SCALE	1/8"=1'-0"	

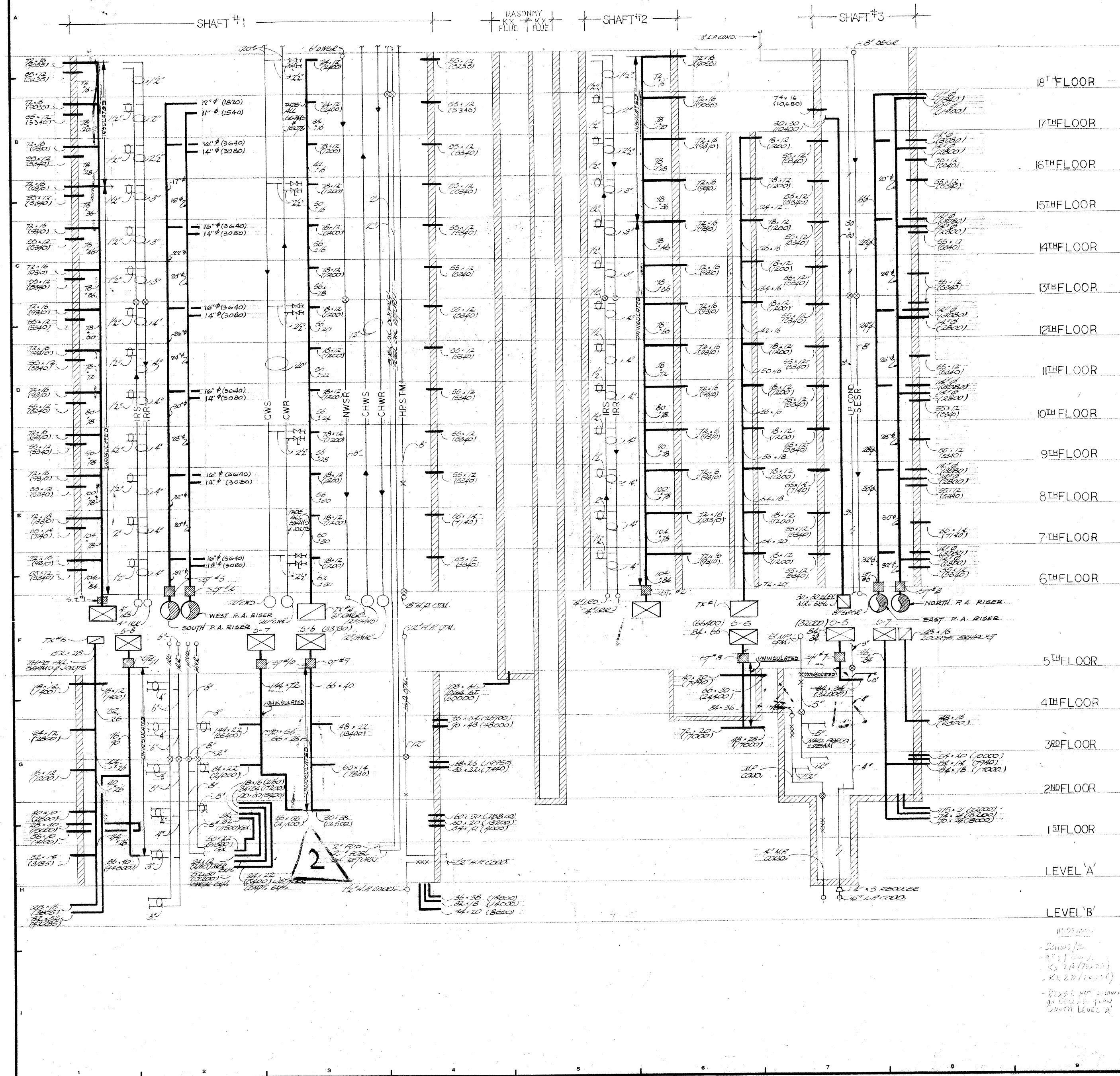


REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	DRAWING NOT CIRCLED
2	4-26-72	INDICATED INSULATION AS CIRCLED
3	9-14-73	ADDED NEW SLAB OPNG. & DUCTWORK TO ELEV. M.E.

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS			
475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS			
315 MADISON AVENUE N.Y. N.Y. 10022			
JAROS, BAUM & BOLLES MECH & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			
INTERIOR RISER DIAGRAM 19TH TO 37TH FL'S			
PROJECT NUMBER		7101	
DRAWING NUMBER		HVAC-26	
DATE		1-7-72	
SCALE		NONE	

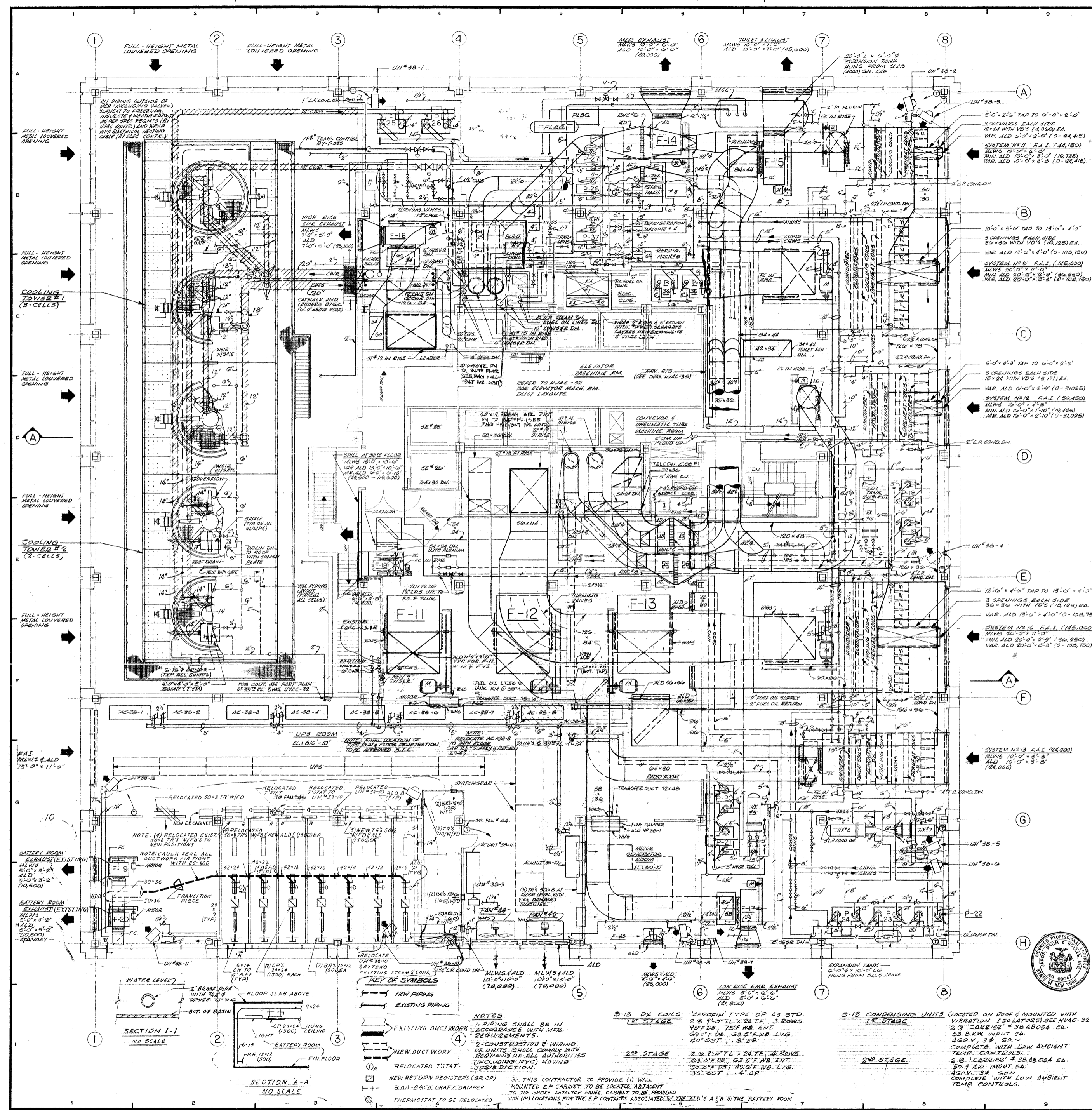
7/26/72

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AND CIRCLED
2	4-26-72	INDICATED INSULATION AS CIRCLED



ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS			
475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS			
515 MADISON AVENUE N.Y. N.Y. 10022			
JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			
INTERIOR RISER DIAGRAM LEVEL B' TO 18TH FLOOR			
	PROJECT NUMBER	7101	
	DRAWING NUMBER	HVAC-25	
	DATE	1-7-72	
	SCALE	1/8" = 1'-0"	

9
28



REVISIONS

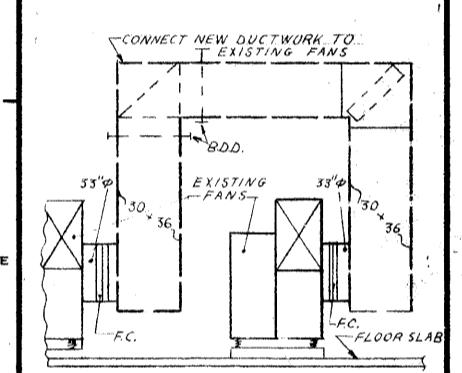
NO	DATE	DESCRIPTION
1	2-18-72	REVISED AS CIRCLED
2	11-30-72	LOCATED SMOKE DETECTORS
3	3-27-73	DELETED COOLER C-4
4	9-14-73	DELETED FIVE STANDPIPE TANKS, ADDED 3PM FLOOR 2ND AS SHOWN
5	10-23-73	REVISED CIRCLED AREA
6	10-29-73	COIL DAMPERS CHANGED TO FIRE DAMPERS
7		ADDED 2 CHANGES AND FRESH AIR DUCT FOR SYSTEM A-C SYSTEM ON 34TH FLOOR
8	10/1/80	REMOVE AC #38-B & RELOCATE TO 33RD FL. THROPPED 4" DIA. R.C. LANS TO 33RD FLOOR AS NOTED.
9	10-21-80	REVISED PARALLEL LAYOUT FOR BANKERS TRUST CO. COMMENTS.
10		REVISE BATTERY RM LAYOUT PER ARCHT. DWG'S DATED 12.2.80.

ISSUED FOR REVIEW 12-19-80

CO2 CONTROL SEQUENCE SCHEDULE

	NORMAL CO2 OPERATING MODE	CO2 FLURGE MODE
ALD-A	OPEN	CLOSED
ALD-B	OPEN	CLOSED

NOTES:
 1. ALD'S SHALL BE CONTROLLED BY THEIR ASSOCIATED ROOM SMOKE DETECTORS & THE CO2 CONTROL PANEL & FUNCTION PER THE CO2 CONTROL SEQUENCE SCHEDULE.
 2. ONLY ALD'S IN THE ROOM WHERE A CROSS ZONE OF SMOKE DETECTORS HAVE BEEN TRIGGERED SHALL CLOSE.



ISSUED TO: NO. DATE PKG. NO.

BANKERS TRUST PLAZA

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GREENWICH AND LIBERTY ST. N.Y. N.Y.

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 475 PARK AVENUE SOUTH N.Y. N.Y. 10016

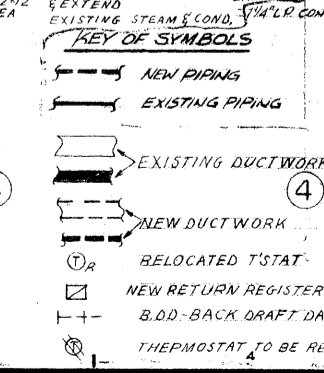
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
 919 THIRD AVENUE N.Y. (N.Y.) 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
 515 MADISON AVENUE N.Y. N.Y. 10022

J. AROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
 345 PARK AVENUE N.Y. N.Y. 10022

40th FL. MECHANICAL EQUIPMENT ROOM

PROJECT NUMBER: 7101
 DRAWING NUMBER: HVAC-24
 DATE: 1-7-72
 SCALE: 1/8" = 1'-0"



KEY OF SYMBOLS

- NEW PIPING
- EXISTING PIPING
- EXISTING DUCTWORK
- NEW DUCT WORK
- RELOCATED T/STAT
- NEW RETURN REGISTERS (R.R. OR) B.O.-BACK DRAFT DAMPER
- THERMOSTAT TO BE RELOCATED

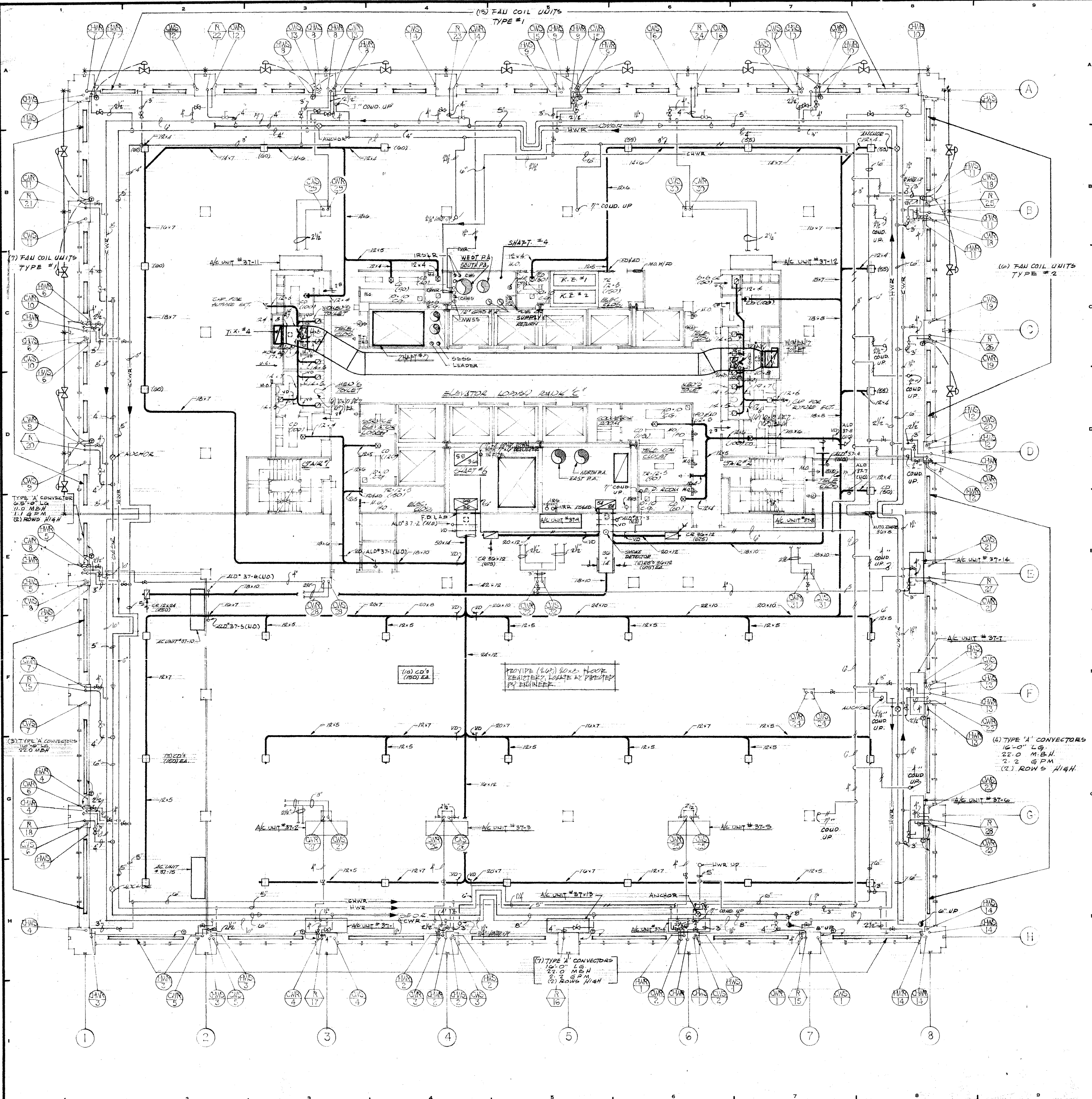
NOTES

1. PIPING SHALL BE IN ACCORDANCE WITH MFR. REQUIREMENTS.
2. CONSTRUCTION & WIRING OF UNITS SHALL COMPLY WITH REQUIREMENTS OF ALL JURISDICTIONS (INCLUDING NYC) HAVING JURISDICTION.
3. THIS CONTRACTOR TO PROVIDE (1) WALL MOUNTED E.P. CABINETS TO BE LOCATED ADJACENT TO THE SMOKE DETECTOR PANEL CABINET TO BE PROVIDED WITH (H) LOCATIONS FOR THE E.P. CONTACTS ASSOCIATED WITH THE ALD'S AS SHOWN IN THE BATTERY ROOM

5-13 DX COILS 1ST STAGE
 2 @ 9'-0" T.L. x 24" T.E., 3 ROWS
 90° OF DB, 63.5° F. WB, L.V.G.
 40° S.T., .3" DR.

5-13 CONDENSING UNITS (LOCATED ON ROOF & MOUNTED WITH VIBRATION ISOLATORS) SEE HVAC-32
 2 @ CARRIER # 38A824 CA.
 53.5 KW INPUT SA.
 460 V, 3 @, 60 Hz
 COMPLETE WITH LOW AMBIENT TEMP. CONTROLS:
 2 @ CARRIER # 38A824 EA.
 50.9 KW INPUT SA.
 460 V, 3 @, 60 Hz
 COMPLETE WITH LOW AMBIENT TEMP. CONTROLS.



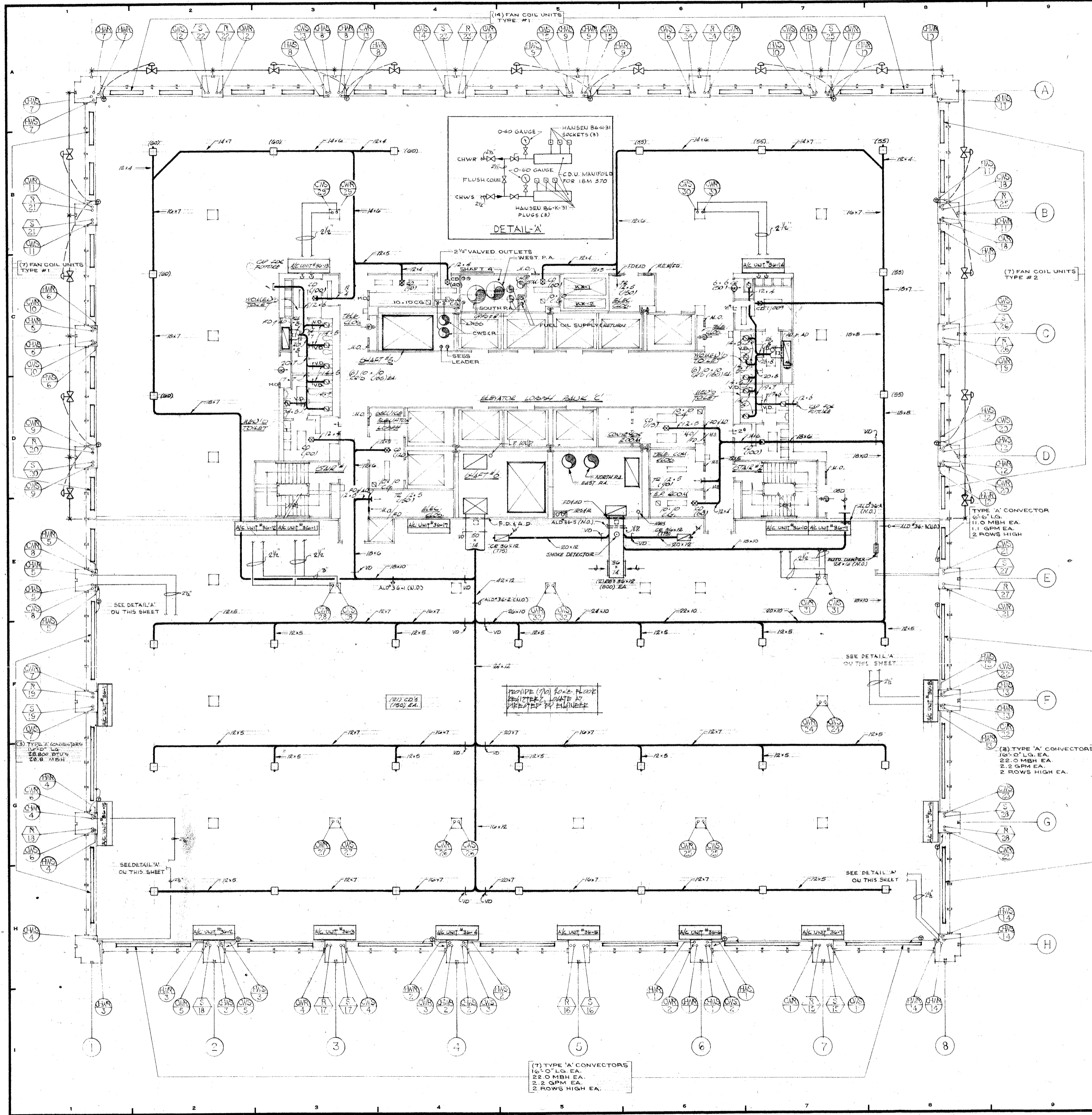


REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	GENERAL REVISION
2	11-30-72	REVISED PER BLDG. DEPT. COMMENTS

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST			
PLAZA			
A FISHER BROTHERS			
PROJECT			
GREENWICH AND LIBERTY ST. N. Y. N. Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C.			
ARCHITECTS			
475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN			
STRUCTURAL ENGINEERS			
315 MADISON AVENUE N.Y. N.Y. 10022			
JAROS, BAUM & BOLLES			
MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			

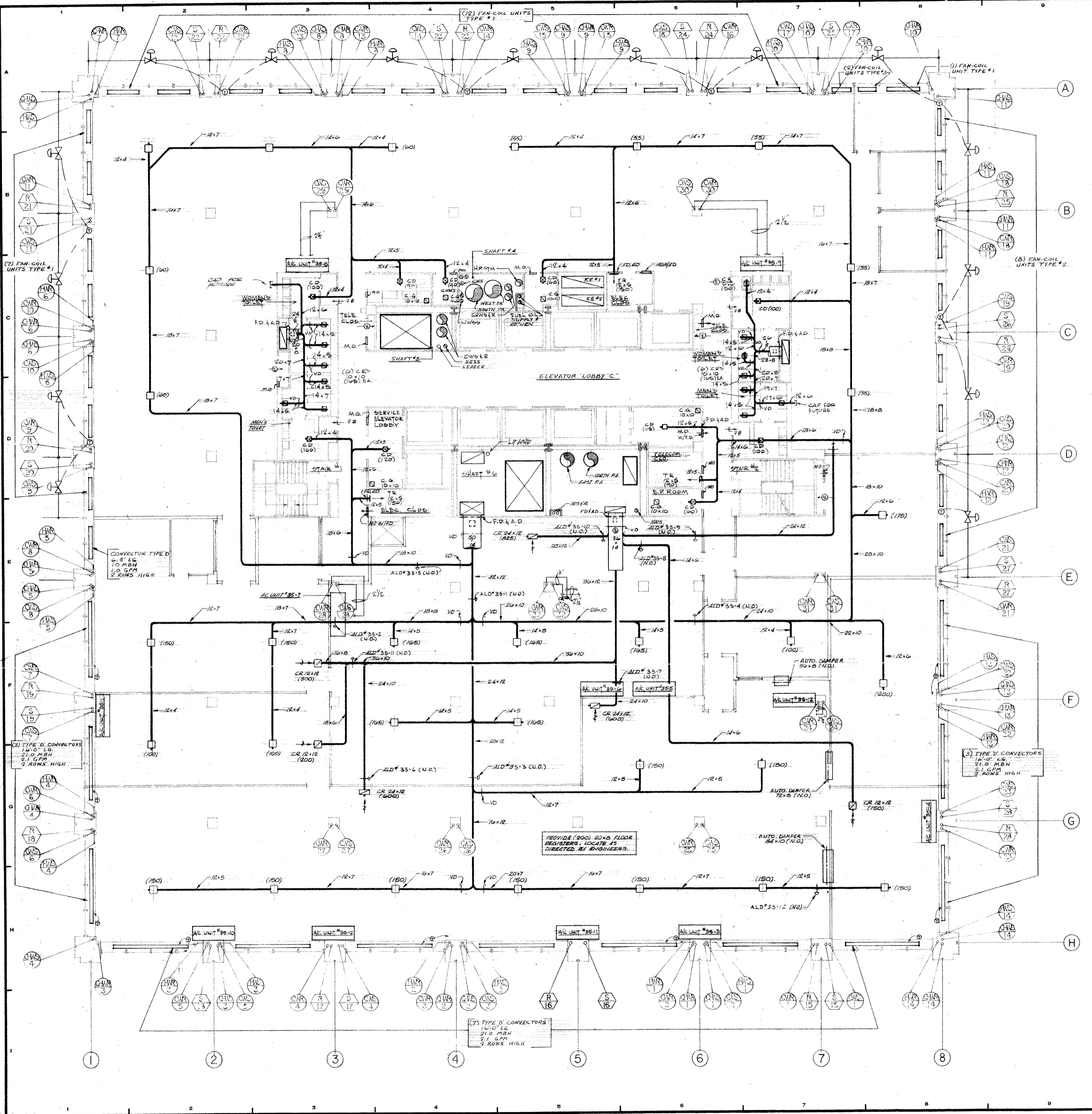
37 TH FLOOR PLAN	
	PROJECT NUMBER
	7101
	DRAWING NUMBER
	HVAC-23
	DATE
	SCALE

23



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	GENERAL REVISION
2	4-26-72	ADDED CHILLED WATER PIPING TO COMPUTERS AND DETAIL 'A'
3	11-30-72	REVISED PER B.C.D.G. DEPT. COMMENTS

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS 475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS 919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS 315 MADISON AVENUE N.Y. N.Y. 10022			
J. A. ROSS, BAUM & BOLLES MECH. ELEC. ENGINEERS 345 PARK AVENUE N.Y. N.Y. 10022			
36TH FLOOR			
	PROJECT NUMBER	7101	
	DRAWING NUMBER	HVAC-22	
	DATE	1-7-72	
	SCALE	1/8" = 1'-0"	



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	GENERAL REVISION
2	11-30-72	REVISED PER BLDG. DEPT. COMMENTS

ISSUED TO	NO.	DATE	PKG. NO.

**BANKERS TRUST
PLAZA**

**A FISHER BROTHERS
PROJECT**

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C.
ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

**PETERSON AND BRICKBAUER
ASSOCIATED ARCHITECTS**
919 THIRD AVENUE N.Y. N.Y. 10022

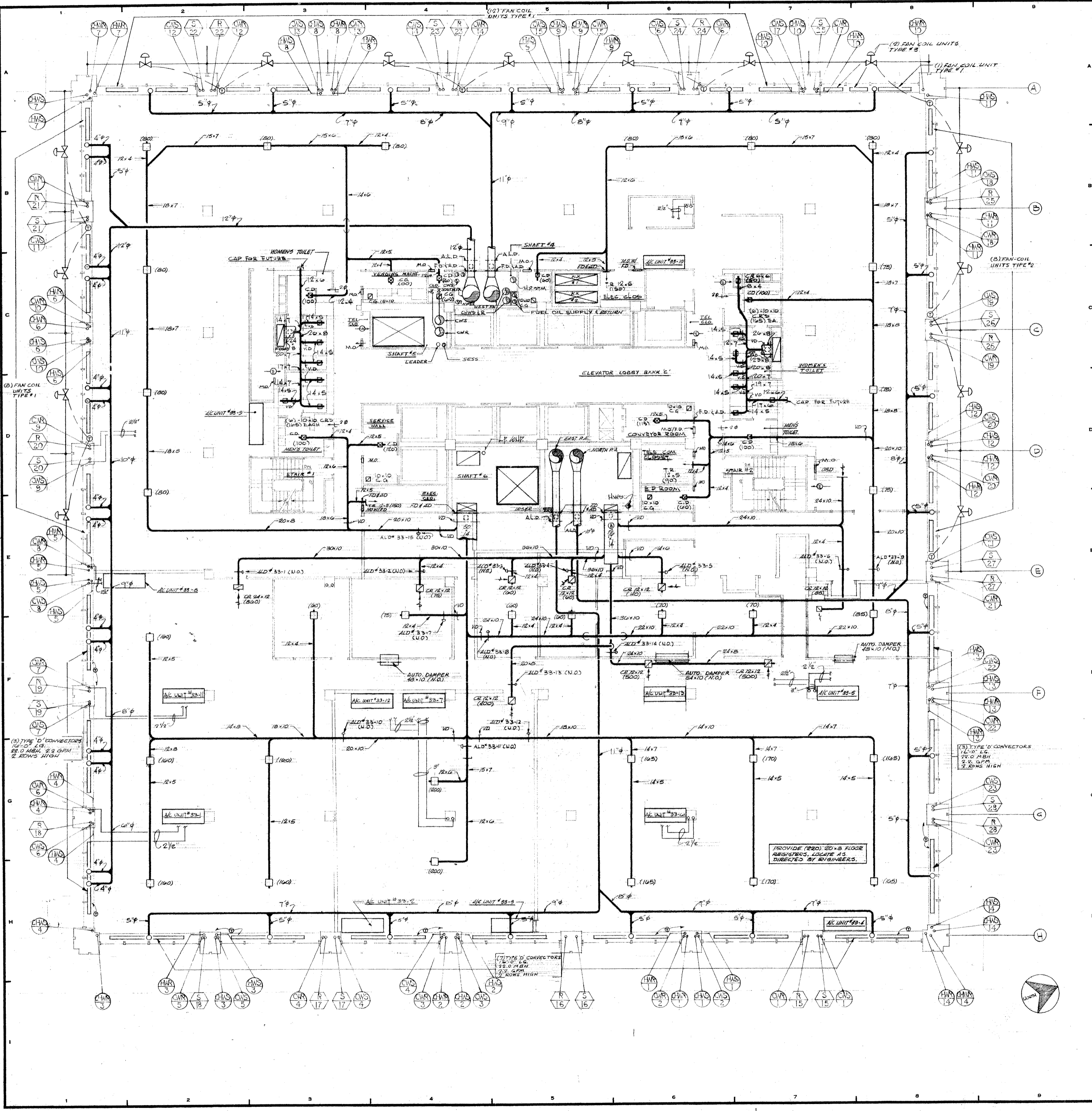
THE OFFICE OF JAMES RUDERMAN
STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

JAROS, BAUM & BOLLES
MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

35TH FLOOR PLAN

	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-21
	DATE	1-7-72
	SCALE	1/8" = 1'-0"

21



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	GENERAL REVISION
2	7-30-72	REVISED PER BLDG. DEPT. COMMENTS.

**BANKERS TRUST
PLAZA**

**A FISHER BROTHERS
PROJECT**

GREENWICH AND LIBERTY ST. N. Y. N. Y.

**SHREVE, LAMB & HARMON ASSOCIATES P.C.
ARCHITECTS**
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

**PETERSON AND BRICKBAUER
ASSOCIATED ARCHITECTS**
919 THIRD AVENUE N. Y. N. Y. 10022

**THE OFFICE OF JAMES RUDERMAN
STRUCTURAL ENGINEERS**
515 MADISON AVENUE N. Y. N. Y. 10022

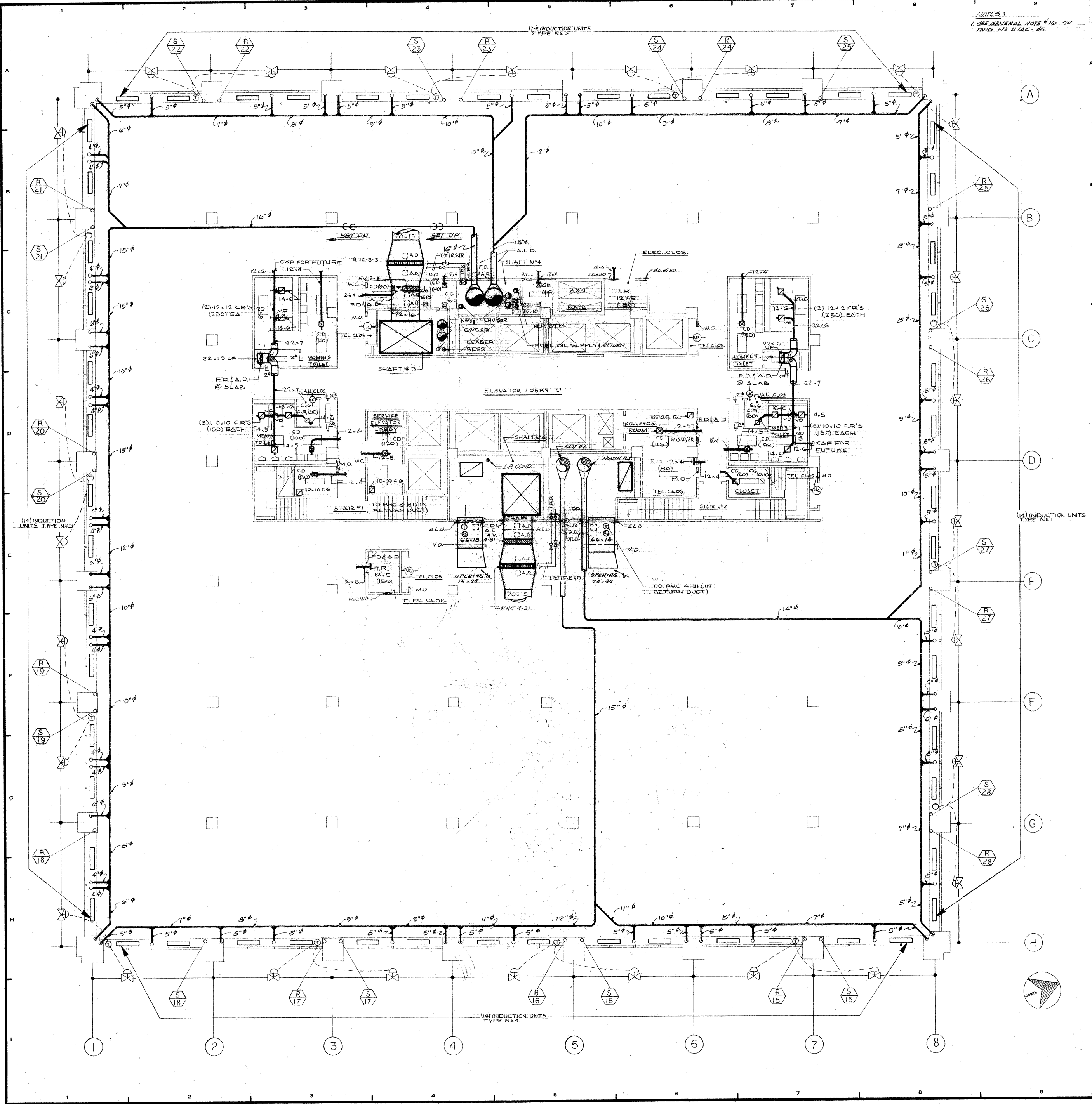
**JAROS, BAUM & BOLLES
MECH. & ELEC. ENGINEERS**
345 PARK AVENUE N. Y. N. Y. 10022

33RD FLOOR PLAN



PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-20
DATE	1-17-72
SCALE	1/8" = 1'-0"

Handwritten initials or mark.



NOTES:
 1. SEE GENERAL NOTE #10 ON DWG. NO. HVAC-16.

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AND CHECKED
2	2-9-72	REVISED RETURN AIR DUCTWORK

ISSUED TO: NO. DATE: PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
 475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
 919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
 315 MADISON AVENUE N.Y. N.Y. 10022

JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
 345 PARK AVENUE N.Y. N.Y. 10022

31ST FLOOR PLAN

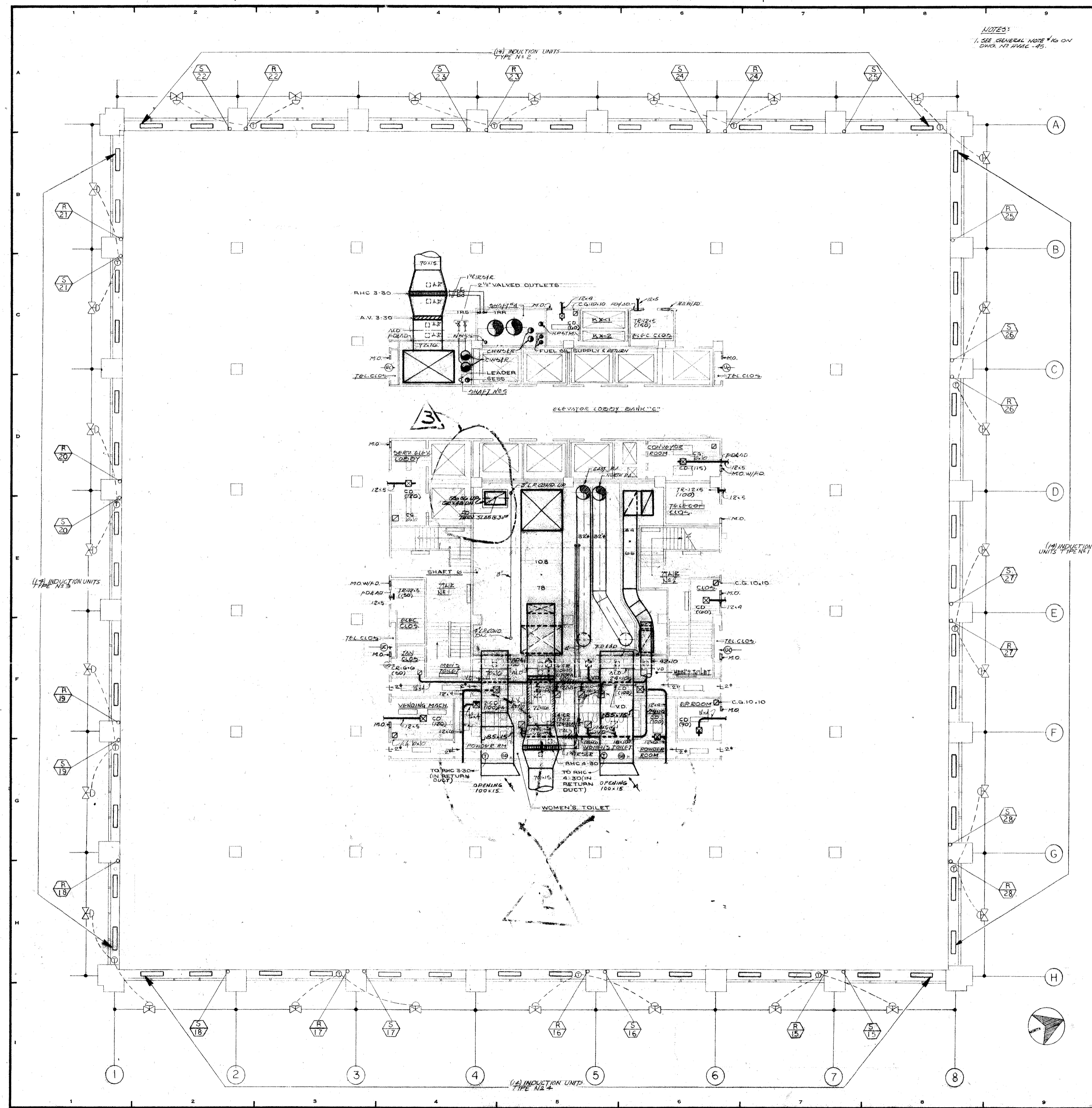
	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-18
	DATE	1-7-72
	SCALE	1/8" = 1'-0"

James E. Ruderman

18

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AS CHECKED
2	5-9-72	REVISED RETURN AIR DUCTWORK
3	9-14-73	REVISED & EXTENDED ELEV. MACH. RM. DUCTWORK

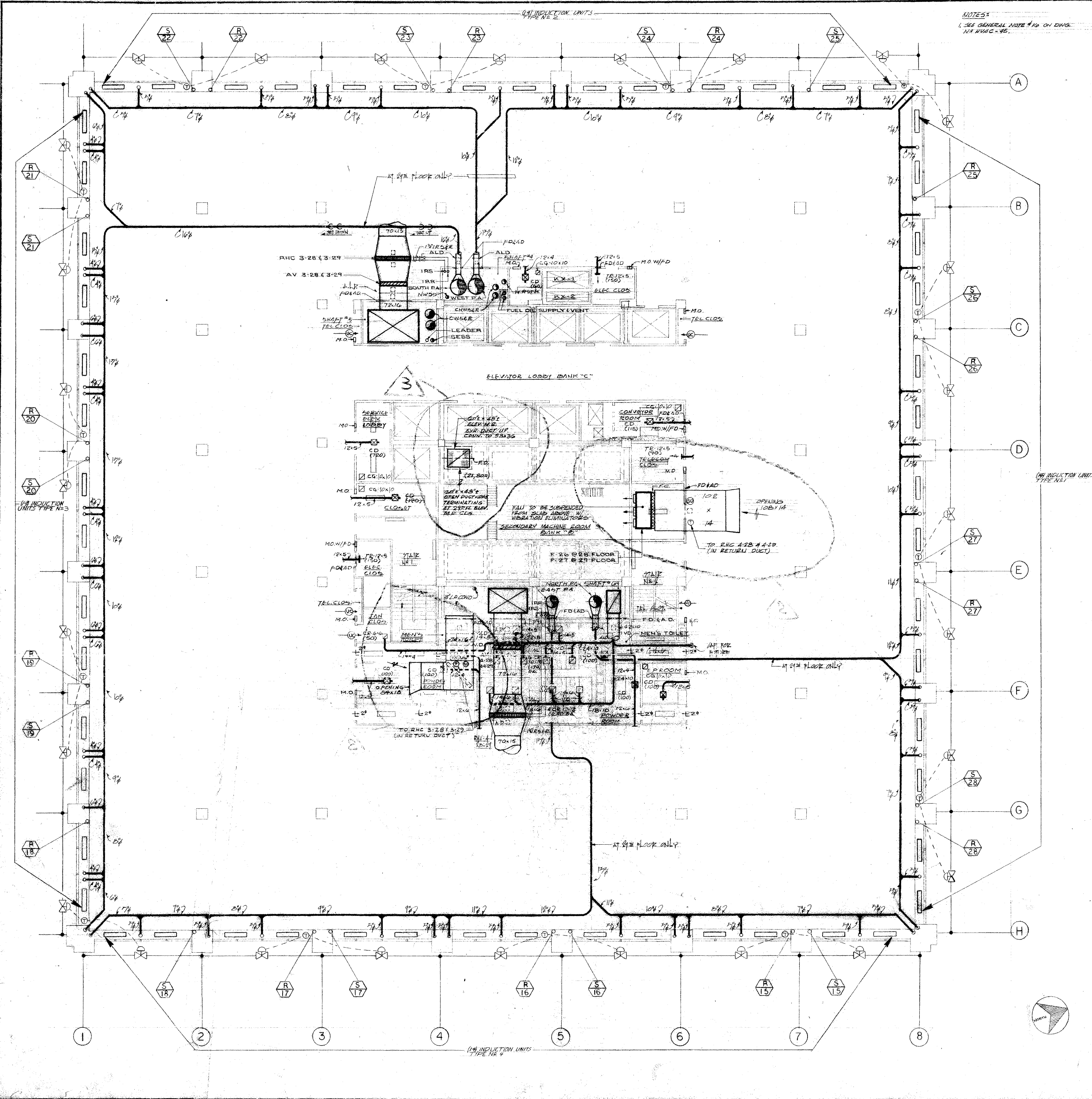
NOTES:
1. SEE GENERAL NOTE #10 ON DWG. NO. HVAC-16.



ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N. Y. N. Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS			
475 PARK AVENUE SOUTH N. Y. N. Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N. Y. N. Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS			
315 MADISON AVENUE N. Y. N. Y. 10022			
J. A. ROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N. Y. N. Y. 10022			

30TH FLOOR PLAN

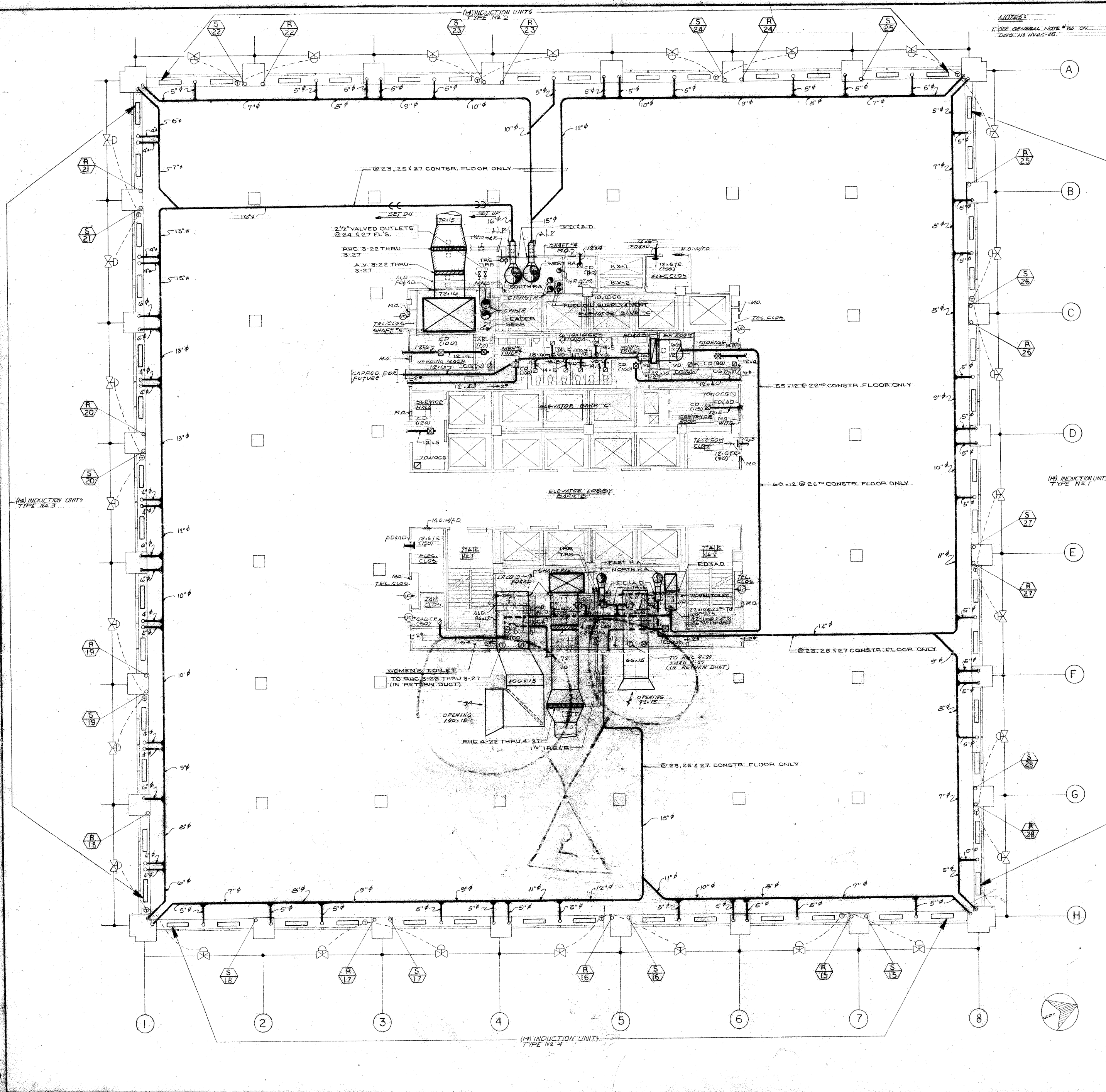
	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-17
	DATE	1-7-72
	SCALE	1/8" = 1'-0"



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED CIRCLED AREAS
2	5-9-72	REVISED RETURN AIR DUCTWORK
3	7-14-72	ADDED DUCTWORK TO ELEV. M.R.

ISSUED TO	NO.	DATE	PRG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHRIVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS 475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS 919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS 515 MADISON AVENUE N.Y. N.Y. 10022			
J. ARON, BAUM & BOLLES MECH. & ELEC. ENGINEERS 345 PARK AVENUE N.Y. N.Y. 10022			
28TH & 29TH FLOOR PLAN			
	PROJECT NUMBER	7101	
	DRAWING NUMBER	HVAC-16	
	DATE	1-7-72	
	SCALE	1/8" = 1'-0"	

16



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AS CIRCLED
2	5-9-72	REVISED RETURN AIR DUCTWORK

ISSUED TO: _____ NO.: _____ DATE: _____ PKG. NO.: _____

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10018

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES ROBERMAN STRUCTURAL ENGINEERS
315 MADISON AVENUE N.Y. N.Y. 10022

JAROSLAW & BOLLES MECHANICAL ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

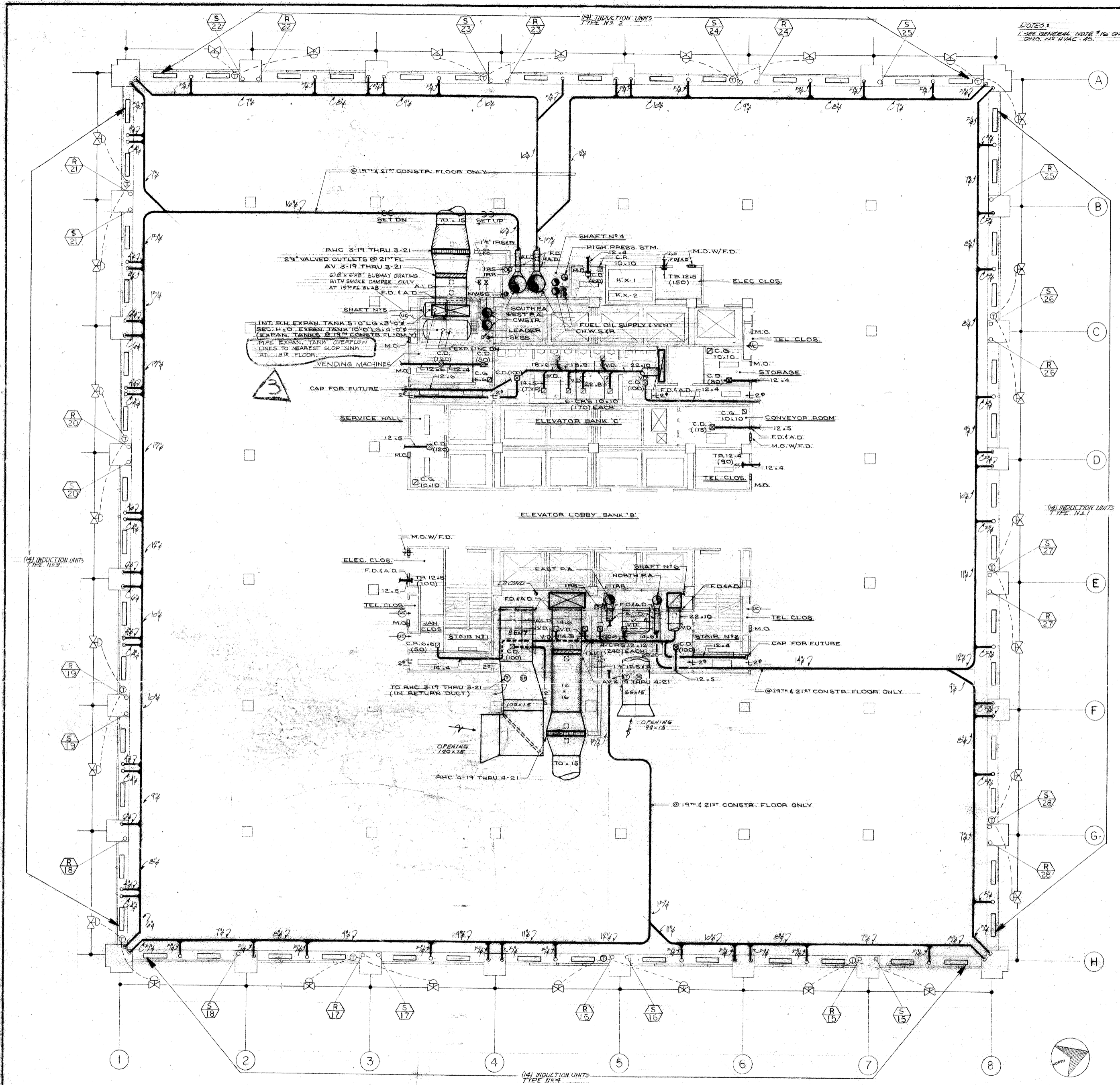
22ND TO 27TH FLOOR PLAN

PROJECT NUMBER: 7101

DRAWING NUMBER: HVAC-15

DATE: 1-7-72

SCALE: 1/8" = 1'-0"



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AS CIRCLED
2	5-9-72	REVISED RETURN AIR DUCTWORK
3	10-1-73	REVISED AS CIRCLED

ISSUED TO: NO. DATE: PRG. NO.

BANKERS TRUST FINAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARNISH ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRECKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDENIK & ASSOCIATES STRUCTURAL ENGINEERS
315 MADISON AVENUE N.Y. N.Y. 10022

JAROS, BAUM & BOLLES MECHANICAL ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

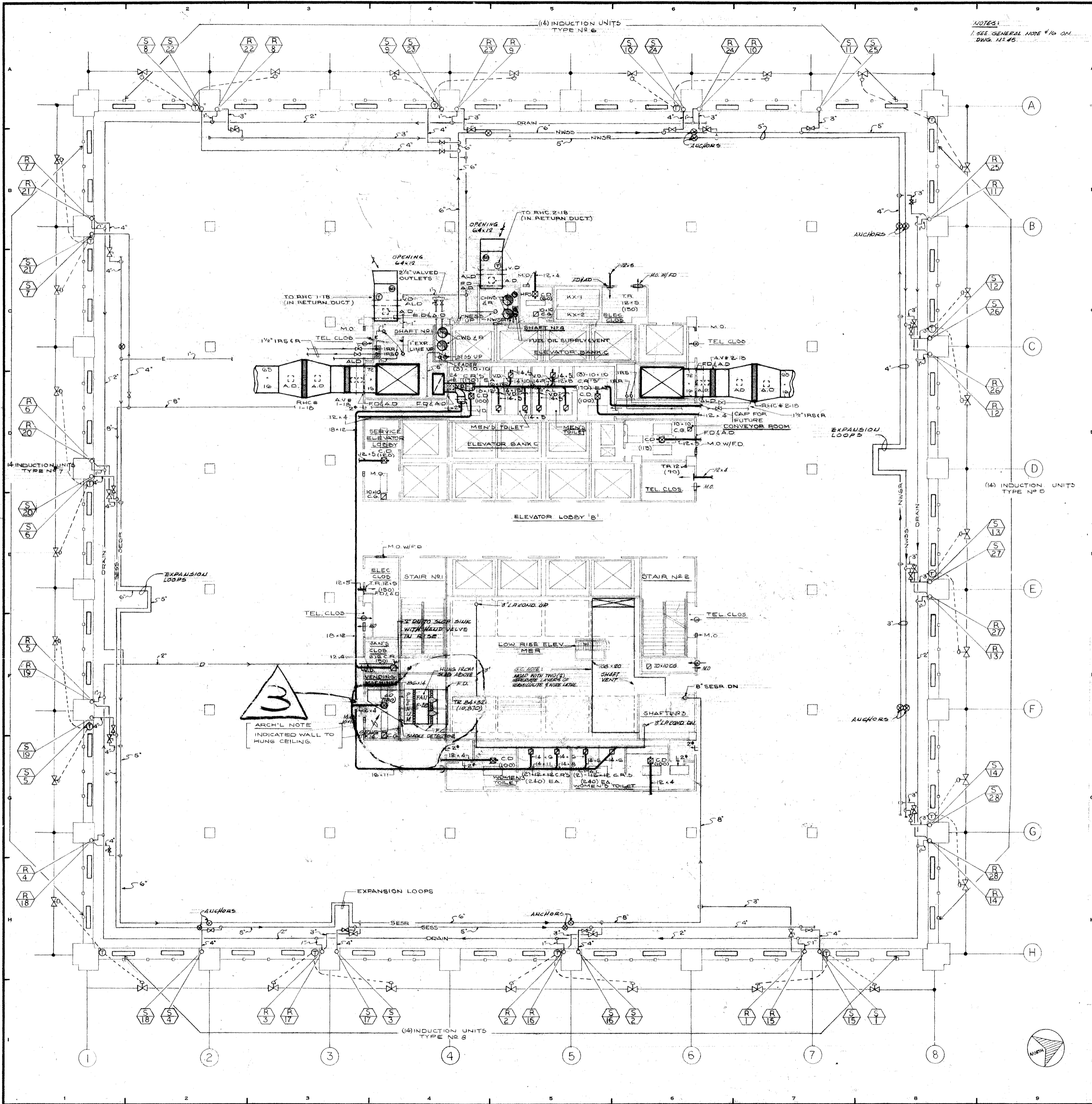
19TH TO 20TH FLOOR PLAN

PROJECT NUMBER: 7101

DRAWING NUMBER: HVAC-14

DATE: 1-7-72

SCALE: 1/8" = 1'-0"



NOTES:
1. SEE GENERAL NOTE #10 ON DWG. #146.

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED AS CIRCLED
2	5-9-72	REVISED RETURN AIR DUCTWORK
3	7-24-72	SHADIST PAN T-12 RELOCATED AS SHOWN.

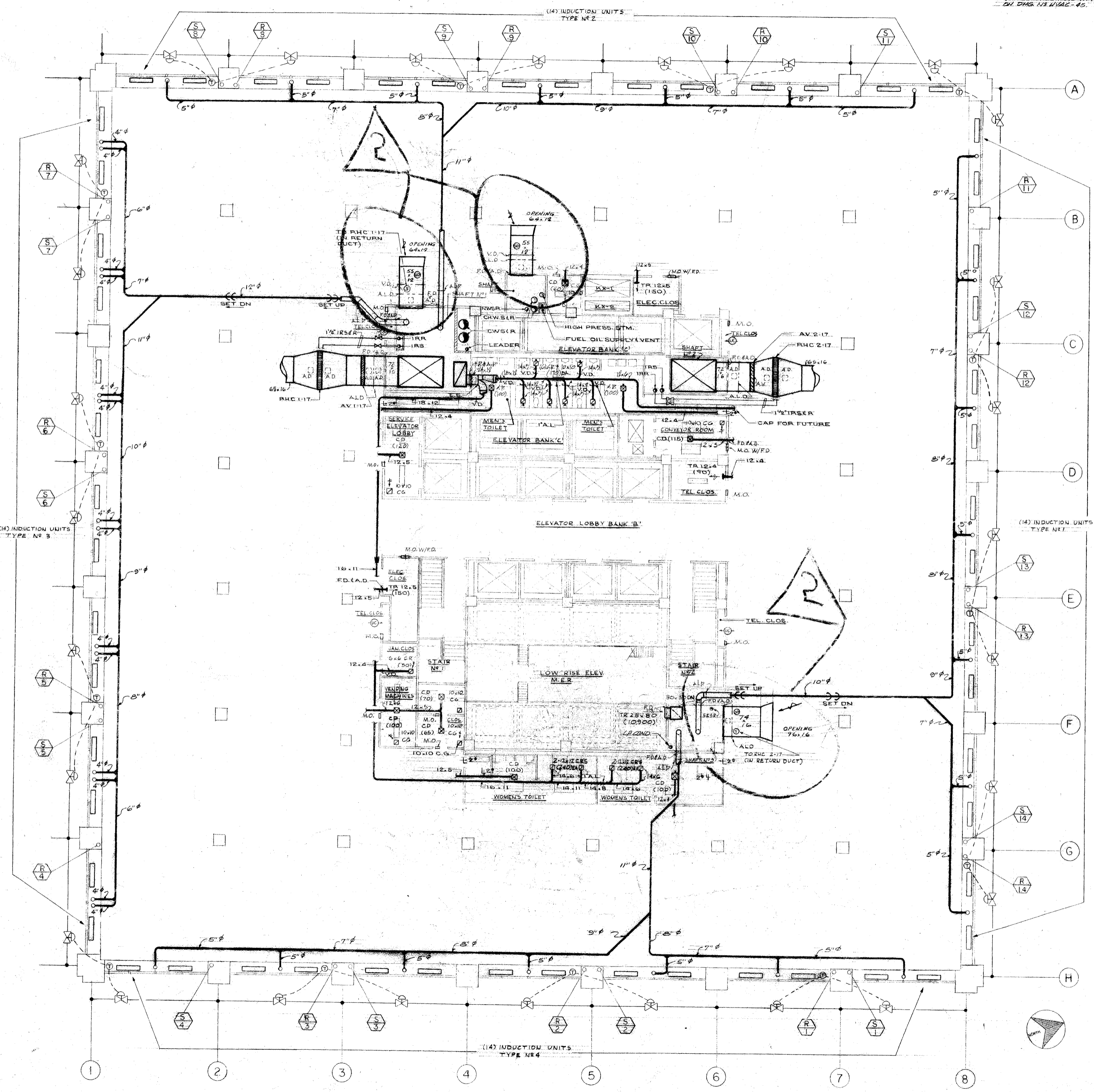
ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C.			
ARCHITECTS			
475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN			
STRUCTURAL ENGINEERS			
315 MADISON AVENUE N.Y. N.Y. 10022			
JAROS, BAUM & BOLLES			
MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			

18TH FLOOR PLAN

	PROJECT NUMBER
	7101
	DRAWING NUMBER
	HVAC - 13
DATE	1-7-72
SCALE	1/8" = 1'-0"

NOTES:
 1. SEE GENERAL NOTE NO. 10 ON DWG. NO. HVAC-15.

REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED CIRCLED AREAS
2	5-9-72	REVISED RETURN AIR DUCTWORK



ISSUED TO NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHRIVE, LAMB & HARMON ASSOCIATES INC. ARCHITECTS
 475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
 819 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
 315 MADISON AVENUE N.Y. N.Y. 10017

JAROS, BAUM & ROLLS MECH. & ELEC. ENGINEERS
 345 PARK AVENUE N.Y. N.Y. 10022

17TH FLOOR PLAN

PROJECT NUMBER 7101

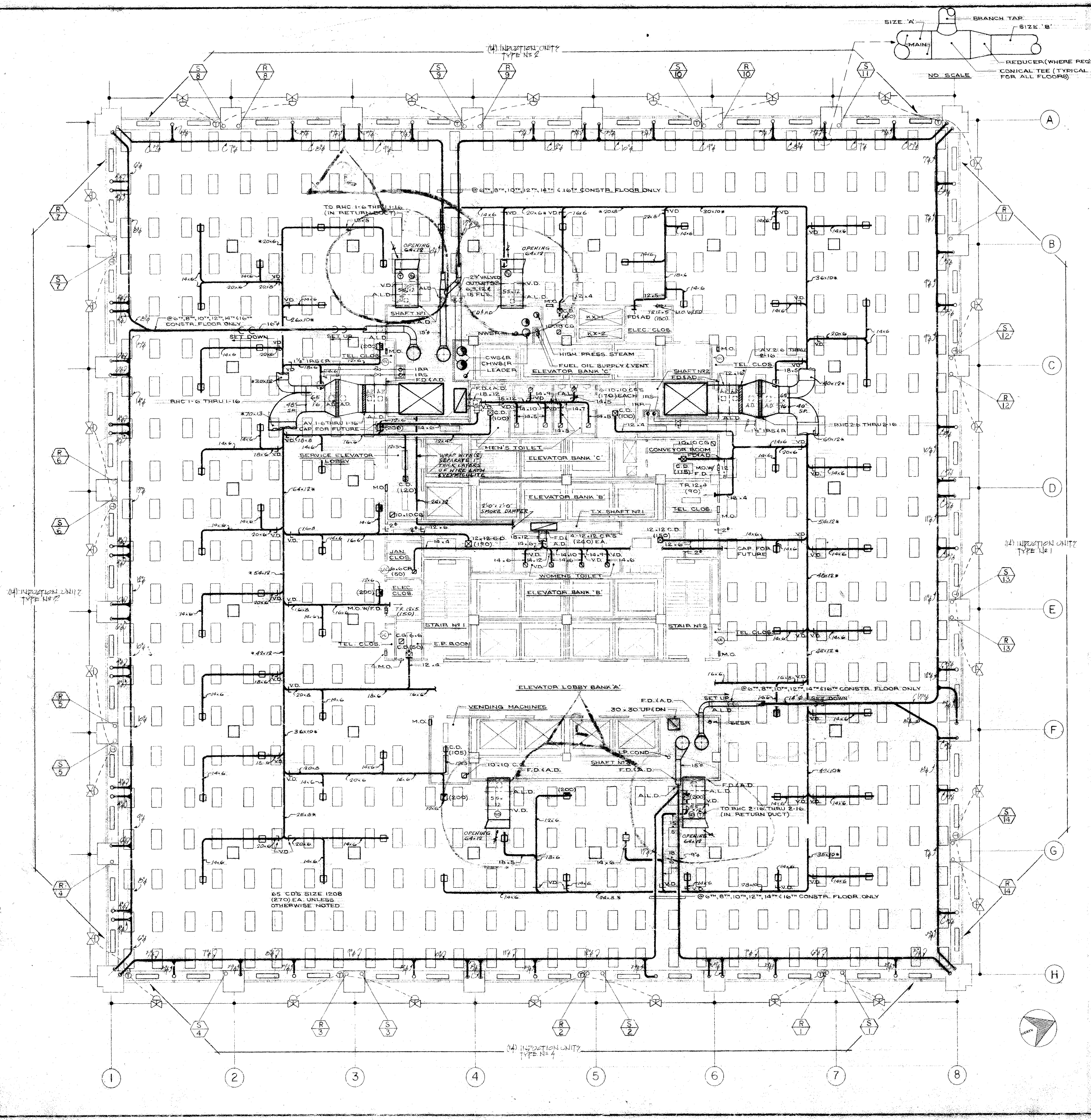
DRAWING NUMBER HVAC-12

DATE 1-7-72

SCALE 1/8" = 1'-0"

Professional Engineer Seal: STATE OF NEW YORK, JAMES RUDERMAN, No. 12345, Mechanical Engineering

Architect Seal: STATE OF NEW YORK, SHRIVE, LAMB & HARMON, No. 67890, Architecture



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-28-72	REVISED CIRCLED AREAS
2	5-9-72	REVISED RETURN AIR DUCTWORK

NOTES
1. SEE GENERAL NOTE #16 ON DWG HVAC-05

ISSUED TO	NO.	DATE	PRG. NO.
BAIRD & BURNETT			

PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHRIVE, LAMB & HARRON ASSOCIATES P.C.
ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES SUGERMAN
STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

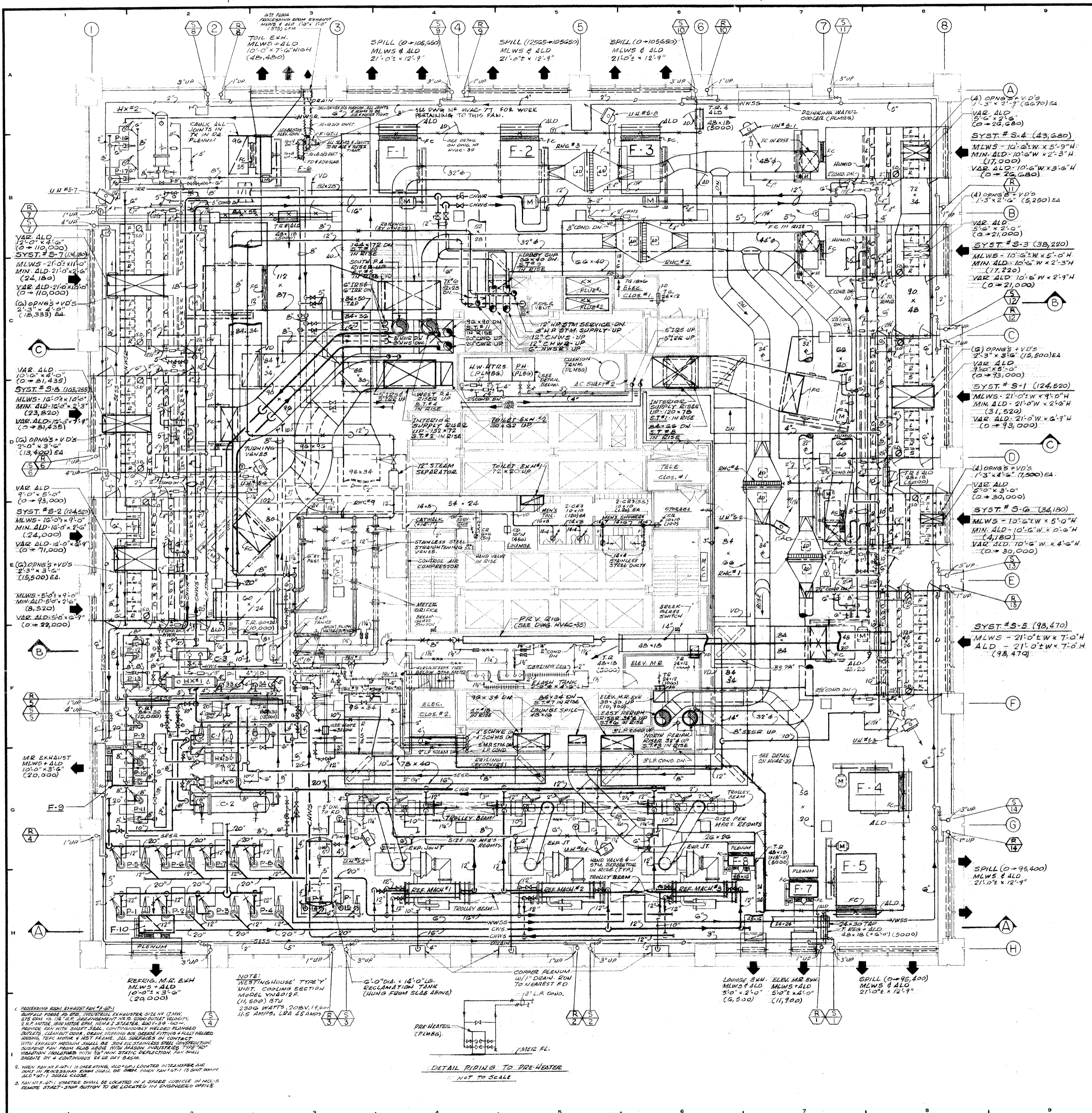
J. A. ROSS, BAUM & HOLLES
MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

6TH TO 16TH FLOOR PLANS

PROJECT NUMBER
7101

HVAC-II

DATE: 1-7-72
SCALE: 1/8" = 1'-0"



REVISIONS		
NO.	DATE	DESCRIPTION
1	11-30-74	LOCATED SMOKE DETECTORS
2	3-27-75	DELETED COOLER C-2A (P-30)
3	9-14-75	ADDED 3" CONDENSATE PIPING TO PREHEATER & DETAIL OF PIPING, MOUNTING
4	9-18-74	ADDED 2" L.P. STEAM PIPING WITH PRESS. 14.2 PER ZUM BURNHAM-MT. FL. TREATM.
5	9-25-74	ADDED SHUNT FLOW METER
6	11-3-75	ADDED 10" FLOOR PLANK EXHAUST ROOM EXHAUST FAN & RELATED DUCTWORK
7	10-14-81	REMOVED 6TH FLOOR PROCESSING ROOM EXHAUST FAN & RELATED DUCTWORK

ISSUED TO: **BANKERS TRUST PLAZA**
 NO. DATE: _____ PKG. NO: _____

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
 475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
 919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
 515 MADISON AVENUE N. Y. N. Y. 10022

J. AROS, BAUM & BOLLES MECH & ELEC. ENGINEERS
 345 PARK AVENUE N. Y. N. Y. 10022

5TH FL. MECHANICAL EQUIPMENT ROOM

PROJECT NUMBER: **7101**
 DRAWING NUMBER: **HVAC - 10**
 DATE: **1-7-72**
 SCALE: **1/8" = 1'-0"**

1. PROCESSING ROOM EXHAUST FAN (P-30) SUPPLY FAN IS TO BE INSTALLED IN PROCESSING ROOM. SUPPLY FAN IS TO BE 10" DIA. WITH 10" DIA. OUTLET. SUPPLY FAN IS TO BE 10" DIA. WITH 10" DIA. OUTLET. SUPPLY FAN IS TO BE 10" DIA. WITH 10" DIA. OUTLET.

2. WHEN FAN #10-1 IS OPERATING, ALL 10" DIA. LOCATED IN PROCESSING ROOM SHALL BE OPEN. WHEN FAN #10-1 IS STOPPED, ALL 10" DIA. SHALL BE CLOSED.

3. FAN #10-1 STARTER SHALL BE LOCATED IN A SERVICE VEHICLE IN M.C.S. ROOM. START-STOP SWITCH TO BE LOCATED IN ENGINEERS OFFICE.

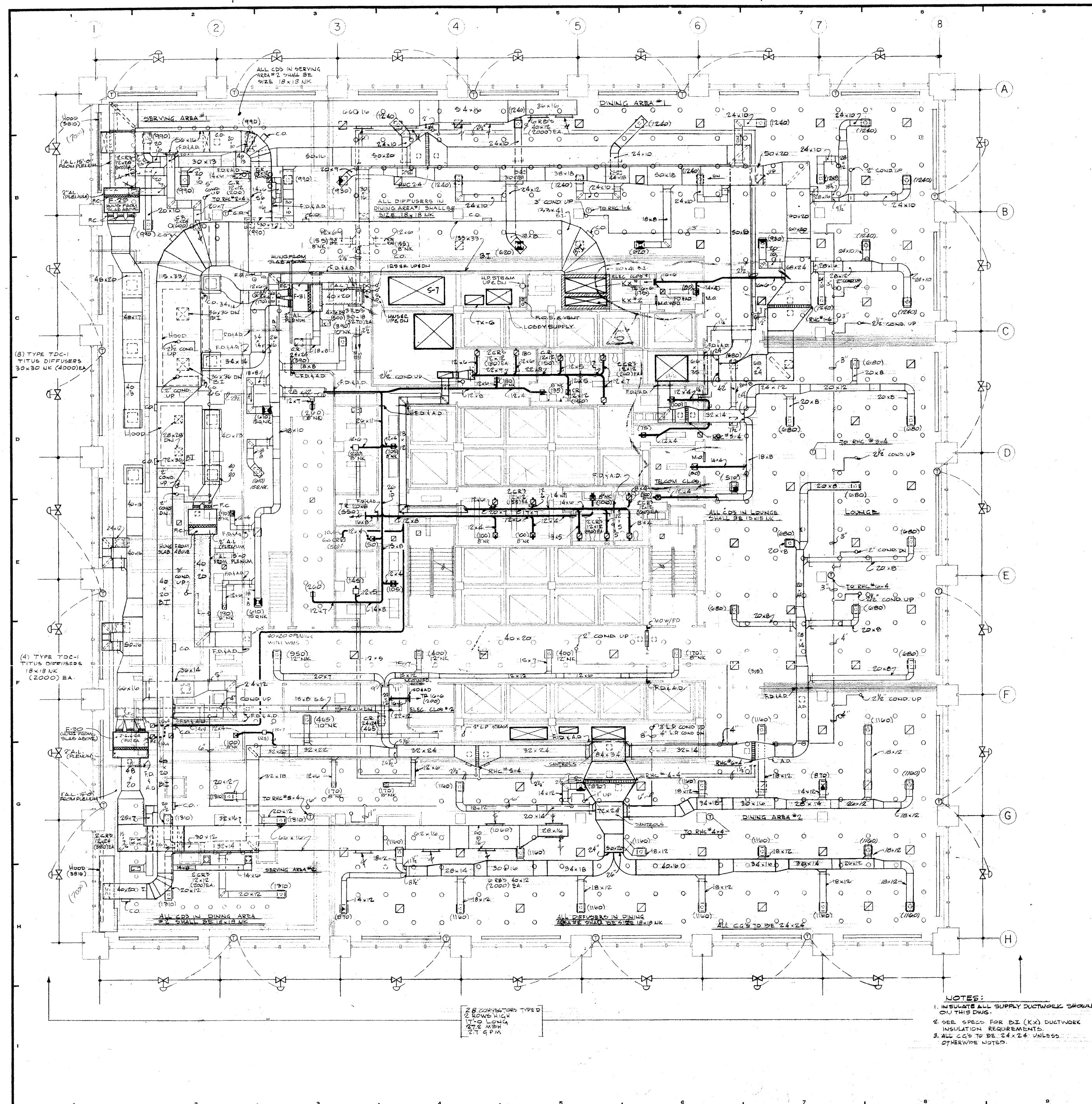
NOTE: TESTING HOUSE TYPE UNIT COOLING SECTION MODEL VMB219 (1,500 BTU 2300 WATTS 208V, 19.0A 11.5 AMP, LRA 25AMP)

REFRIG. M.R. EXH. MLWS & ALD 10'-0" x 3'-0" (20,000)

MR. EXHAUST MLWS & ALD 10'-0" x 3'-0" (20,000)

SPILL (0-95,400) MLWS & ALD 21'-0" x 12'-9"





REVISIONS		
NO.	DATE	DESCRIPTION
1	5-24-72	GENERAL REVISION
2	10-30-72	REVISED ALL DIFFUSER SIZES
3	2-21-73	ADDED TOILET EXHAUST DUCT WORK; REVISED TRANSFER AIR DUCT WORK
4	3-14-73	GENERAL REVISION ALL AS CHECKED
5	3-18-74	INDICATED NEW 2" L.P. STEAM PIPING FOR ZUM-ZUM RESTAURANT
6	11-4-74	ADDED DUCTWORK FOR ELECTRIC GLOBE TO 1 & 2. 4 TELLUM CLOSET

ISSUED TO: NO. DATE: PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

J. AROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

4TH FLOOR PLAN

PROJECT NUMBER: **7101**

DRAWING NUMBER: **HVAC-9**

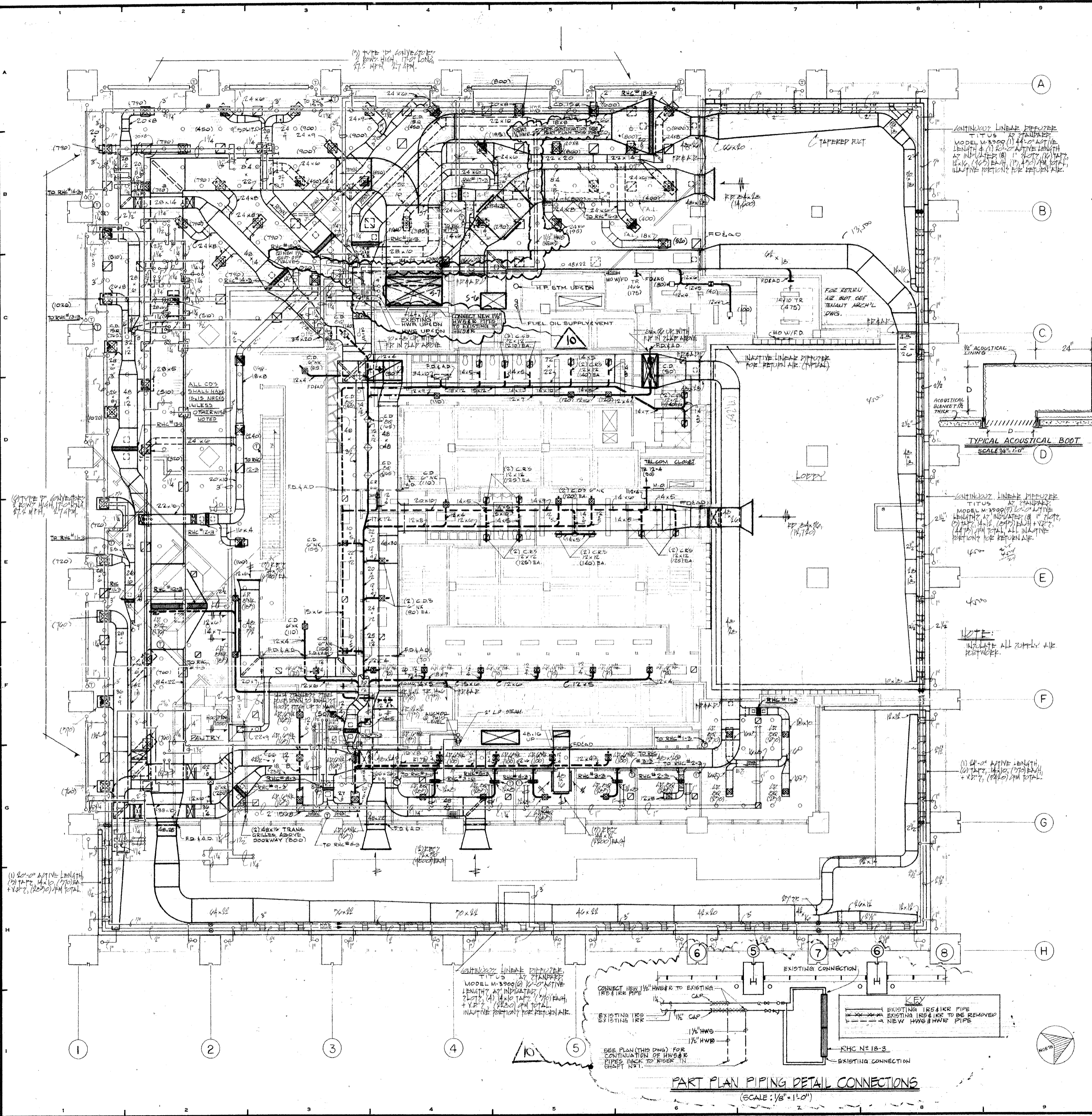
DATE: 1-1-74

SCALE: 1/8" = 1'-0"

NOTES:

- INSULATE ALL SUPPLY DUCTWORK SHOWN ON THIS PLAN.
- SEE SPEC FOR DI (KX) DUCTWORK INSULATION REQUIREMENTS.
- ALL CG'S TO BE 24x24 UNLESS OTHERWISE NOTED.

28 CONDUITORS TYPE D
2 ROWS HIGH
1" DIA. LUMEN
27.2" HIGH
27.7" G.P.M.



REVISIONS		
NO.	DATE	DESCRIPTION
1	10-30-72	GENERAL REVISION
2	5-9-73	REVISED DIFFUSER SIZES, REVISED LINEAR DIFFUSER IN MAIN LOBBY, AND ADDED SOUND TRAPS
3	5-1-73	REVISED SOUND TRAPS, DELETED EXHAUST RETURN AIR LINEAR DIFFUSER
4	7-6-73	ADDED TYPICAL ACOUSTICAL BOOT DETAIL
5	8-14-73	GENERAL REVISION, ALL AS CIRCLED
6	10-24-73	DELETED SOUND TRAPS
7	3-15-74	ALSO GRILLED LOCATION REVISED AS CIRCLED
8	9-18-74	INDICATED NEW 2" L.P. STEAM PIPES FOR ZUM-ZUM RESTAURANT
9	11-4-74	ADDED DUCTWORK FOR TEL.COM CLOSET
10	5-29-80	REVISED SUPPLY & RETURN PIPING & CONNECTIONS TO RHC# 18-3

ISSUED TO: NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

JARO'S, BAUM & BOLLES MECHANICAL ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

3RD FLOOR PLAN

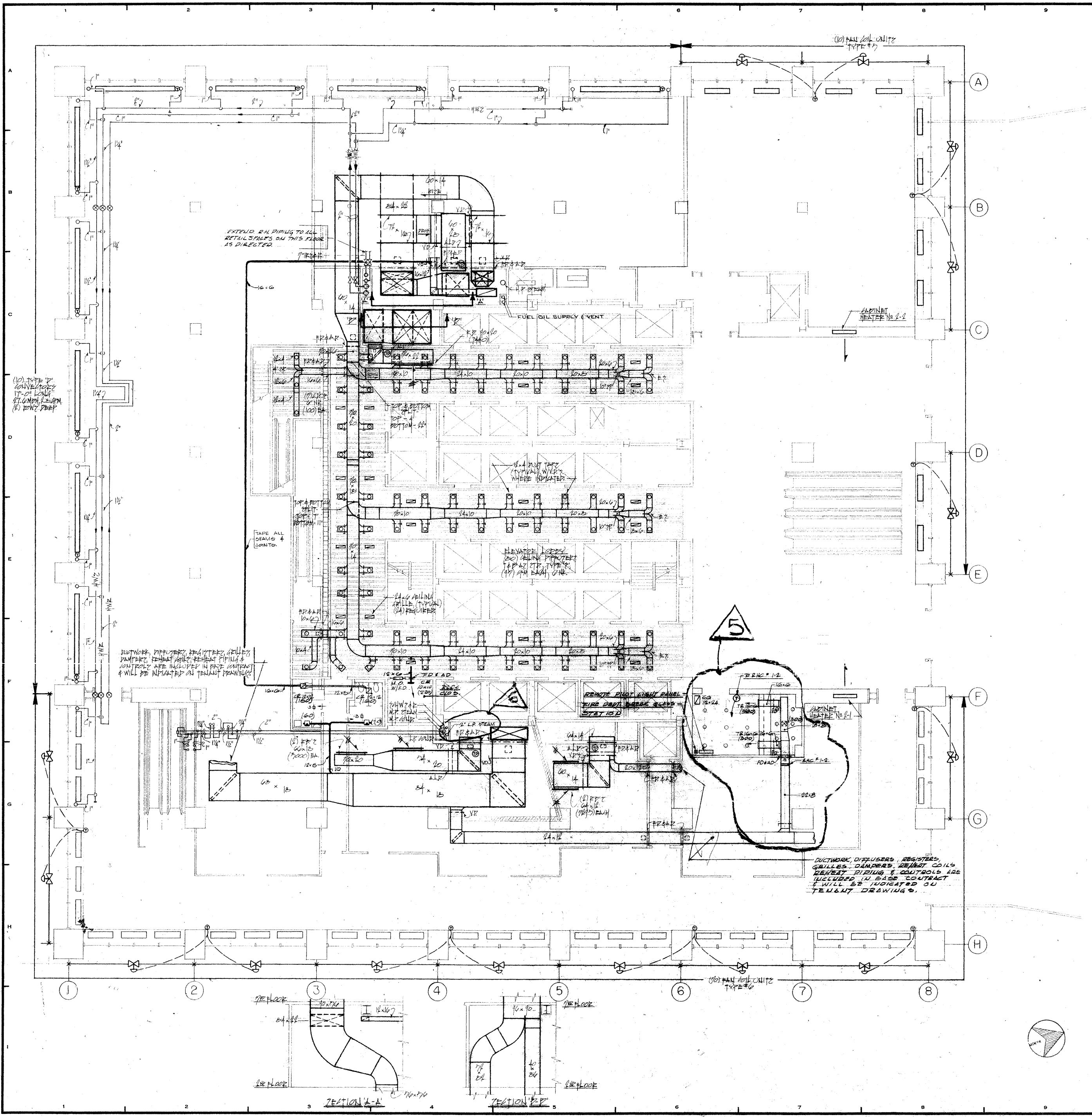
PROJECT NUMBER
7101

DRAWING NUMBER
HVAC-8

DATE
1-7-76

SCALE
1/8"

SEAL OF THE CITY OF NEW YORK
SHREVE, LAMB & HARMON ASSOCIATES P.C.
REGISTERED PROFESSIONAL ARCHITECTS
NO. 10000



REVISIONS		
NO.	DATE	DESCRIPTION
1	1-24-73	REVISED CIRCLED AREA
2	8-14-73	REVISED AC1, ADDED ACC1
3	10-2-73	A/C UNIT #1 DELETED PER D.T. CO.'S INSTRUCTION DATED 9-26-73
4	10-29-73	ADDED SUPPLY & EXHAUST DUCTWORK FOR TOILETS
5		REVISED DUCTWORK IN SECURITY RM.
6	9-18-74	INDICATED NEW 2" LP STEAM RISER FOR ZUM-ZUM RESTAURANT

ISSUED TO: NO. DATE: PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N.Y. N.Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N.Y. N.Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N.Y. N.Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N.Y. N.Y. 10022

J. AROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N.Y. N.Y. 10022

2ND FLOOR PLAN SOUTH

PROJECT NUMBER: **7101**

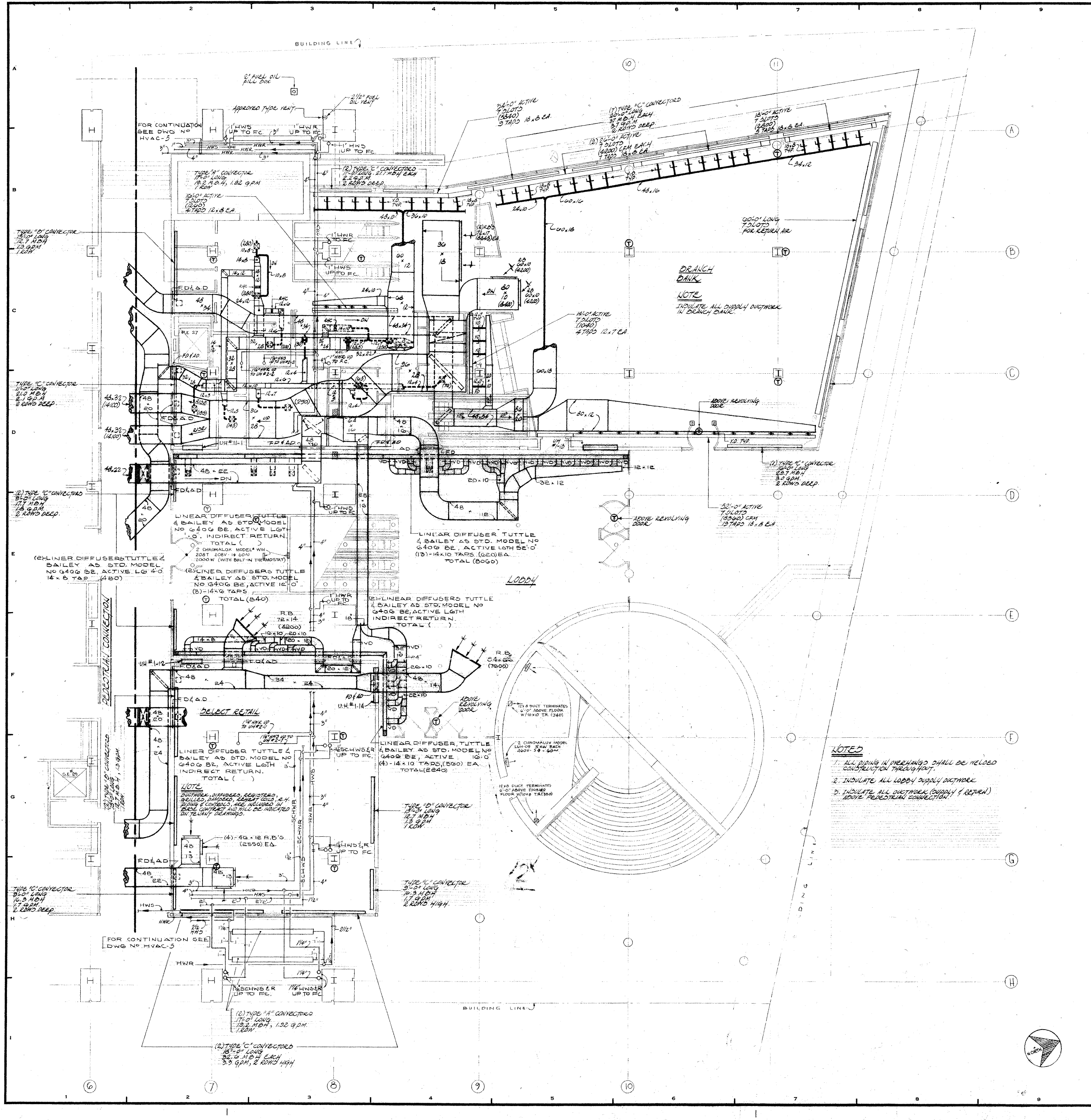
DRAWING NUMBER: **HVAC-7**

DATE: **1-7-78**

SCALE: **1/8" = 1'-0"**

Shreve, Lamb & Harmon

REVISIONS		
NO	DATE	DESCRIPTION
1	4-24-72	REVISED UNIT MATERS AS CIRCLED
2	9-14-73	REVISED STORAGE ROOM AS CIRCLED



ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N.Y. N.Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS			
475 PARK AVENUE SOUTH N.Y. N.Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N.Y. N.Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS			
315 MADISON AVENUE N.Y. N.Y. 10022			
J. A. ROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			

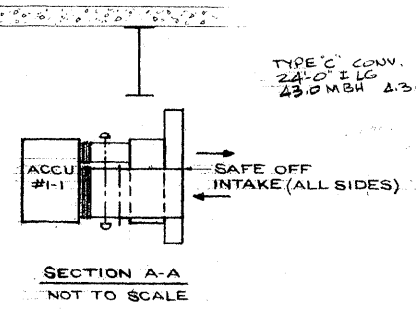
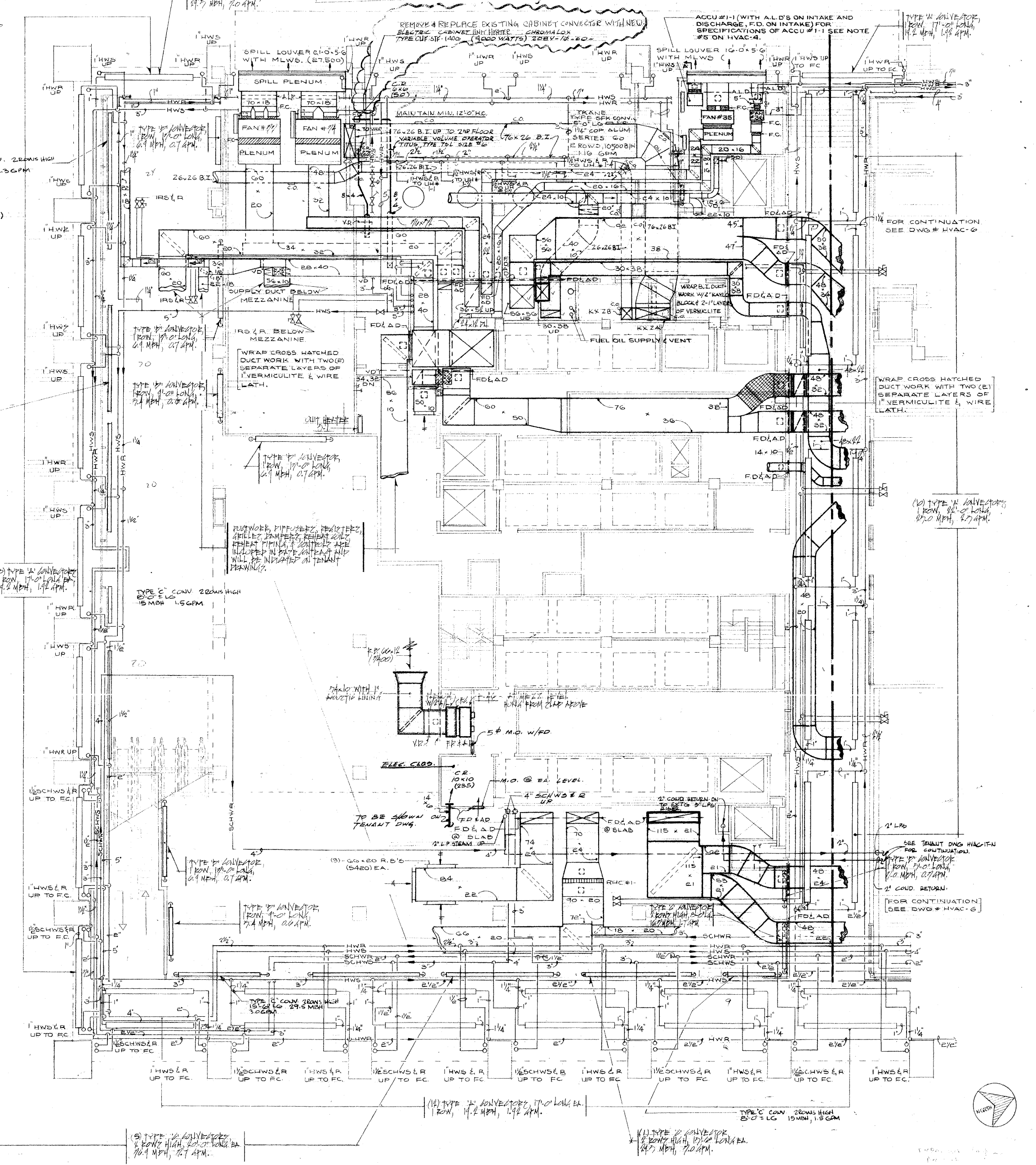
- NOTED**
1. ALL PIPING IN OVERHEAD SHALL BE WELDED CONSTRUCTION THROUGHOUT.
 2. INSULATE ALL LOBBY SUPPLY DUCTWORK.
 3. INSULATE ALL DUCTWORK (SUPPLY & RETURN) ABOVE PEDESTRIAN CONNECTION.

1ST FLOOR PLAN NORTH

	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-6
	DATE	1-7-72
	SCALE	1/8" = 1'-0"

NOTES:

1. ALL FITTING IN OVERHANGS SHALL BE WELDED
2. INSULATE ALL LOBBY ROOFS AND DECKWORK
3. INSULATE ALL ROOFWORK (SLOPE APPROXIMATELY ABOVE PERFECT CONNECTION)
4. INSULATE ALL ROOFWORK (SLOPE APPROXIMATELY ABOVE PERFECT CONNECTION)



REVISIONS		
NO.	DATE	DESCRIPTION
1	10-15-72	ADDED KITCHEN EXHAUST DUCTWORK FOR TENDANTS
2	11-8-72	REVISED KITCHEN EXHAUST DUCTWORK, ADDED CO'S.
3	1-24-73	REVISED CIRCLED AREA.
4	5-22-73	ADDED AIR COOLED CONDENSER FOR CONSOLE ROOM ON LEVEL 'A'
5	8-18-73	ADDED A.C. & HEATER IN CONTROL ROOM
6	9-14-73	REV. CONNECTORS
7	9-18-74	2\"/>

ISSUED TO NO. DATE PKG. NO.

BANKERS TRUST PLAZA

A FISHER BROTHERS PROJECT

GREENWICH AND LIBERTY ST. N. Y. N. Y.

SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS
475 PARK AVENUE SOUTH N. Y. N. Y. 10016

PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS
919 THIRD AVENUE N. Y. N. Y. 10022

THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS
515 MADISON AVENUE N. Y. N. Y. 10022

J. AROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS
345 PARK AVENUE N. Y. N. Y. 10022

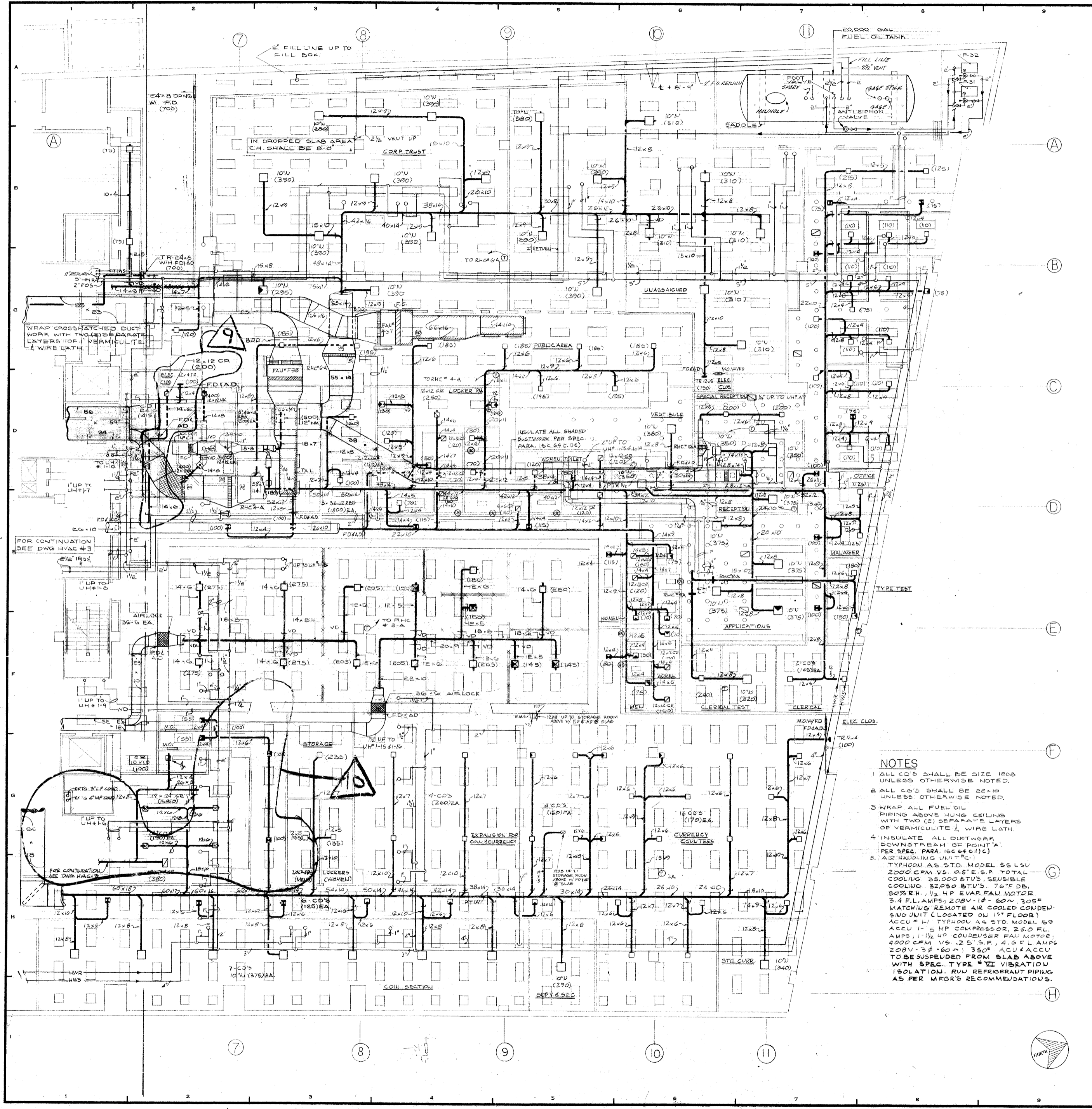
1ST FL. PLAN SOUTH

PROJECT NUMBER **7101**

DRAWING NUMBER **HVAC-5**

DATE **1-7-72**

SCALE **1/8\"/>**



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-18-72	REVISED CIRCLED AREA
2	5-23-72	GENERAL REVISION
3	9-19-72	REVISED CIRCLED AREA
4	10-15-72	REVISED NOTE # 2
5	5-22-73	ADDED A.C. UNIT # C-1 TO CONDENSE ROOM & SUPPLY S DELETED RHC# 5-A
6	3-14-73	ADDED SUPPLY & RETURN AIR POP IN FLOOR STORAGE ROOM
7	10-31-73	REVISED DUCTWORK FOR CONDENSE ROOM AND AS CIRCLED.
8	11-20-73	DELETED DUCTWORK IN LOBBY
9	4-16-74	ADDED EXHAUST FOR BATTERY ROOM
10	8-18-74	ADDED STEAM & CONDENSATE PIPING FOR ZUM-ZUM - INT FLOOR TENANT.
11	10-14-74	DELETED STEAM PIPING AS PER OWNER'S REQUEST - BT Co.

ISSUED TO	NO.	DATE	PKG. NO.
BANKERS TRUST PLAZA			
A FISHER BROTHERS PROJECT			
GREENWICH AND LIBERTY ST. N. Y. N. Y.			
SHREVE, LAMB & HARMON ASSOCIATES P.C. ARCHITECTS			
475 PARK AVENUE SOUTH N. Y. N. Y. 10016			
PETERSON AND BRICKBAUER ASSOCIATED ARCHITECTS			
919 THIRD AVENUE N. Y. N. Y. 10022			
THE OFFICE OF JAMES RUDERMAN STRUCTURAL ENGINEERS			
515 MADISON AVENUE N. Y. N. Y. 10022			
JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N. Y. N. Y. 10022			

- NOTES**
- 1 ALL C.D.'S SHALL BE SIZE 1808 UNLESS OTHERWISE NOTED.
 - 2 ALL C.D.'S SHALL BE 22-10 UNLESS OTHERWISE NOTED.
 - 3 WRAP ALL FUEL OIL PIPING ABOVE HUNG CEILING WITH TWO (2) SEPARATE LAYERS OF VERMICULITE & WIRE LATH.
 - 4 INSULATE ALL DUCTWORK DOWNSTREAM OF POINT 'A' PER SPEC. PARA. 15C 64 C.10C
 - 5 AIR HANDLING UNIT # C-1 TYPHOON AS STD. MODEL 55 LSV 2000 CFM VS. 85'E.S.P. TOTAL COOLING 35,000 BTU'S. SENSIBLE COOLING 32,050 BTU'S. 76°F DB, 50% RH. 1/2 HP EVAP. FAN MOTOR 3.4 FL. AMPS. 208V-1P-60W/305" WATTS. REMOTE AIR COOLED CONDENSING UNIT (LOCATED ON 1ST FLOOR) ACCU # 1 TYPHOON AS STD. MODEL 59 ACCU # 1-5 HP COMPRESSOR, 25.0 FL. AMPS. 1 1/2 HP CONDENSER FAN MOTOR, 4000 CFM VS. 25'E.S.P. 4.6 FL. AMPS. 208V-3P-60W/350" ACU # ACCU TO BE SUSPENDED FROM SLAB ABOVE WITH SPEC. TYPE # VII VIBRATION ISOLATION. R/W REFRIGERANT PIPING AS PER MGR'S RECOMMENDATIONS.

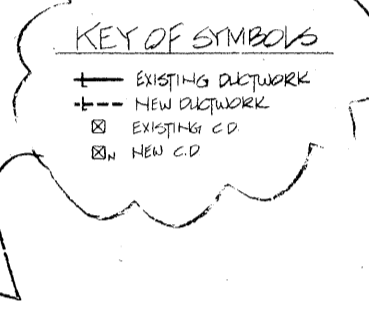
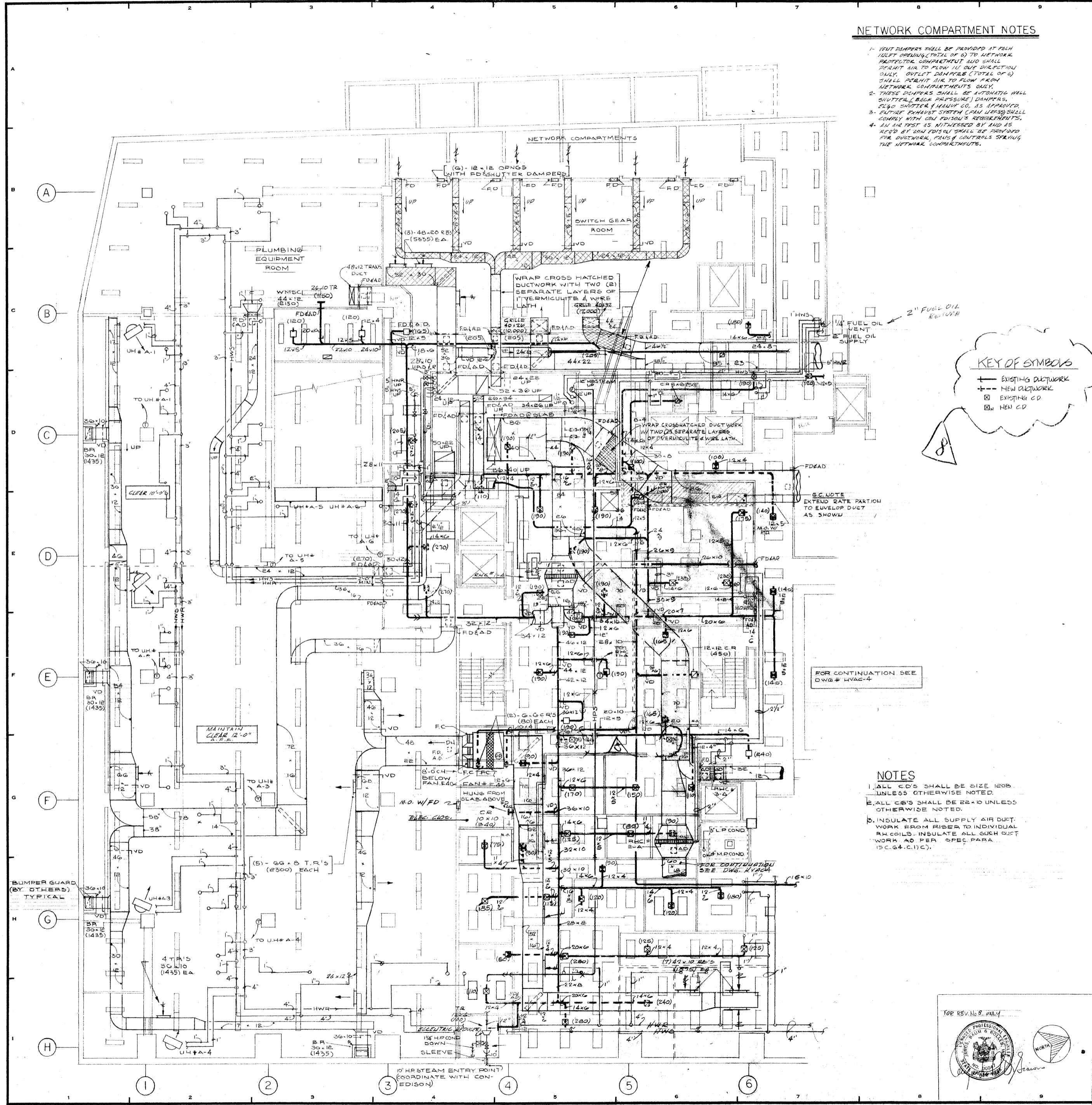
CELLAR PLAN NORTH LEVEL 'A'

	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-4
	DATE	1-7-72
	SCALE	1/8" = 1'-0"

NETWORK COMPARTMENT NOTES

1. OUT DAMPERS SHALL BE PROVIDED AT EACH INLET (TOTAL OF 6) TO NETWORK COMPARTMENT. OUTLET DAMPERS (TOTAL OF 6) SHALL PERMIT AIR TO FLOW FROM NETWORK COMPARTMENTS ONLY.
2. THESE DAMPERS SHALL BE AUTOMATICALLY SHUTTERED (BASE PRESSURE) DAMPERS.
3. ENTIRE EXHAUST SYSTEM (FROM UH#3) SHALL COMPLY WITH ALL FEDERAL REQUIREMENTS.
4. ALL AIR TEST IS MITIGATED BY AND IS KEPT BY UH#3 SHALL BE PROVIDED FOR DUCTWORK, FANS & CONTROLS SERVING THE NETWORK COMPARTMENTS.

REVISIONS		
NO.	DATE	DESCRIPTION
1	5-22-72	GENERAL REVISIONS PER 100% DWG # 4-B DATED 4-17-72
2	5-25-72	DELETED FAN # F-33 AND REVISED RELATED DUCTWORK
3	6-1-72	REVISED SUPPLY AIR DUCTWORK TO SWITCH BOARD ROOM
4	1-24-73	REVISED CIRCLED AREA
5	7-14-73	REVISED H.W. PIPING
6	10-28-73	DUCTWORK REVISED AND CIRCLED
7	1-1-74	REVISED OFFSHOOT LOCATION AND RELATED DUCTWORK AND CIRCLED
8	4-19-81	REVISED AS PER LATEST ARCHITECTURAL

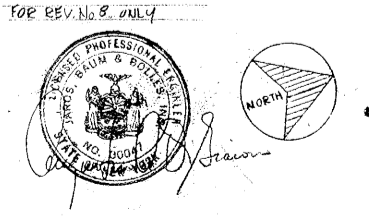


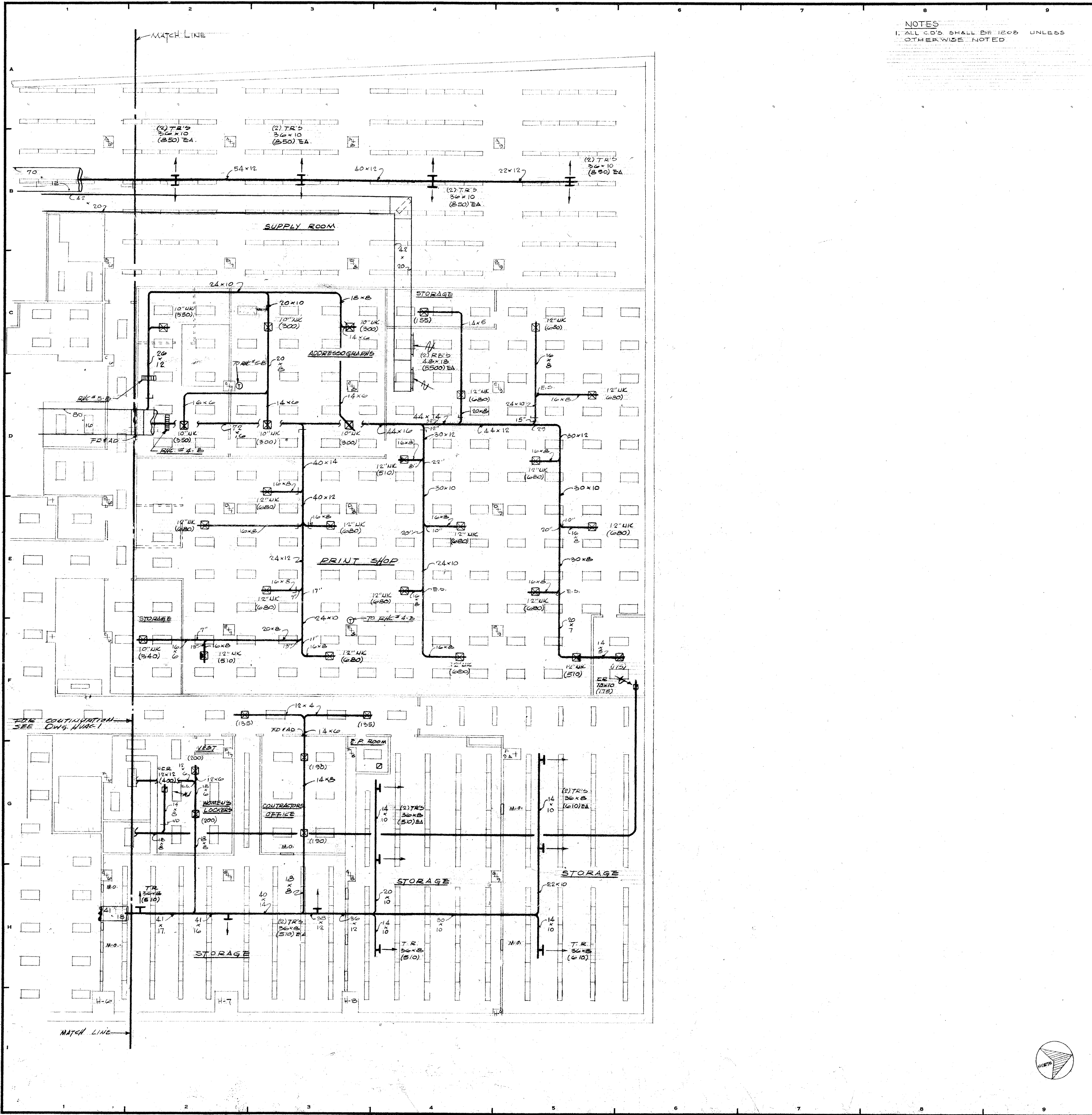
- NOTES
1. ALL CDS SHALL BE SIZE 1208 UNLESS OTHERWISE NOTED.
 2. ALL CDS SHALL BE 22-0 UNLESS OTHERWISE NOTED.
 3. INSULATE ALL SUPPLY AIR DUCTWORK FROM RISER TO INDIVIDUAL RA COILS. INSULATE ALL SUCH DUCTWORK AS PER SPEC PARA 15.C.4.C.(1)(c).

ISSUED TO	NO.	DATE	PKG. NO.
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315 MADISON AVENUE N.Y. N.Y. 10022			
JAROS, BAUM & BOLLES MECH. & ELEC. ENGINEERS			
345 PARK AVENUE N.Y. N.Y. 10022			

CELLAR PLAN SOUTH LEVEL 'A'

PROJECT NUMBER	7101
DRAWING NUMBER	HVAC-3
DATE	1-7-72
SCALE	1/8"=1'-0"





NOTES
 1. ALL C.O.'S SHALL BE 1200 UNLESS OTHERWISE NOTED

REVISIONS		
NO.	DATE	DESCRIPTION
1	6-12-72	GENERAL REVISIONS

ISSUED TO	NO.	DATE	PKG. NO.

**BANKERS TRUST
 PLAZA**

**A FISHER BROTHERS
 PROJECT**

GREENWICH AND LIBERTY ST. N. Y. N. Y.

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 MECH. & ELEC. ENGINEERS
 345 PARK AVENUE N. Y. N. Y. 10022

**SUB-CELLAR PLAN NORTH
 LEVEL 'B'**

	PROJECT NUMBER	7101
	DRAWING NUMBER	HVAC-2
	DATE	1-7-72
	SCALE	1/8" = 1'-0"

