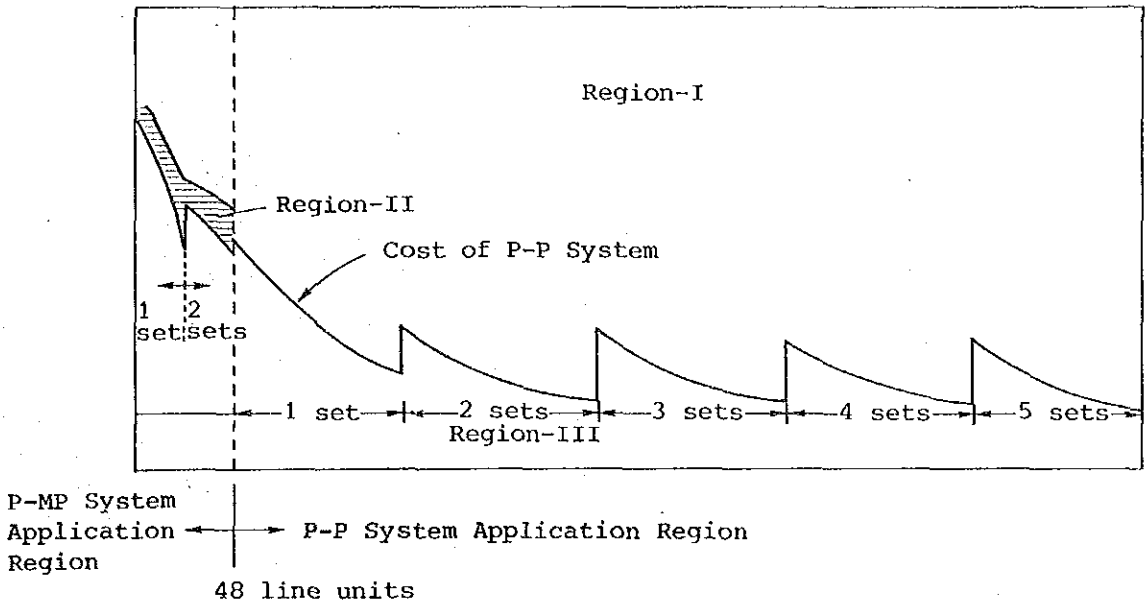
Attachment - 6 : Explanation of Result of Cost Comparison



Region-I : Region where the costs of Microwave Subscriber System are cheaper than those of Cable Subscriber System

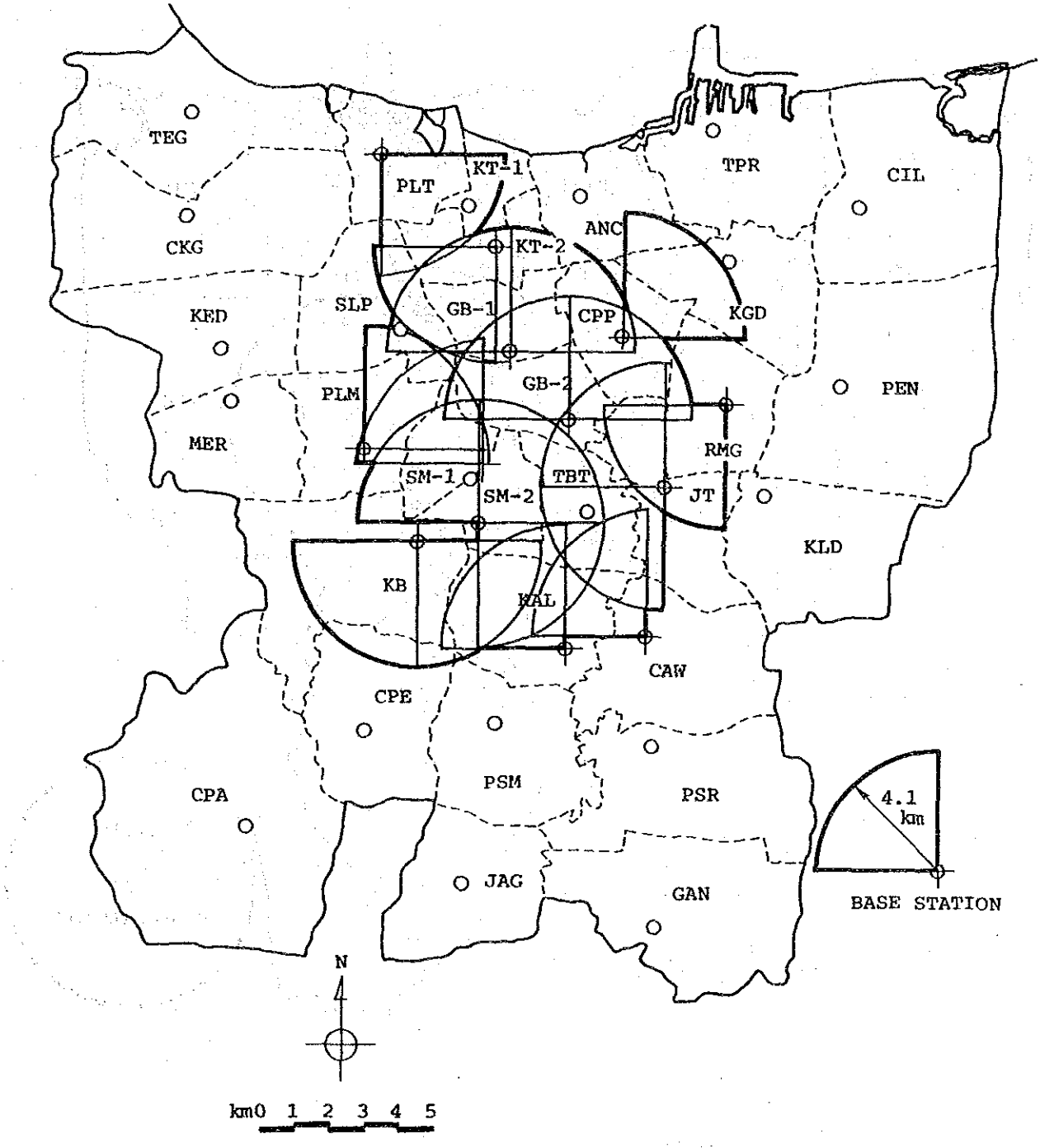
Region-II : Region where the costs of Microwave Subscriber System are variable according to applicable conditions.

Region-III : Region where the costs of Microwave Subscriber System are more expensive than those of Cable Subscriber System.

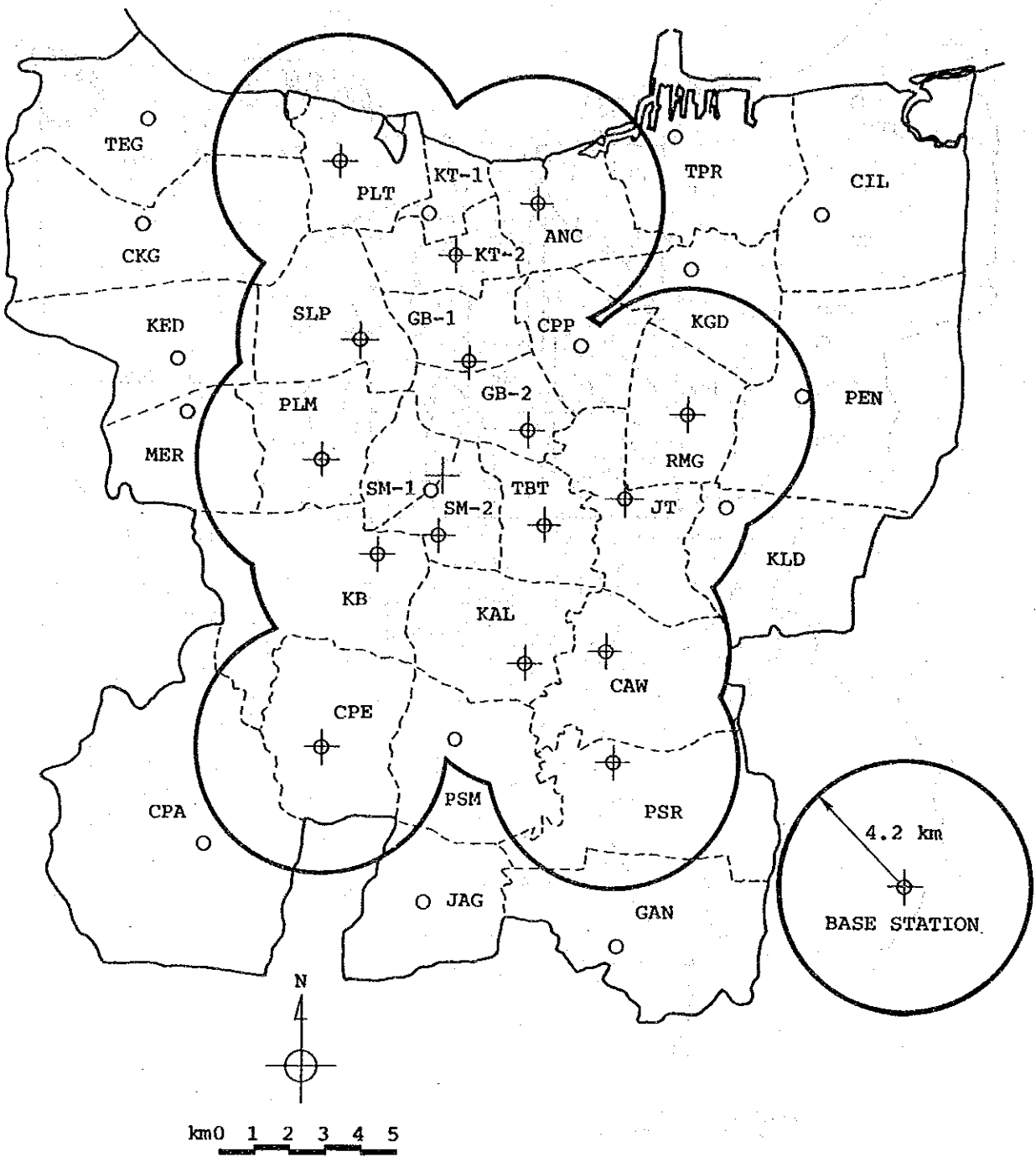
Attachment - 7 : Applied Areas/Subscriber Stations

Legend: No. in the Distribution Map represents the number in Attachment-5.

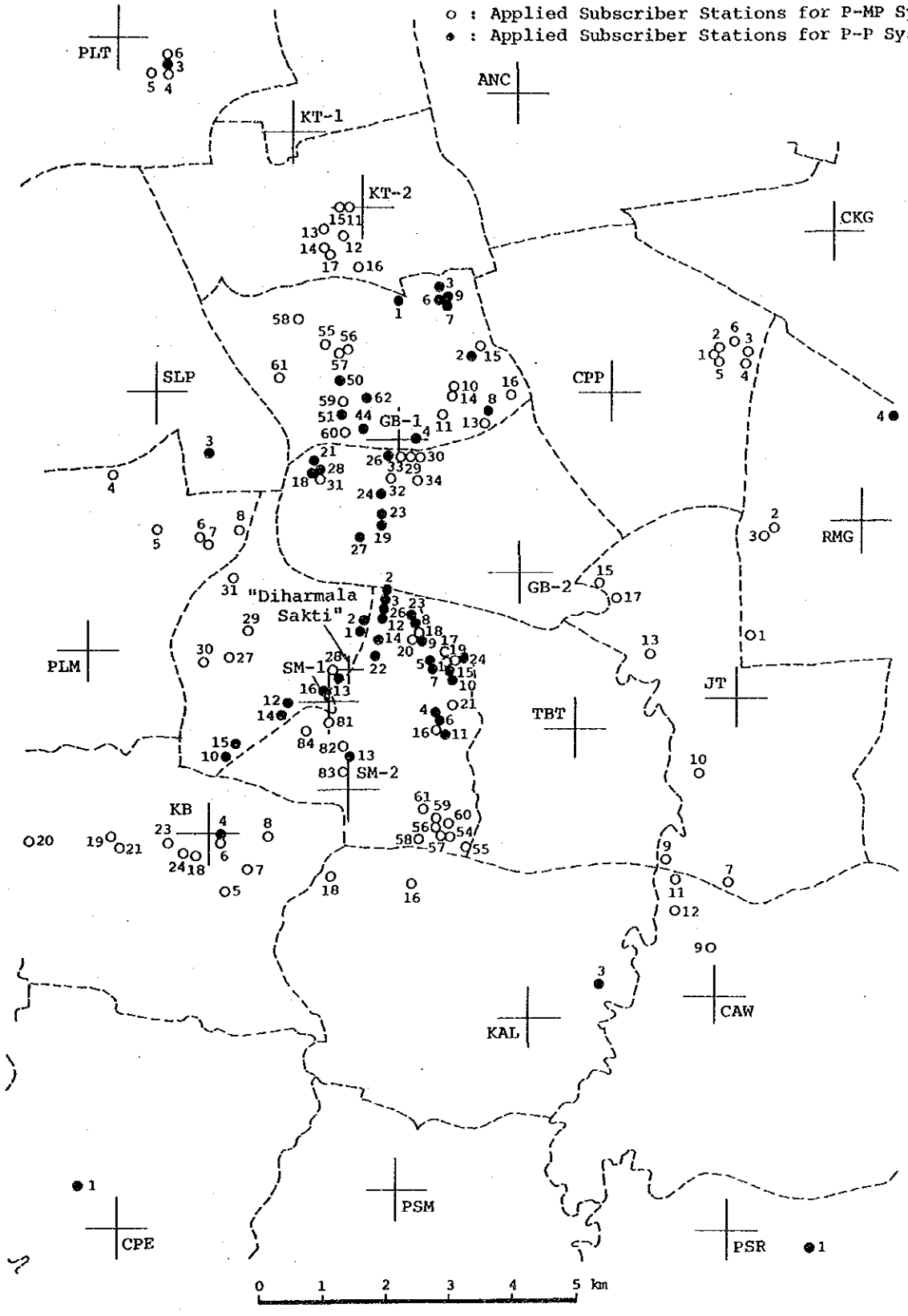
P-MP System Area



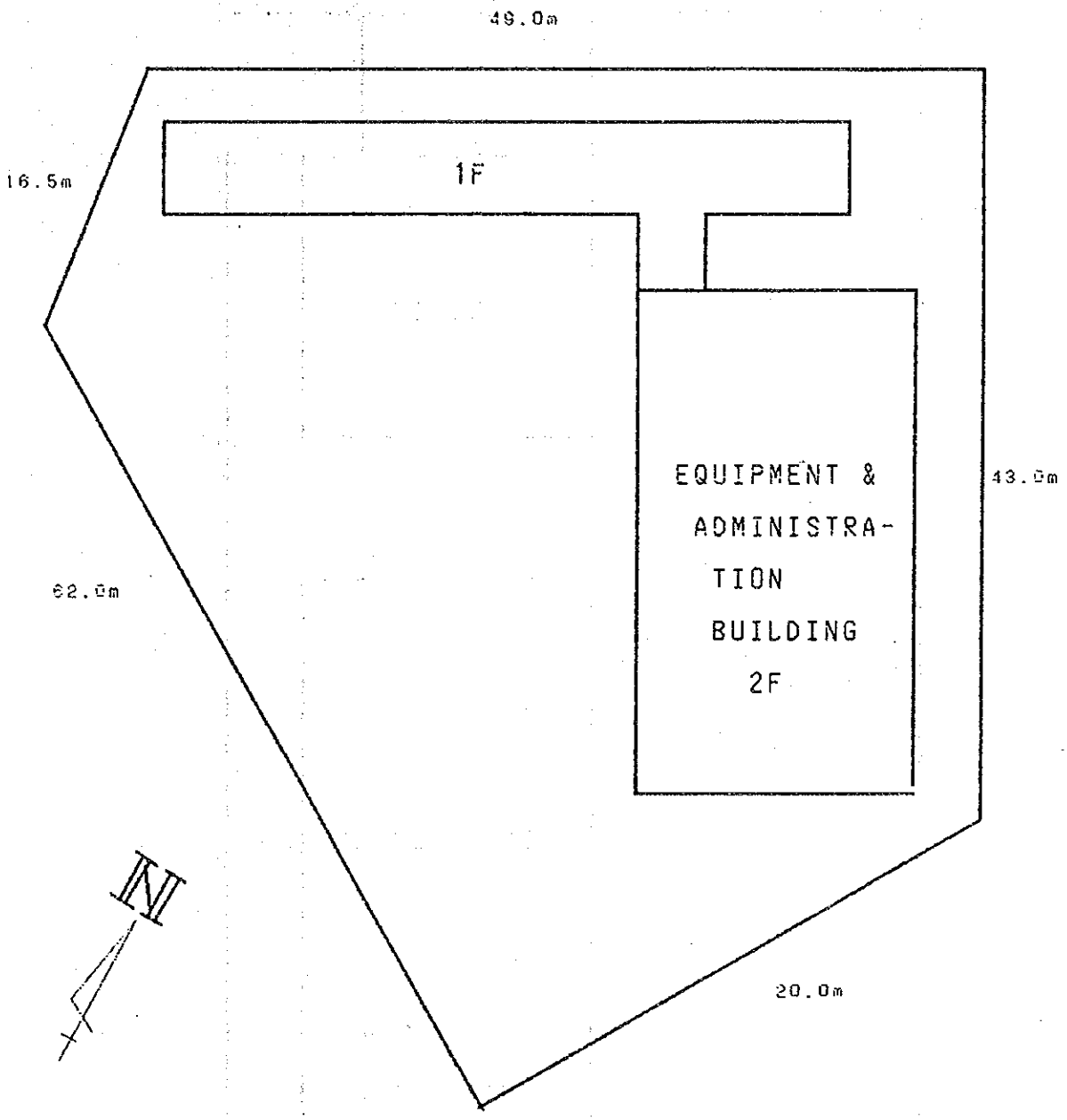
P-P System Area



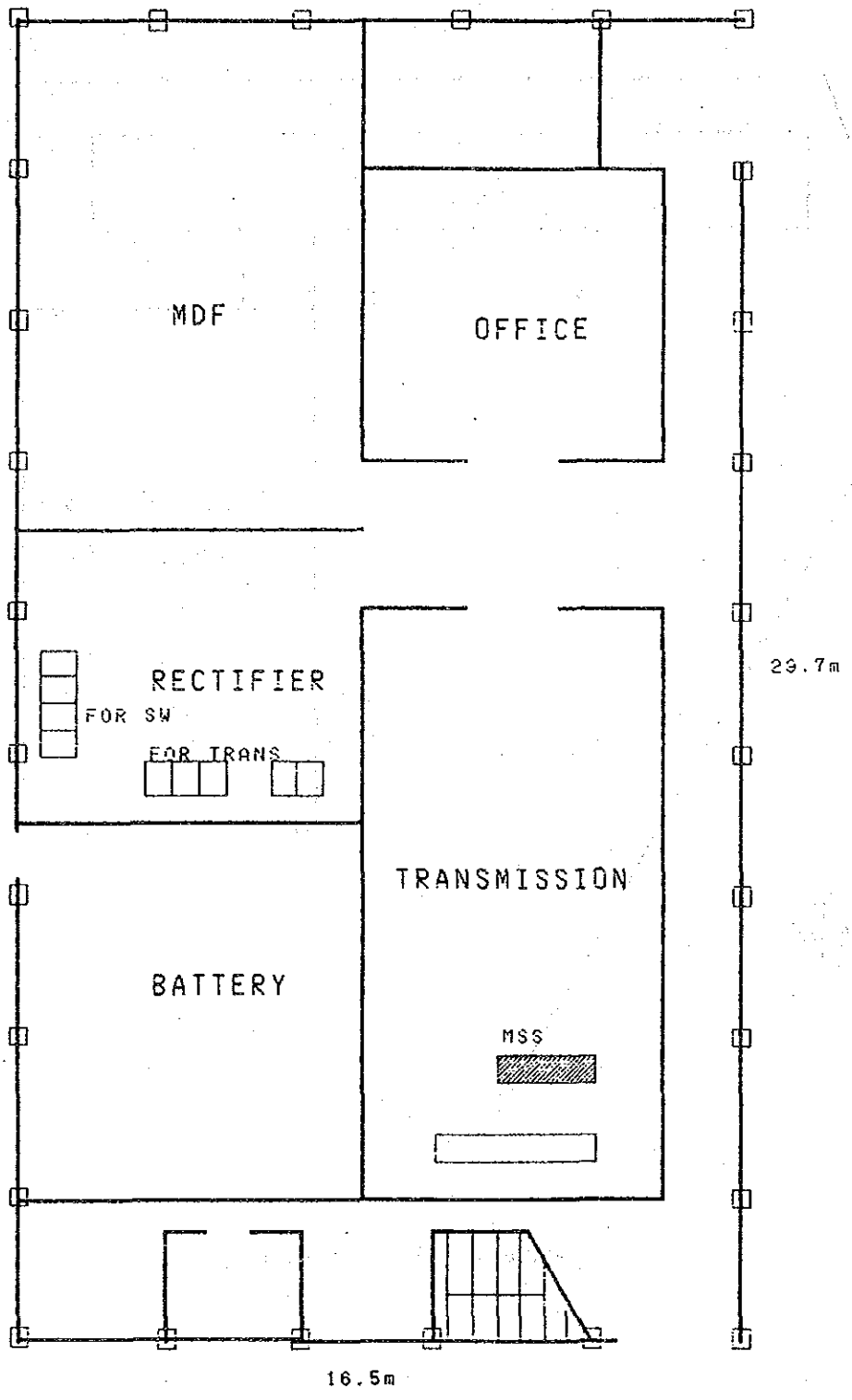
Distribution Map of Applied Subscriber Stations



Attachment - 8 : Building/Floor Layout

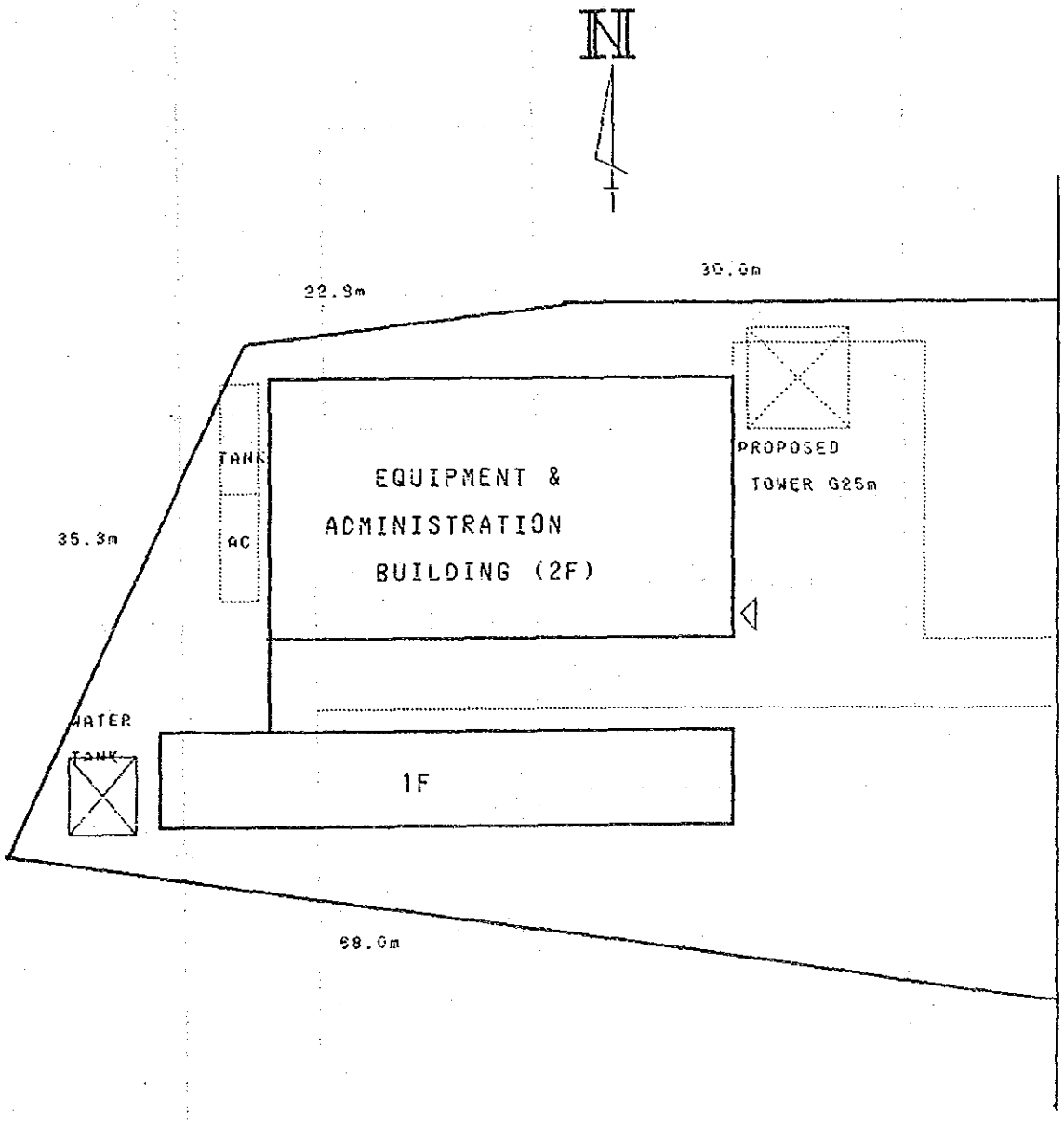


ANCOL Building Layout

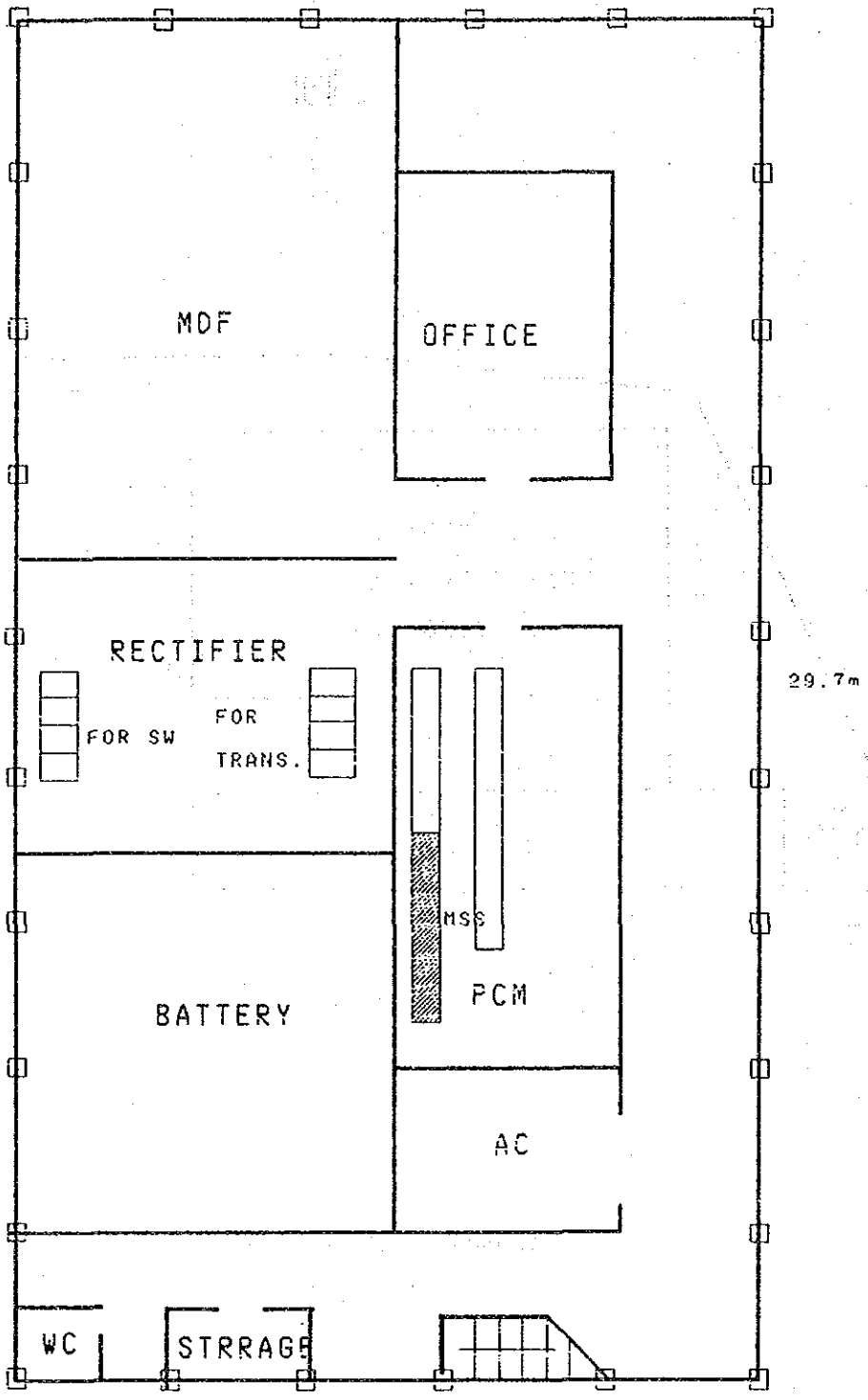


ANCOL Floor Layout

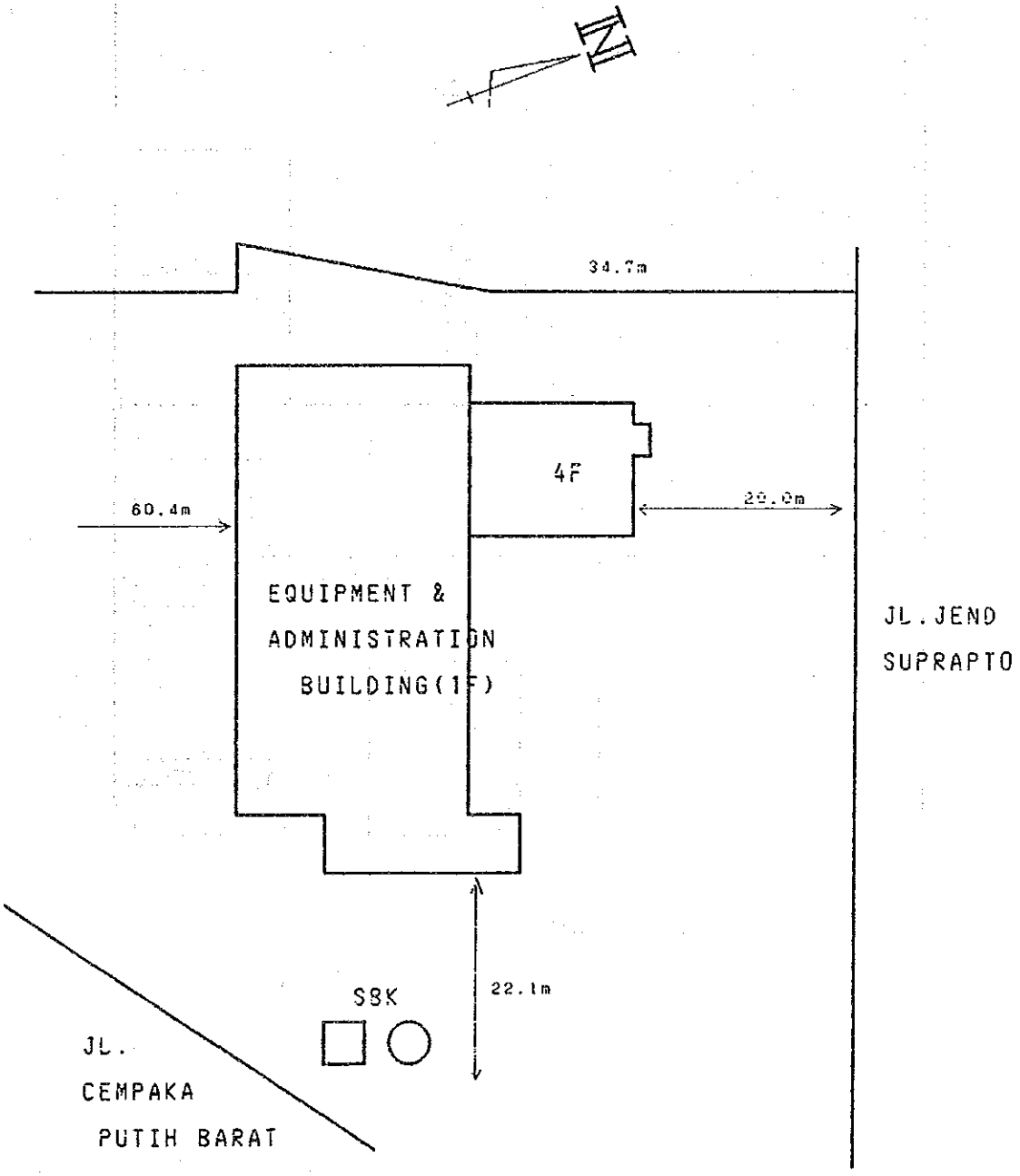
(1F)



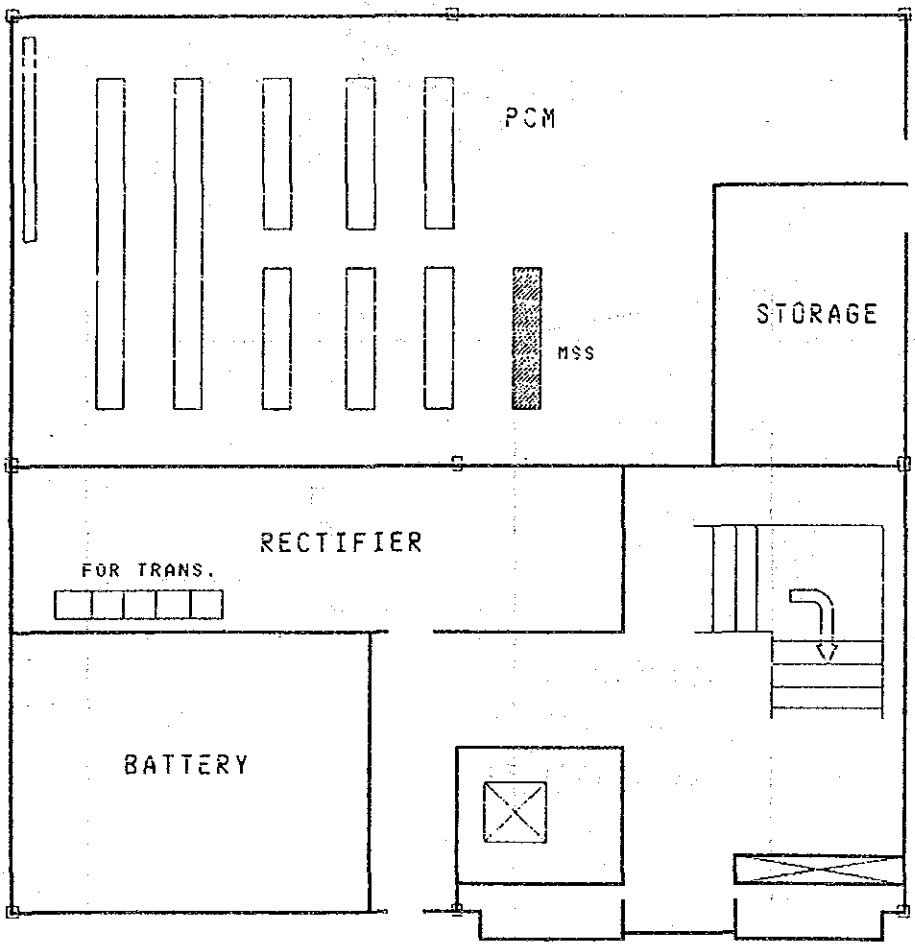
CAWANG Building Layout



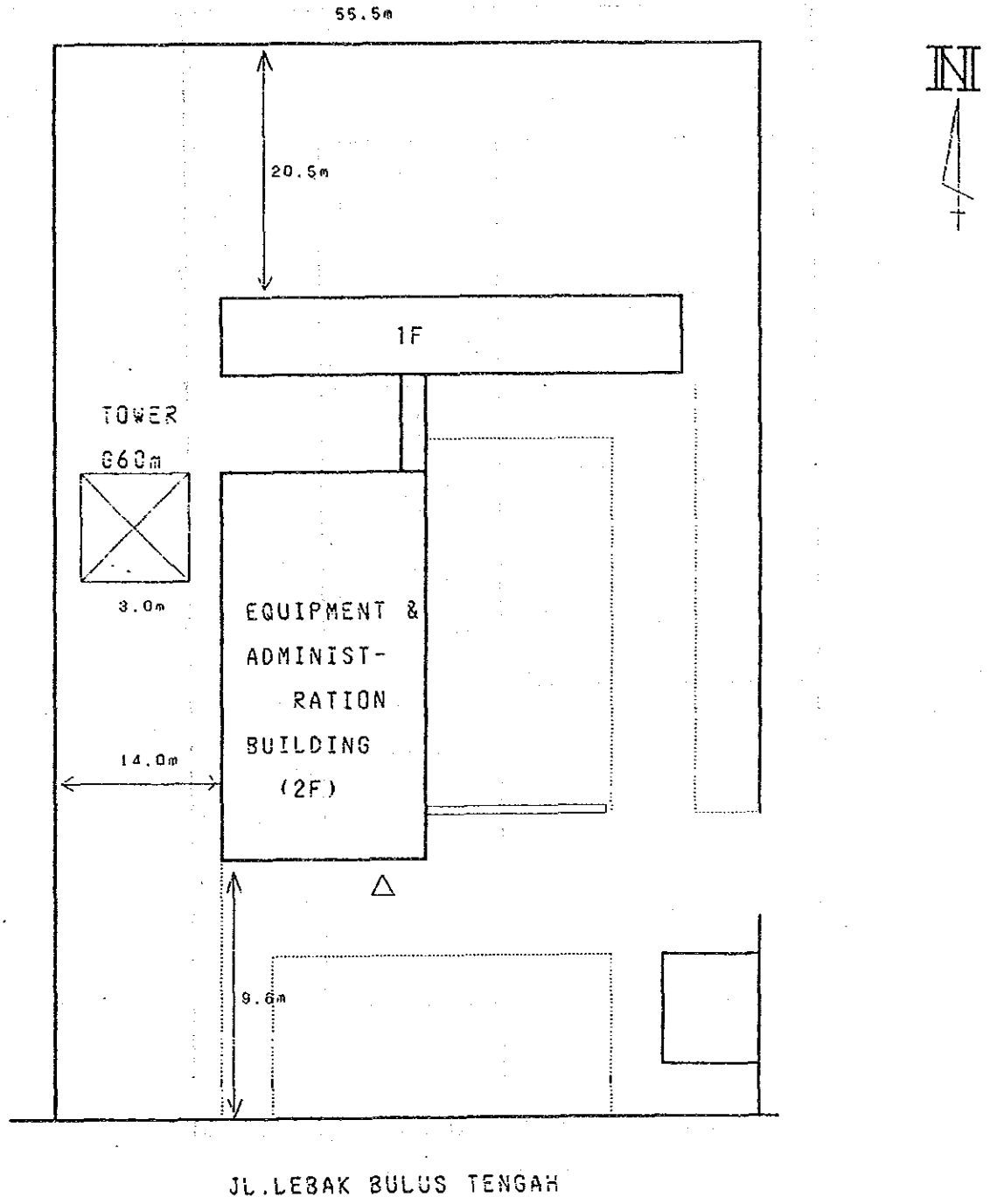
CAWANG Floor Layout
(1F)



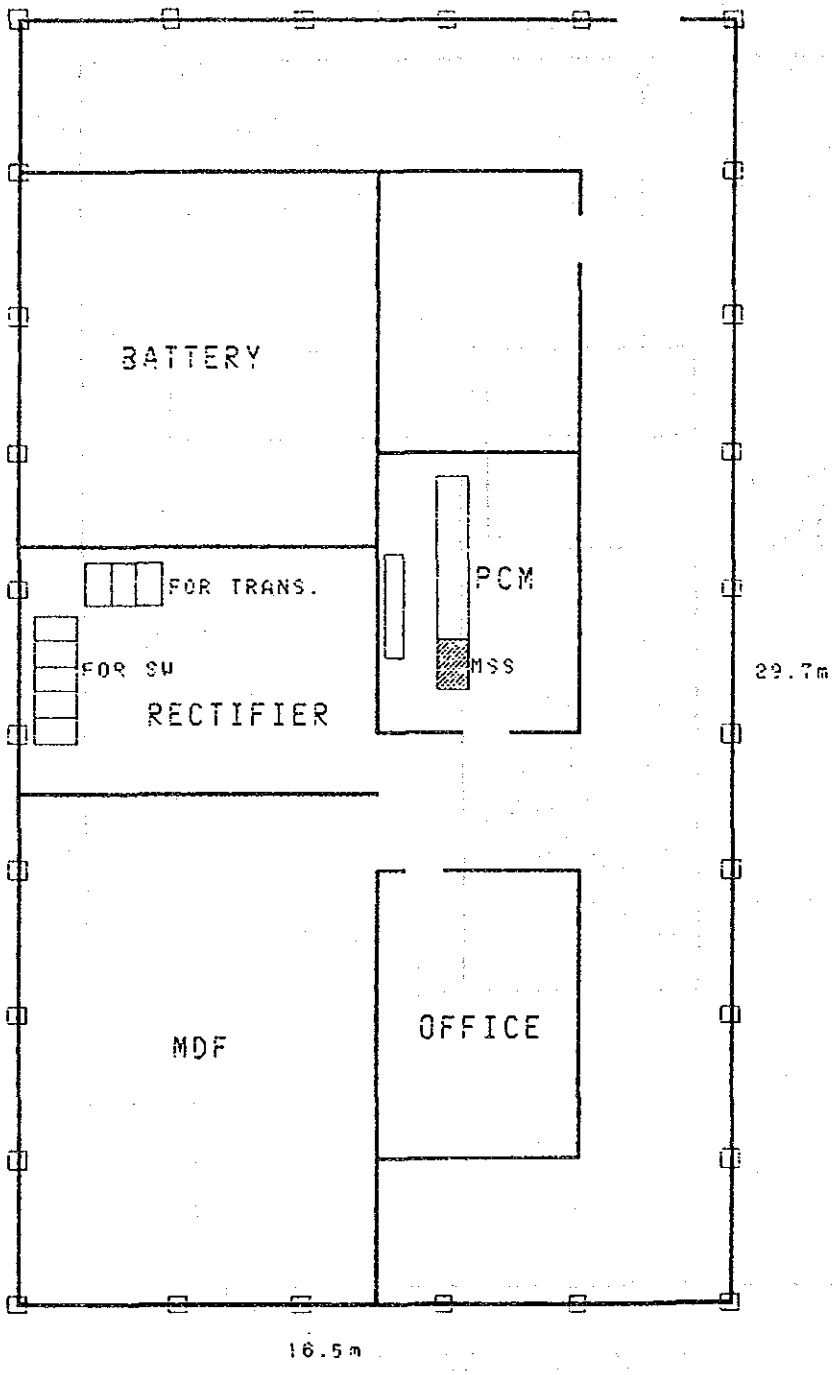
CEMPAKA PUTIH Building Layout



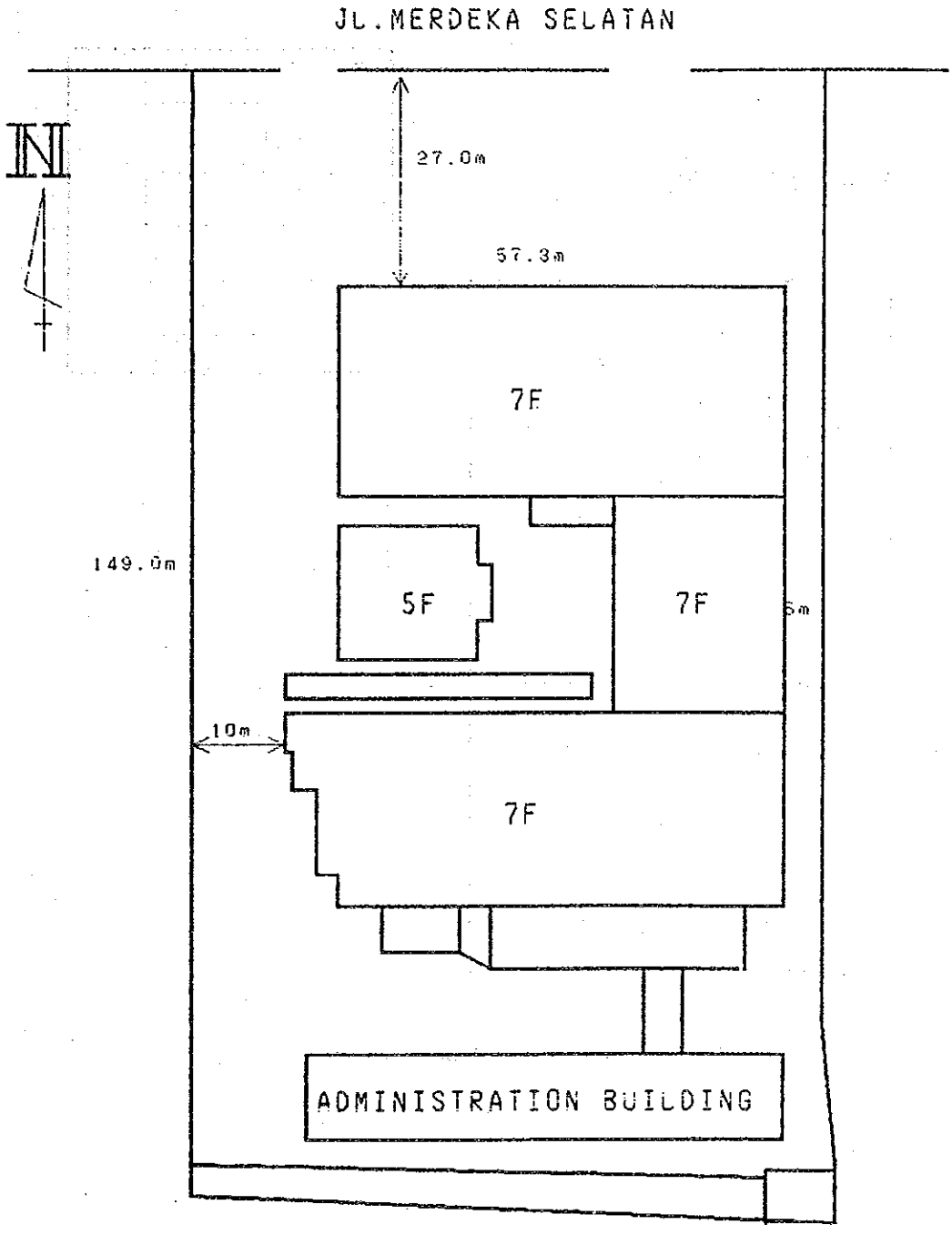
CEMPAKA PUTIH Floor Layout
(1F)



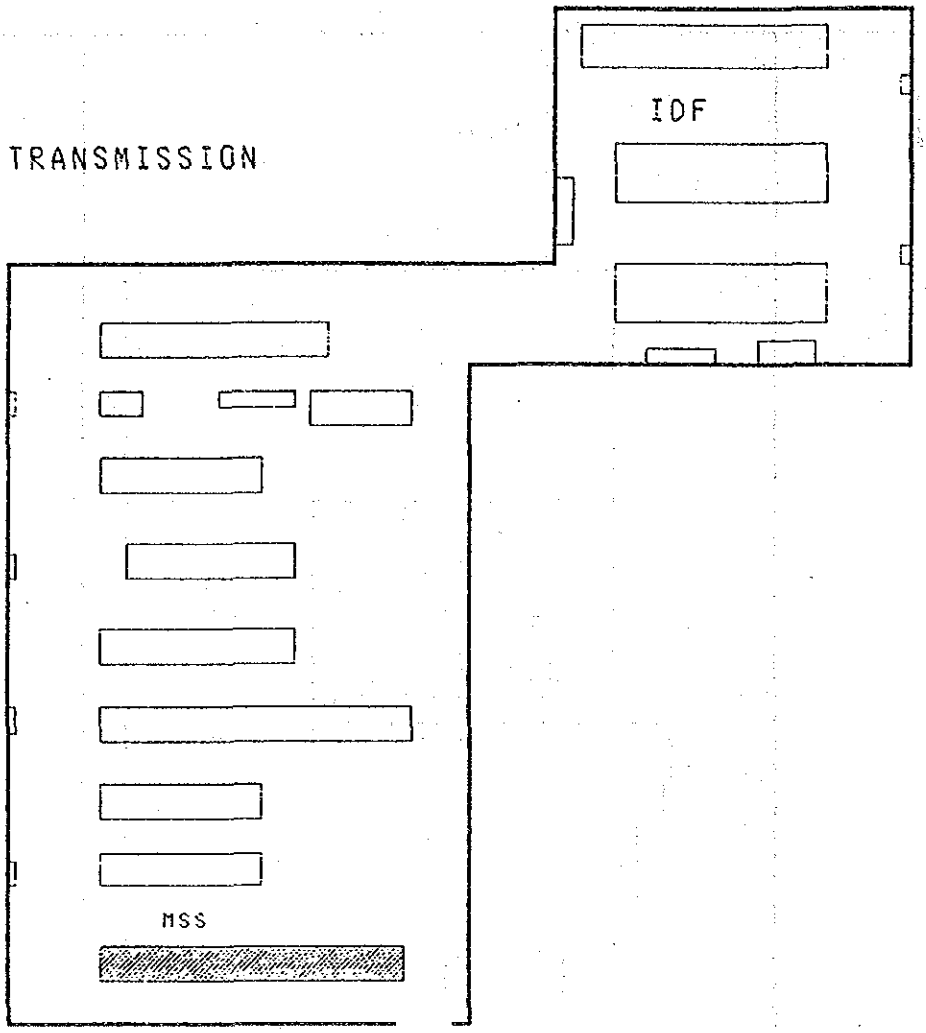
CIPETE Building Layout



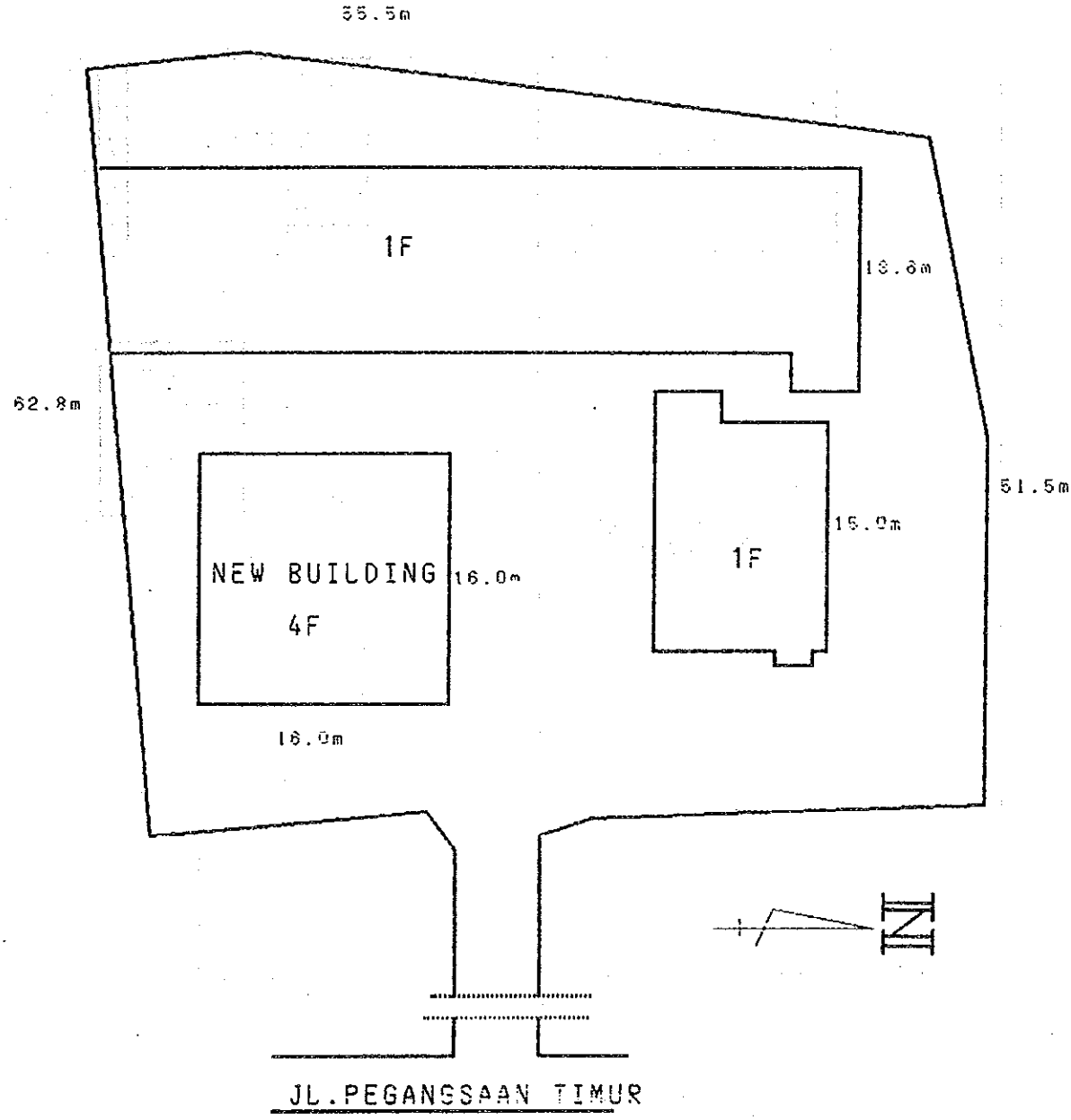
CIPETE Floor Layout
(1F)



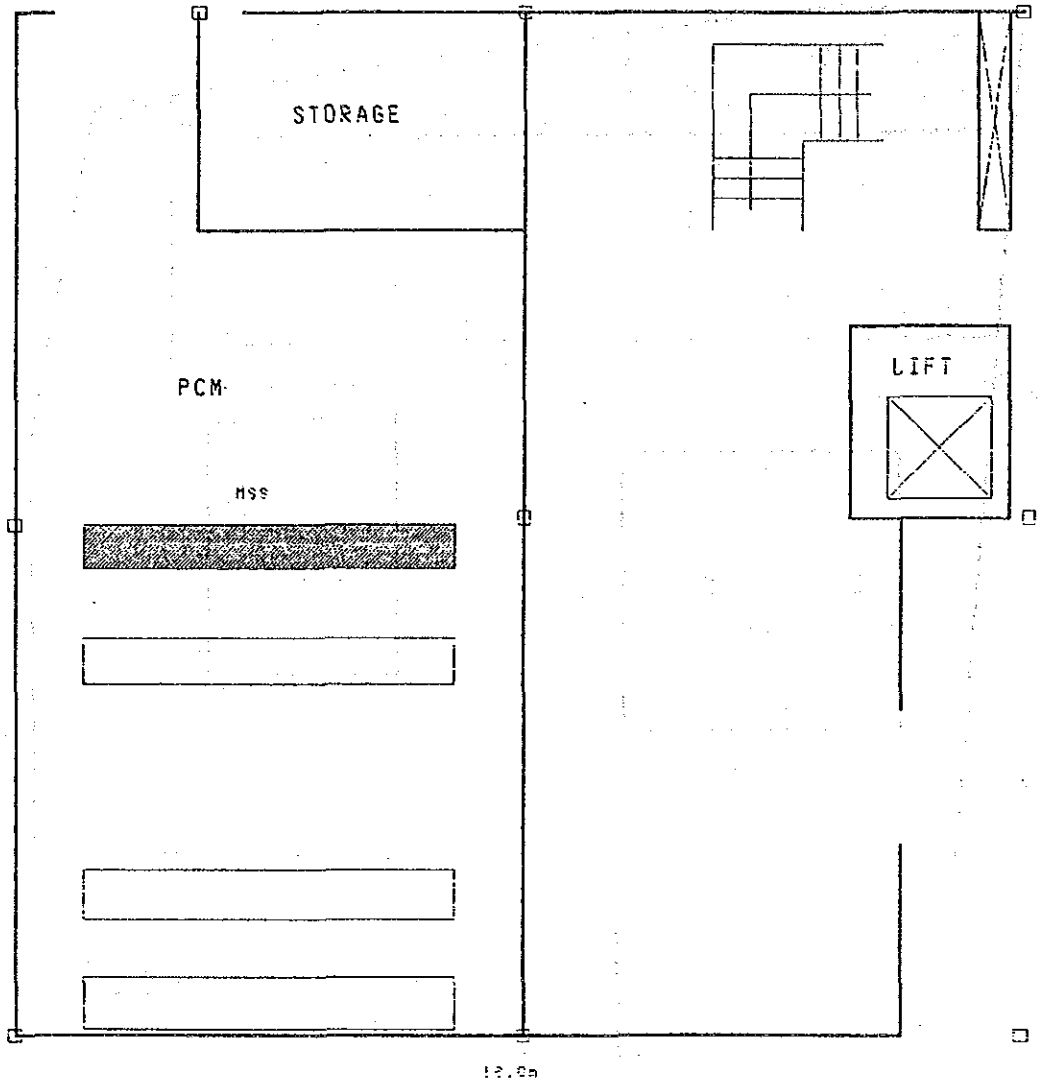
GAMBIR-1 Building Layout



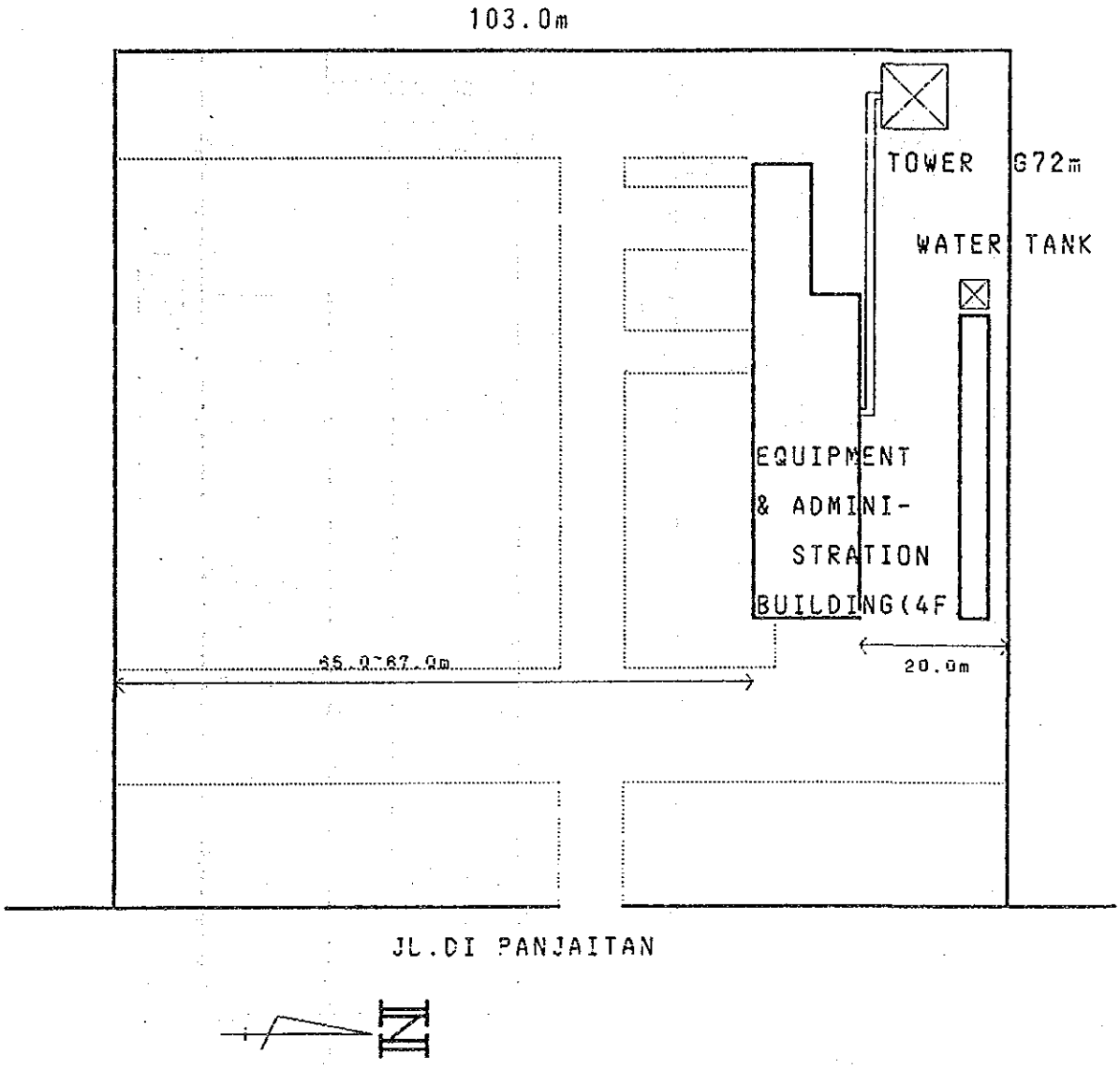
GAMBIR-1 Floor Layout
(6F)



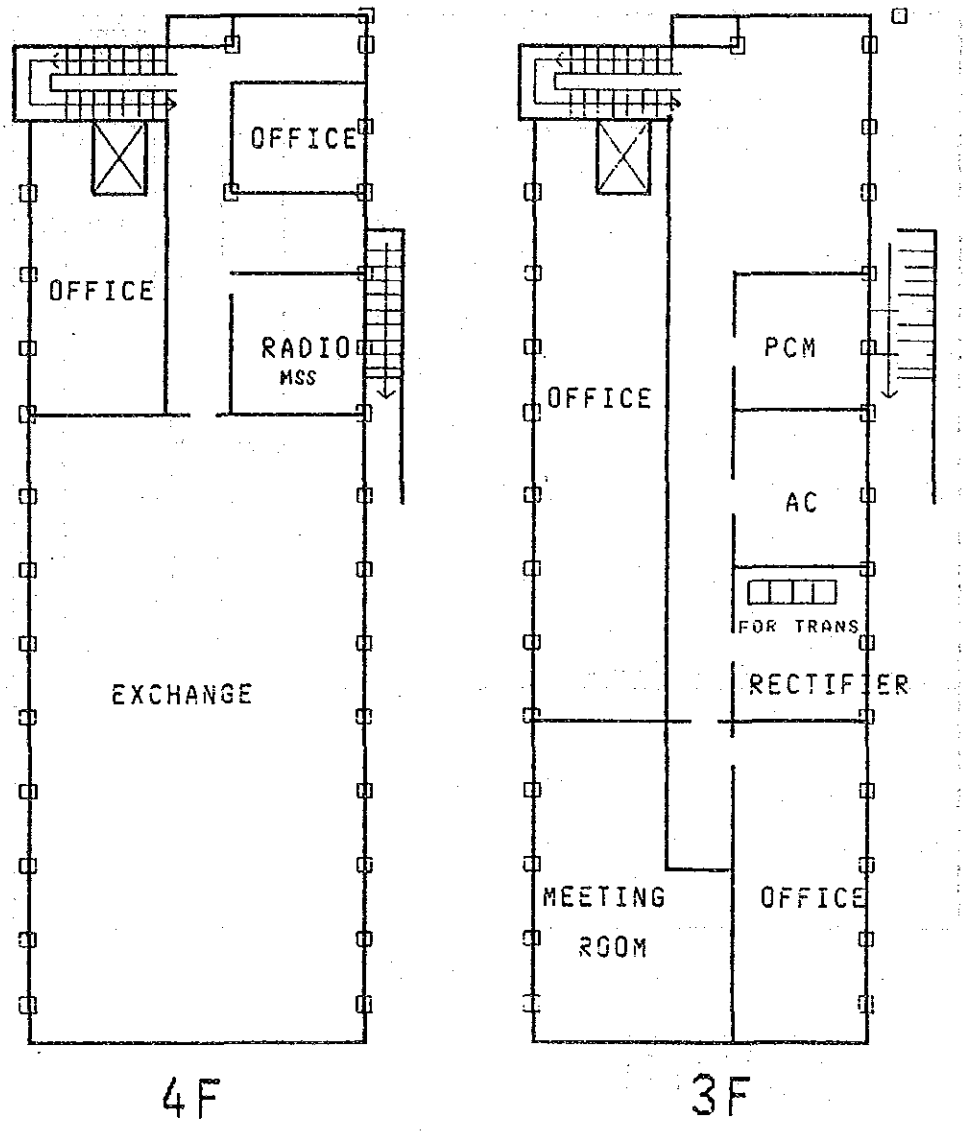
GAMBIR-2 Building Layout



GAMBIR-2 Floor Layout
(NEW BUILDING IF)

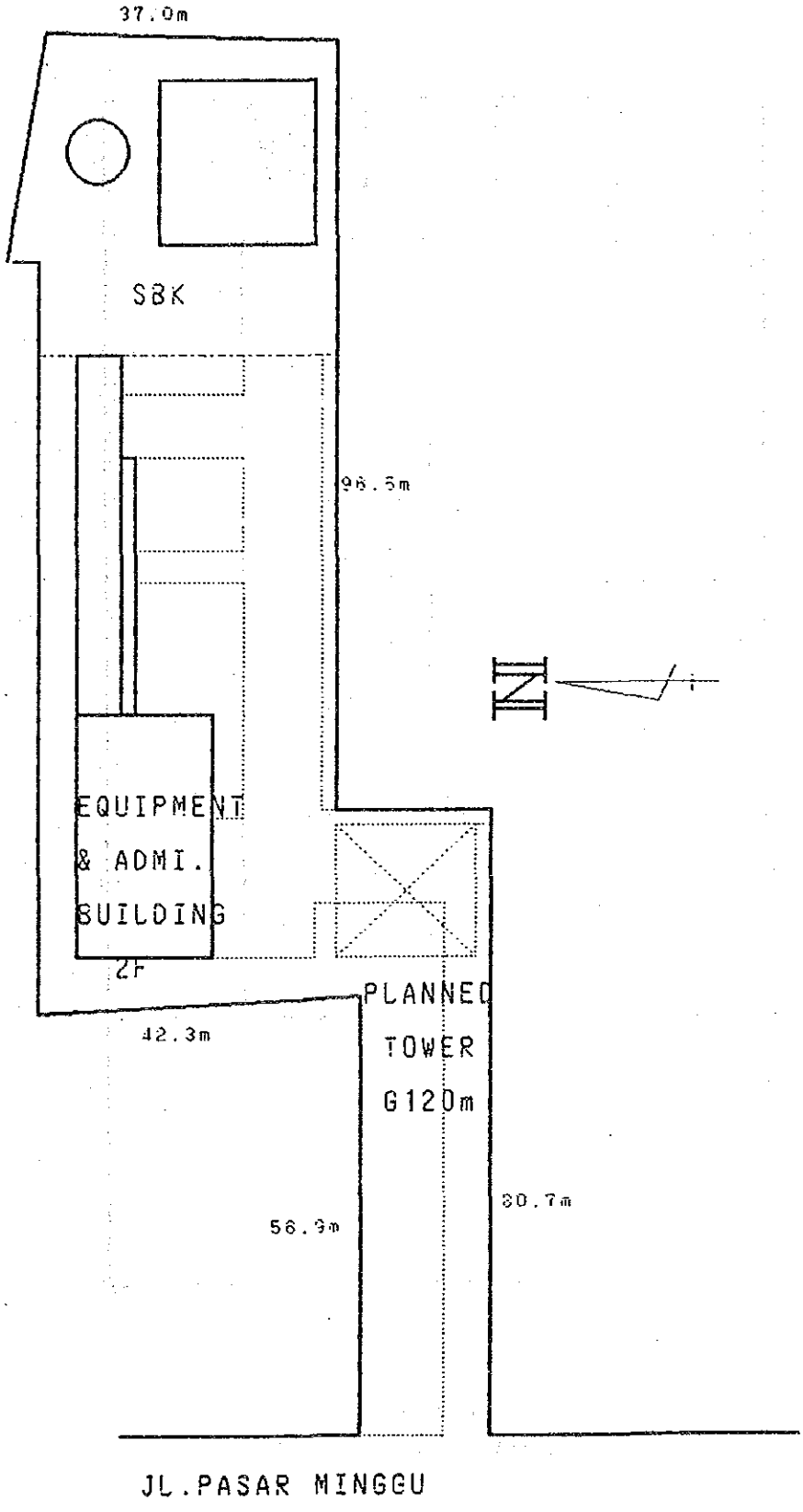


JATINEGARA Building Layout

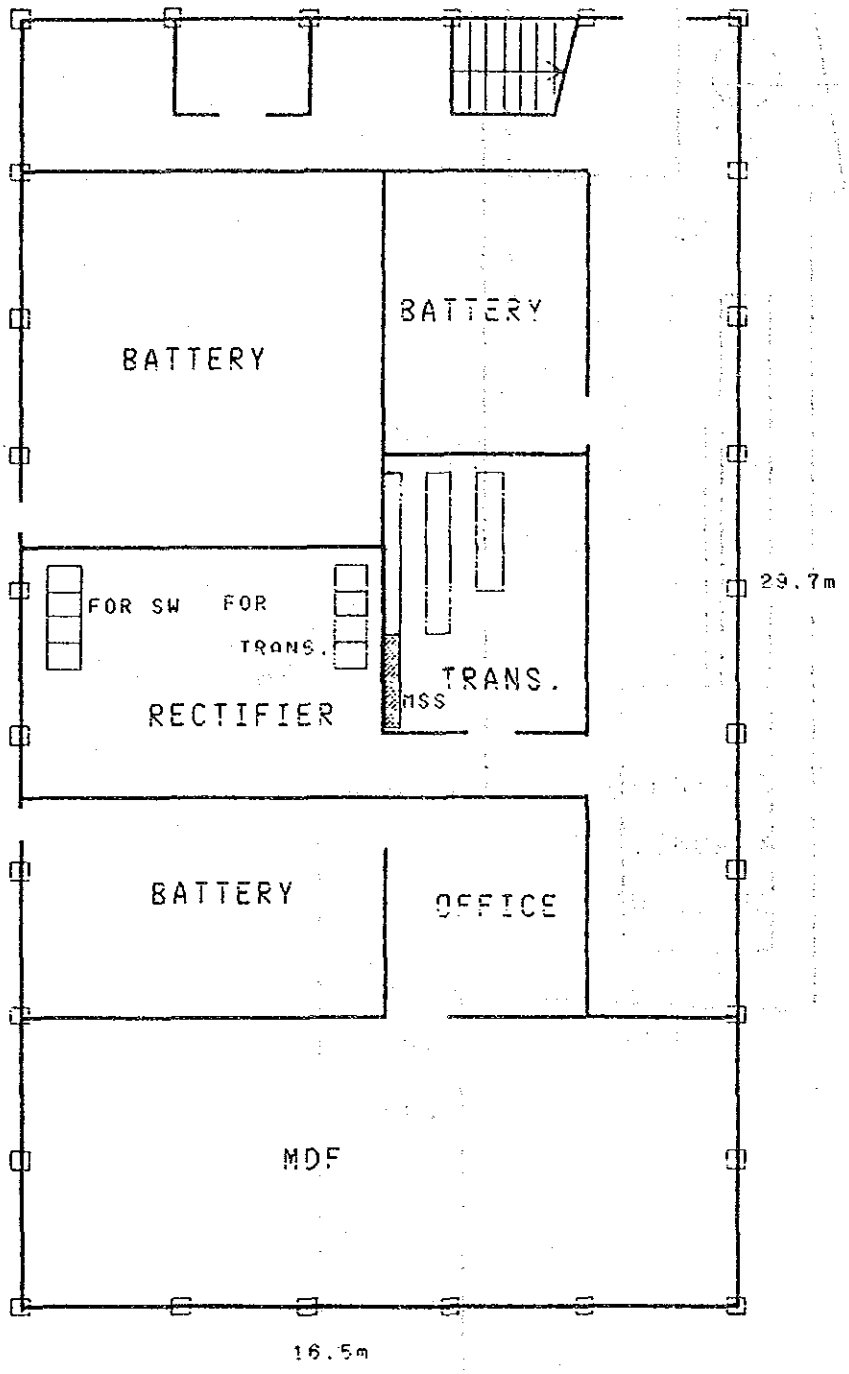


JATINEGARA Floor Layout

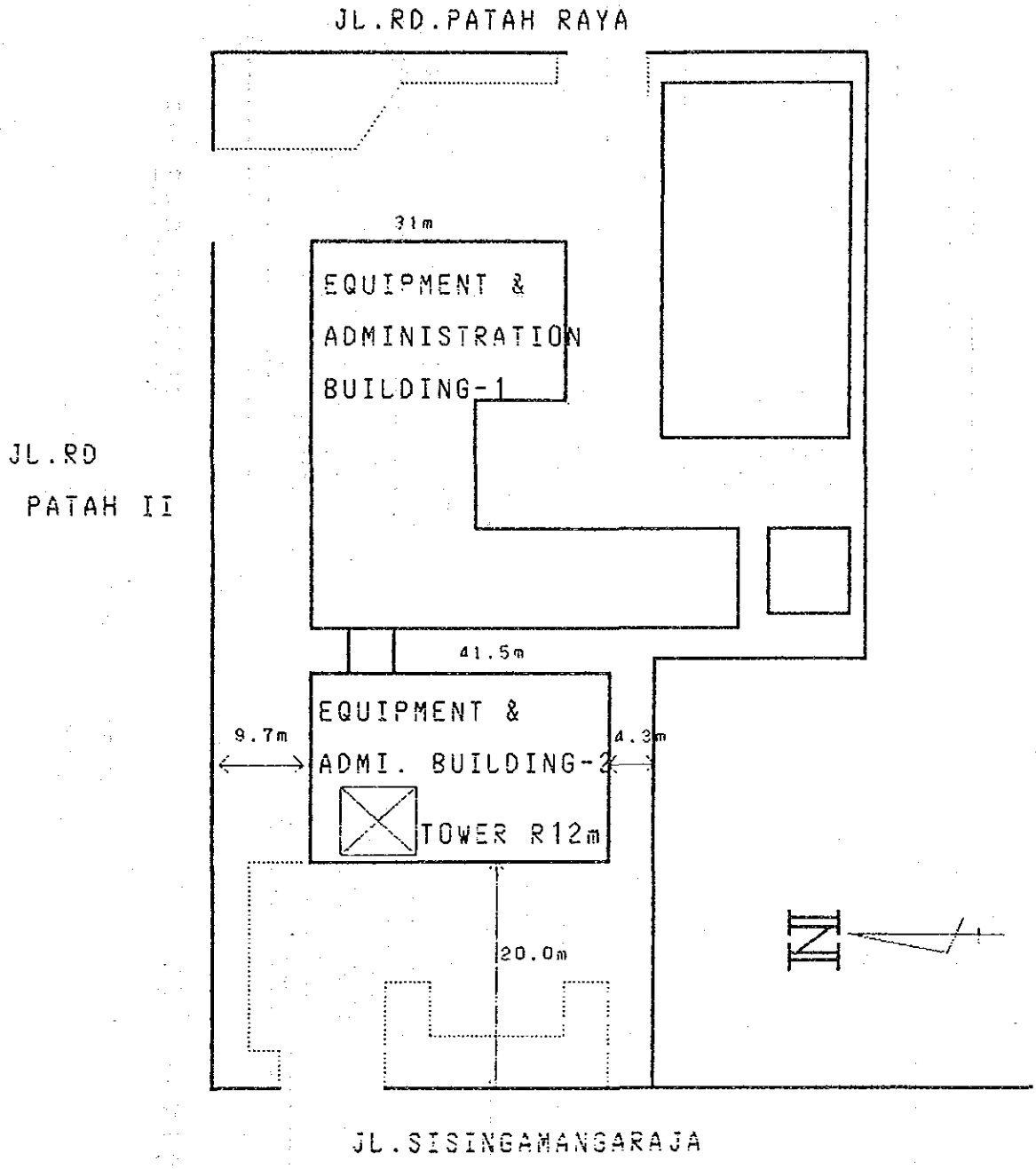
(3F, 4F)



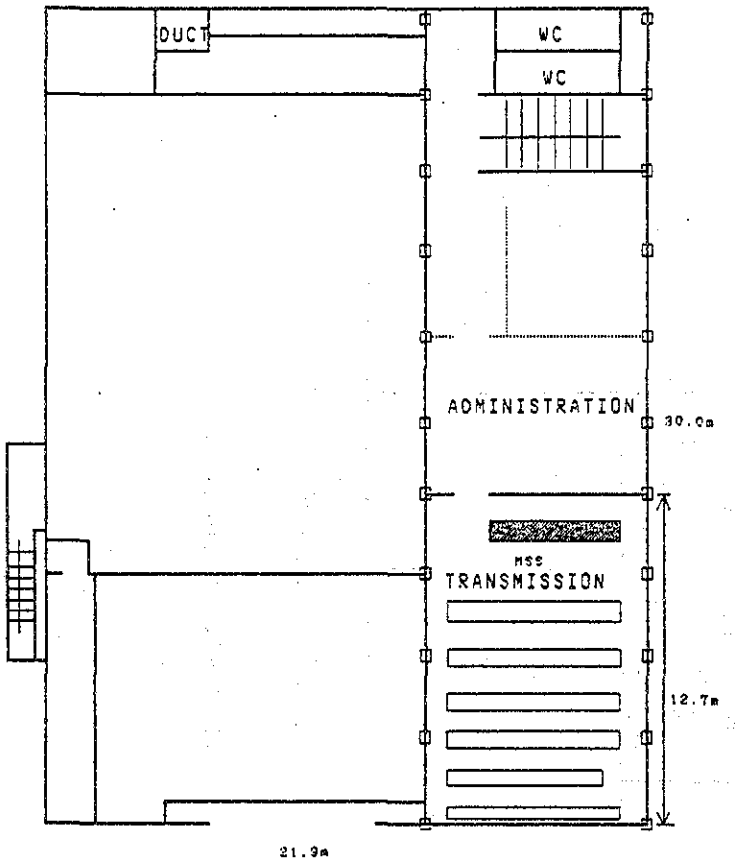
KALIBATA Building Layout



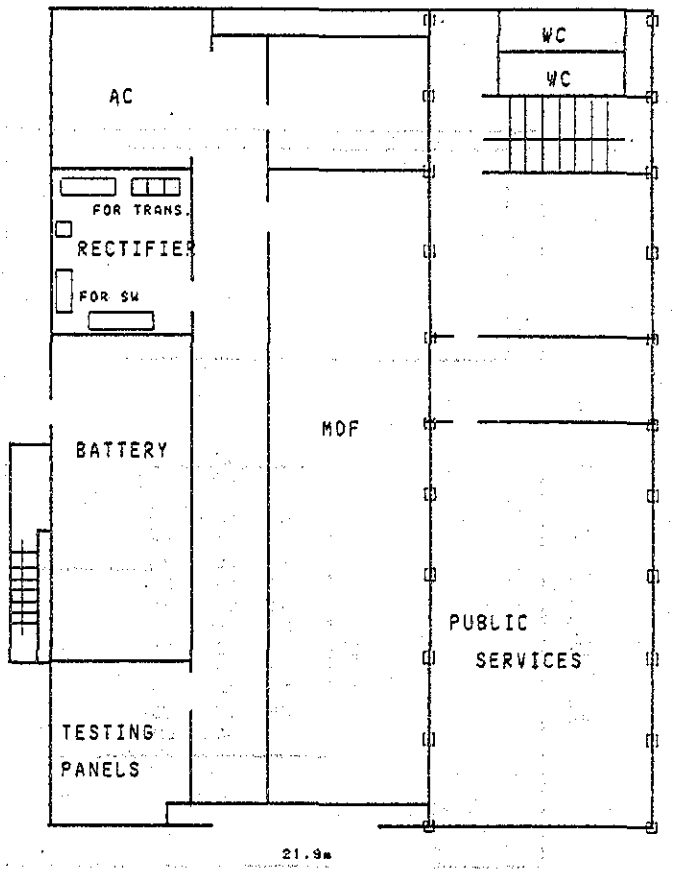
KALIBATA Floor Layout
(1F)



KEBAYORAN Building Layout



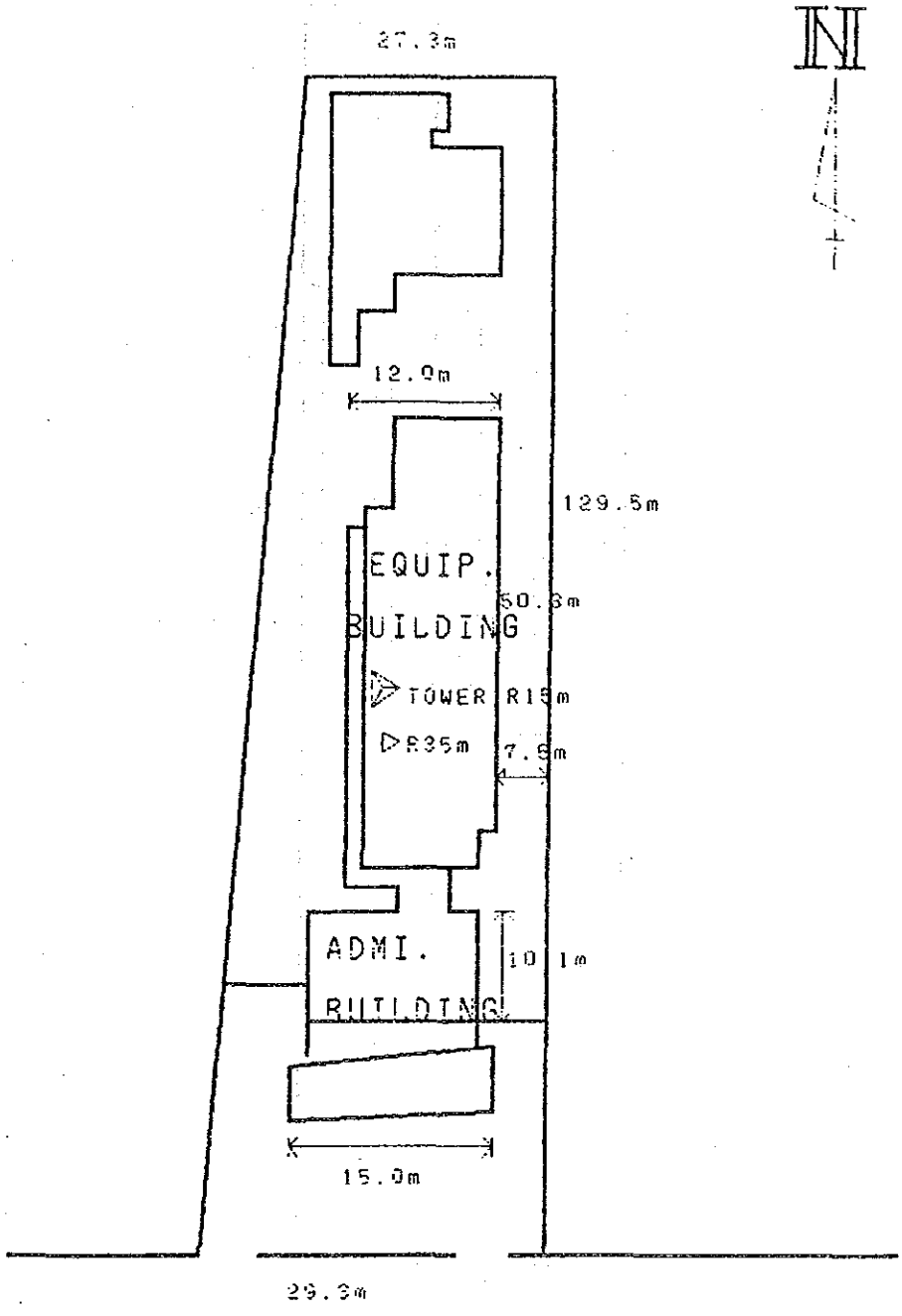
BUILDING-2 2F



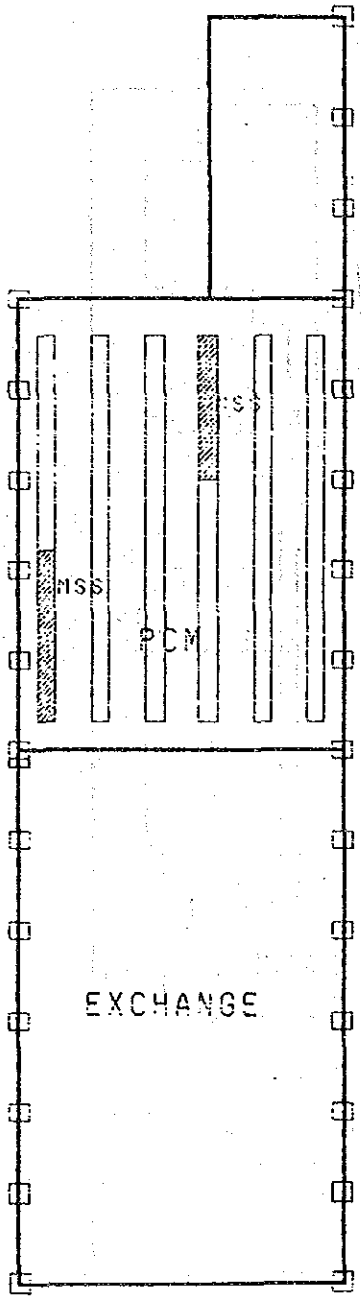
BUILDING-2 1F

KEBAYORAN Floor Layout

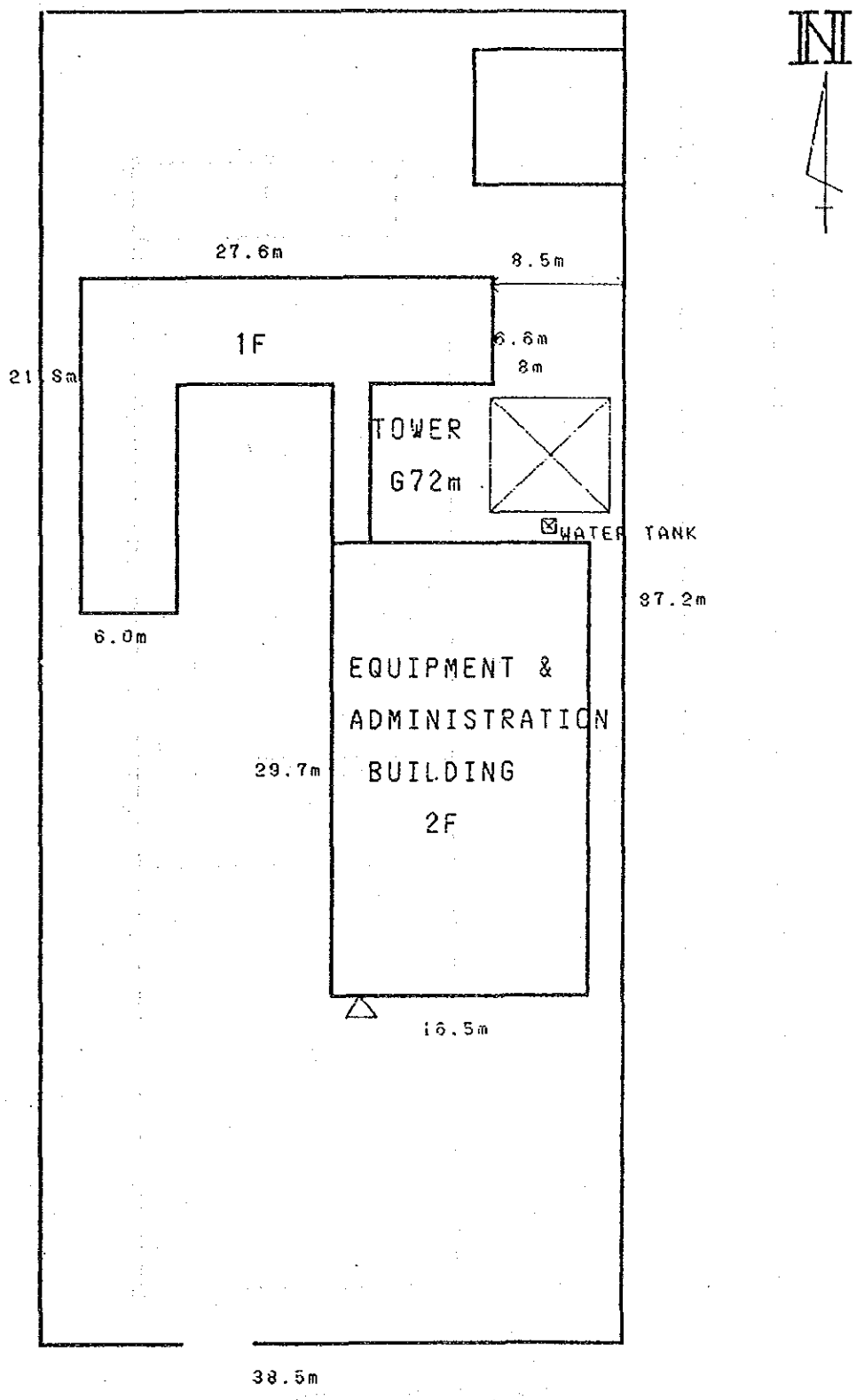
(1F, 2F)



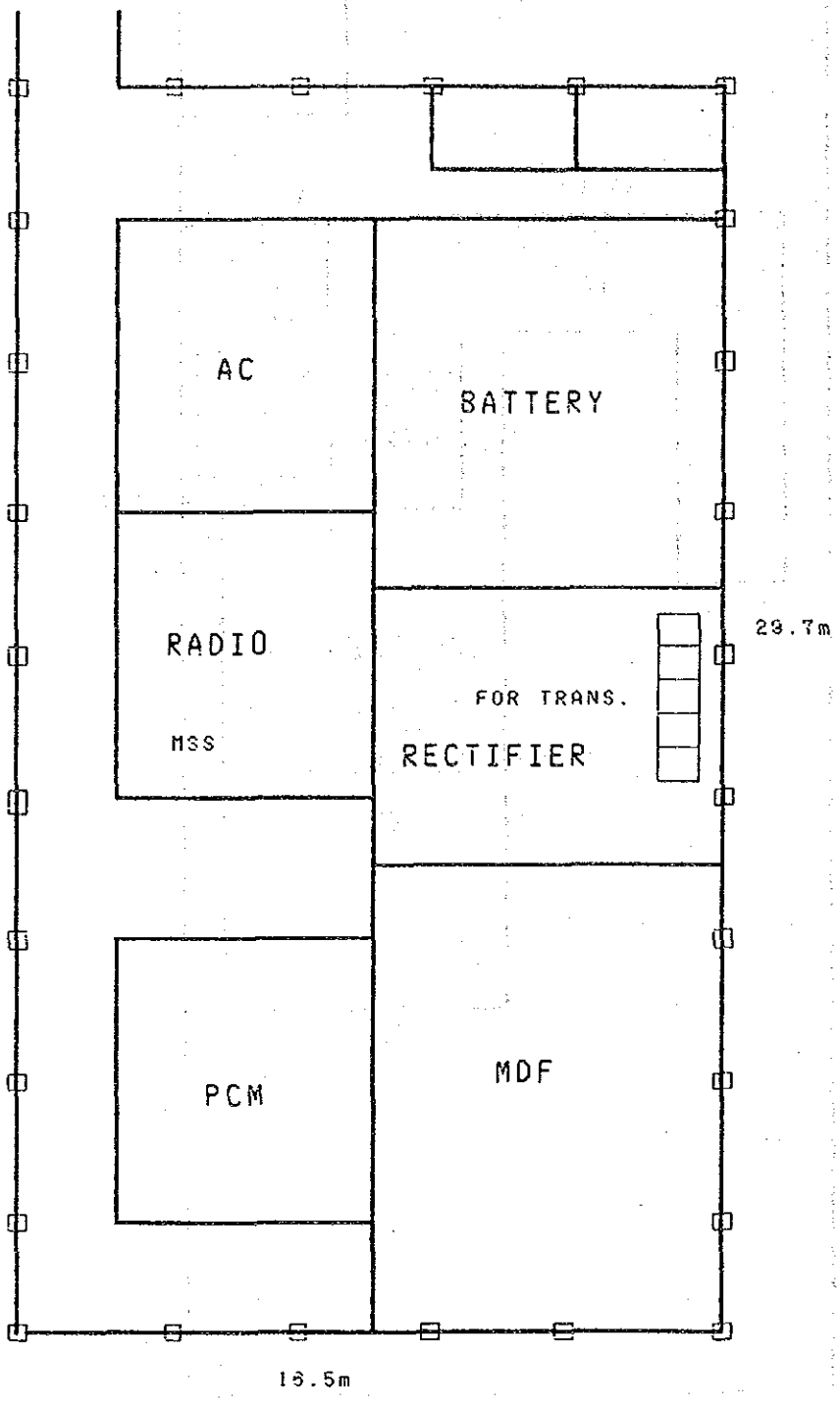
KOTA-2 Building Layout



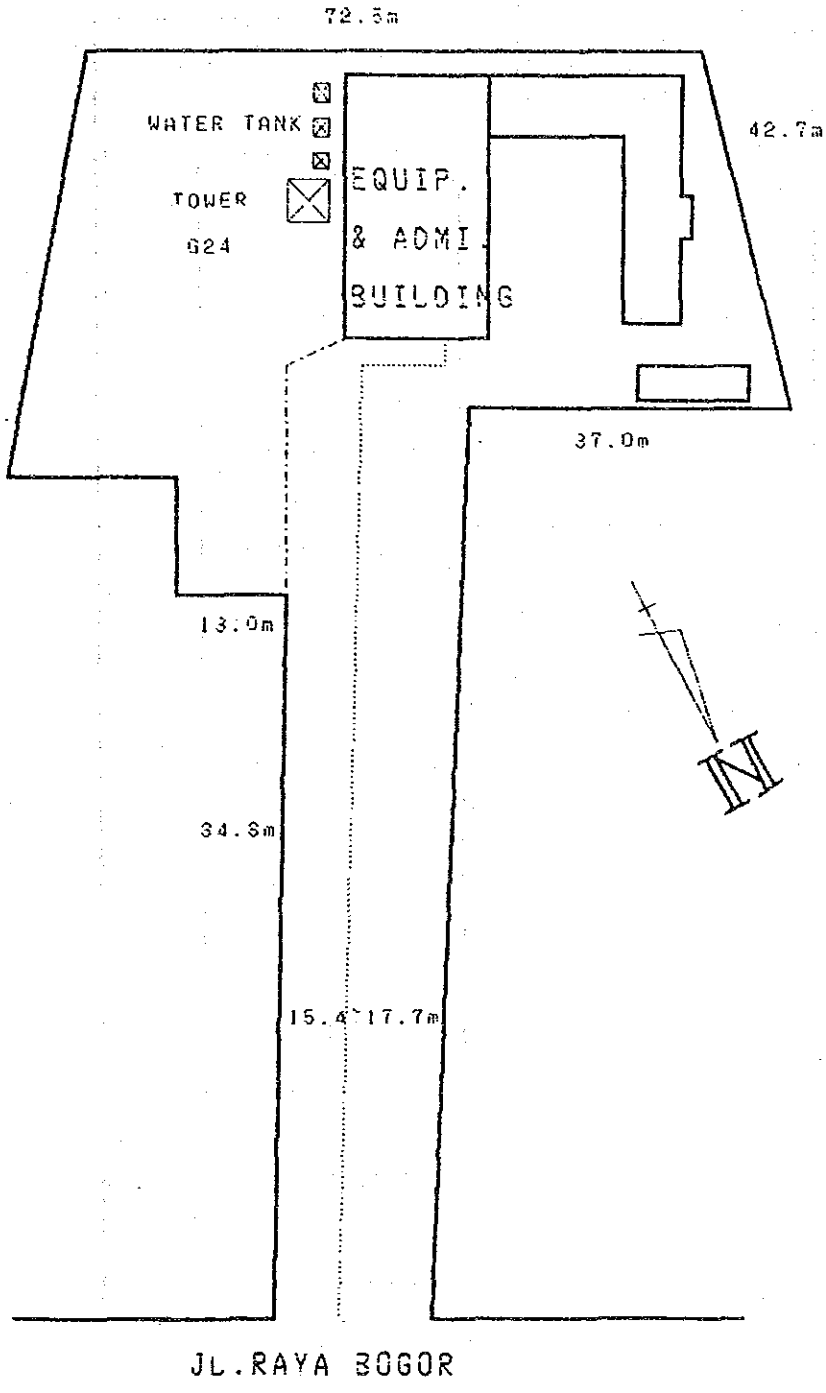
KOTA-2 Floor Layout
(5F)



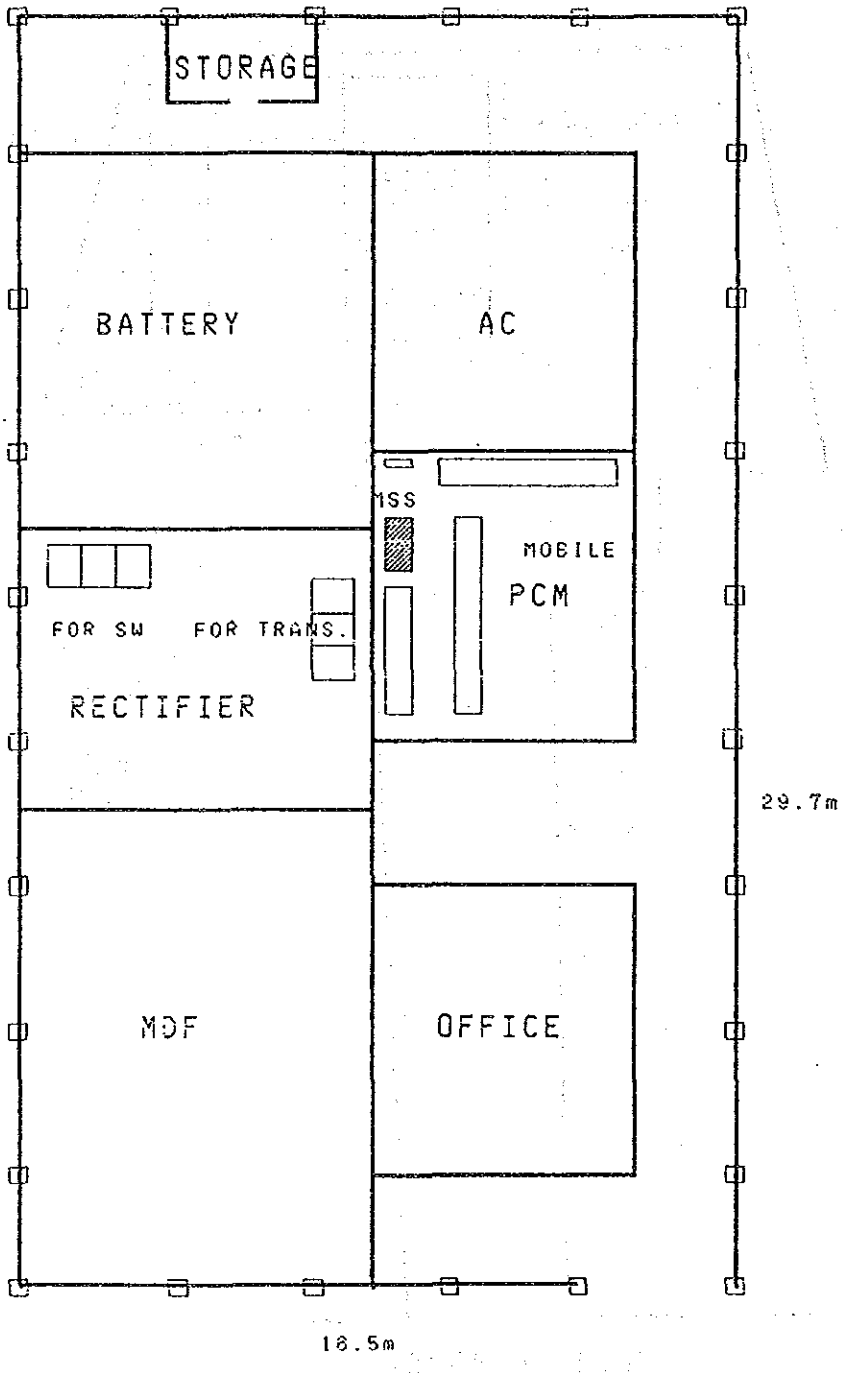
PALMERAH Building Layout



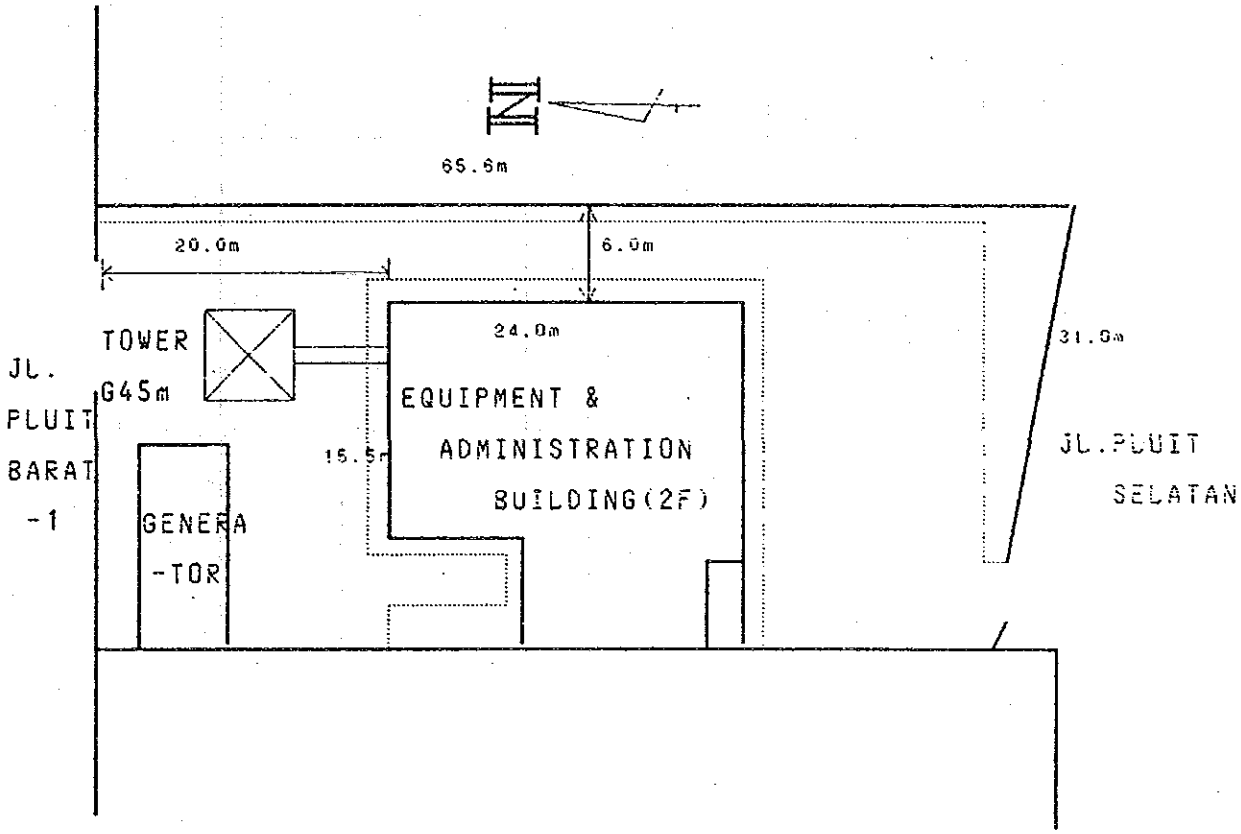
PALMERAH Floor Layout
(1F)



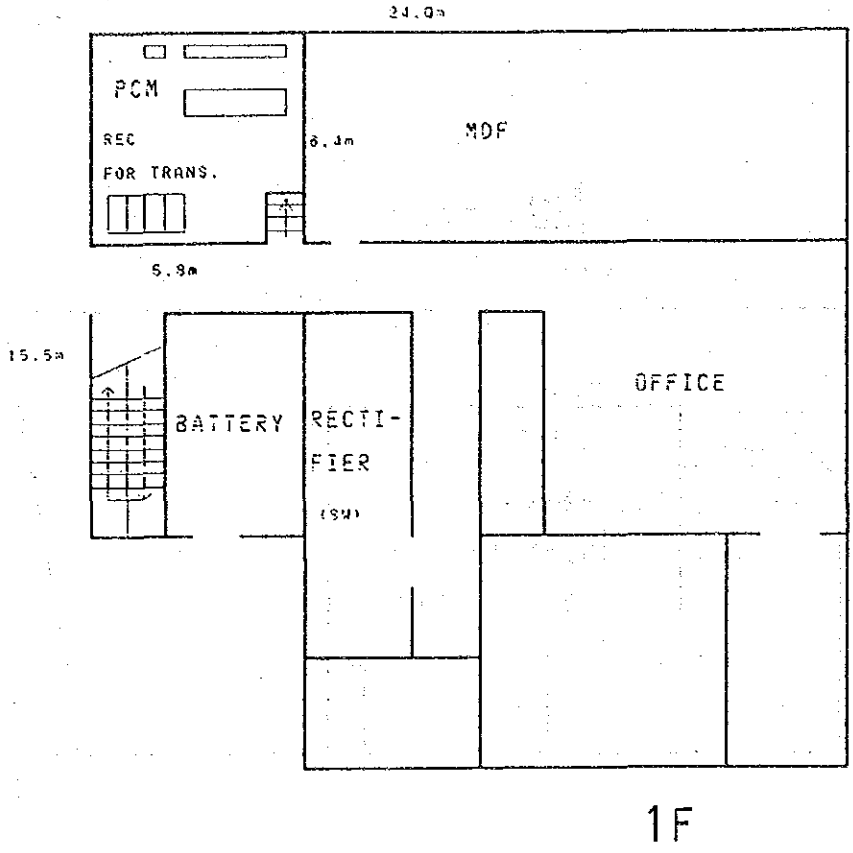
PASAR REBO Building Layout

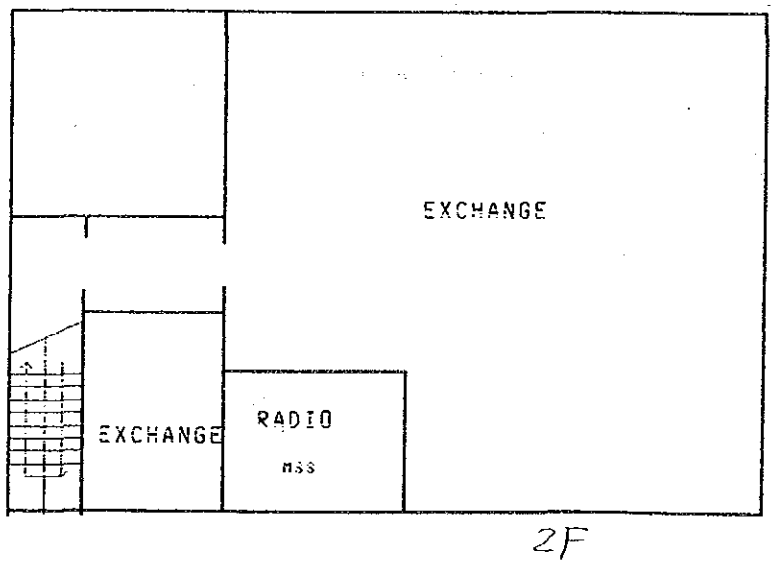


PASAR REBO Floor Layout
(1F)



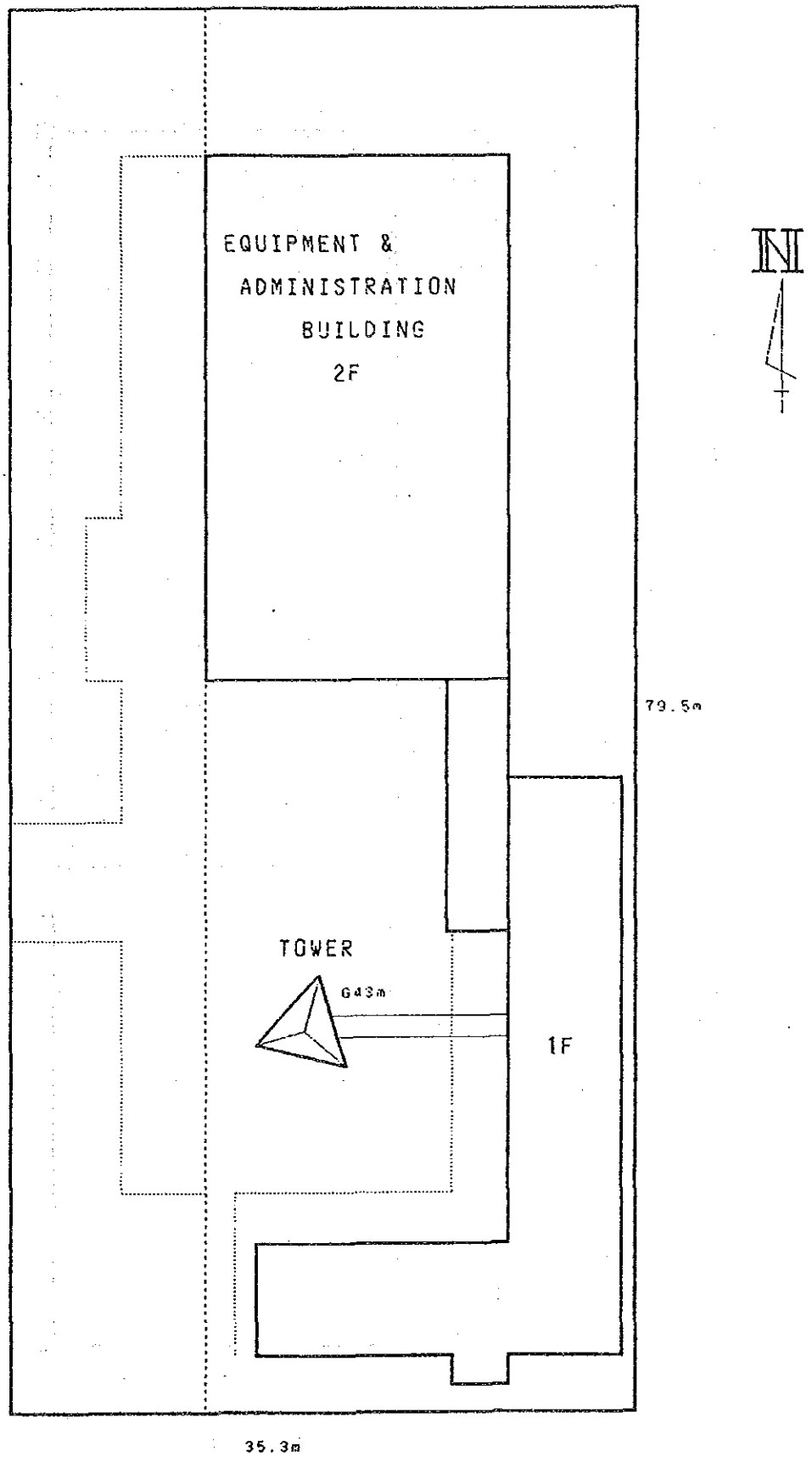
PLUIT Building Layout



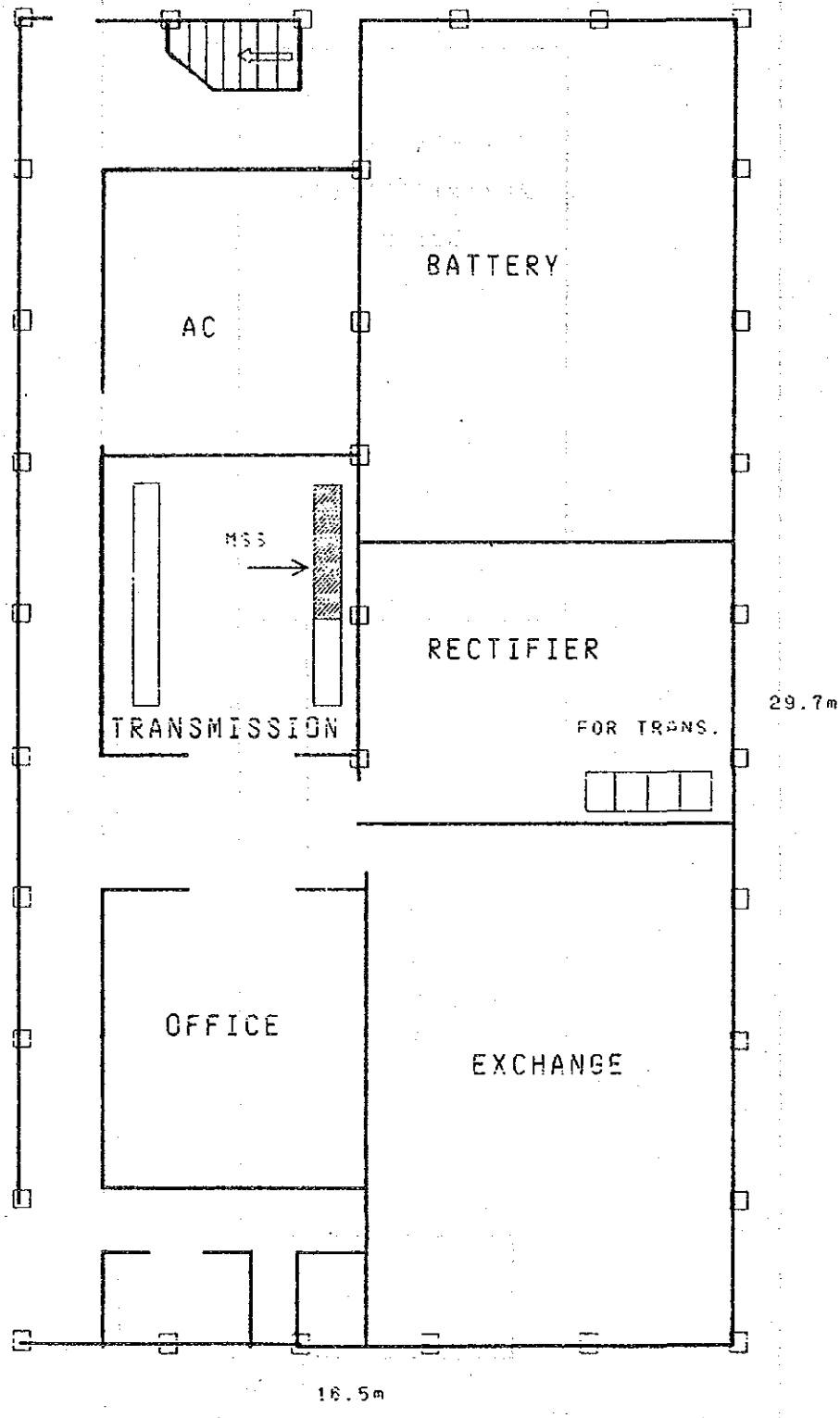


PLUIT · Floor Layout

(1F, 2F)

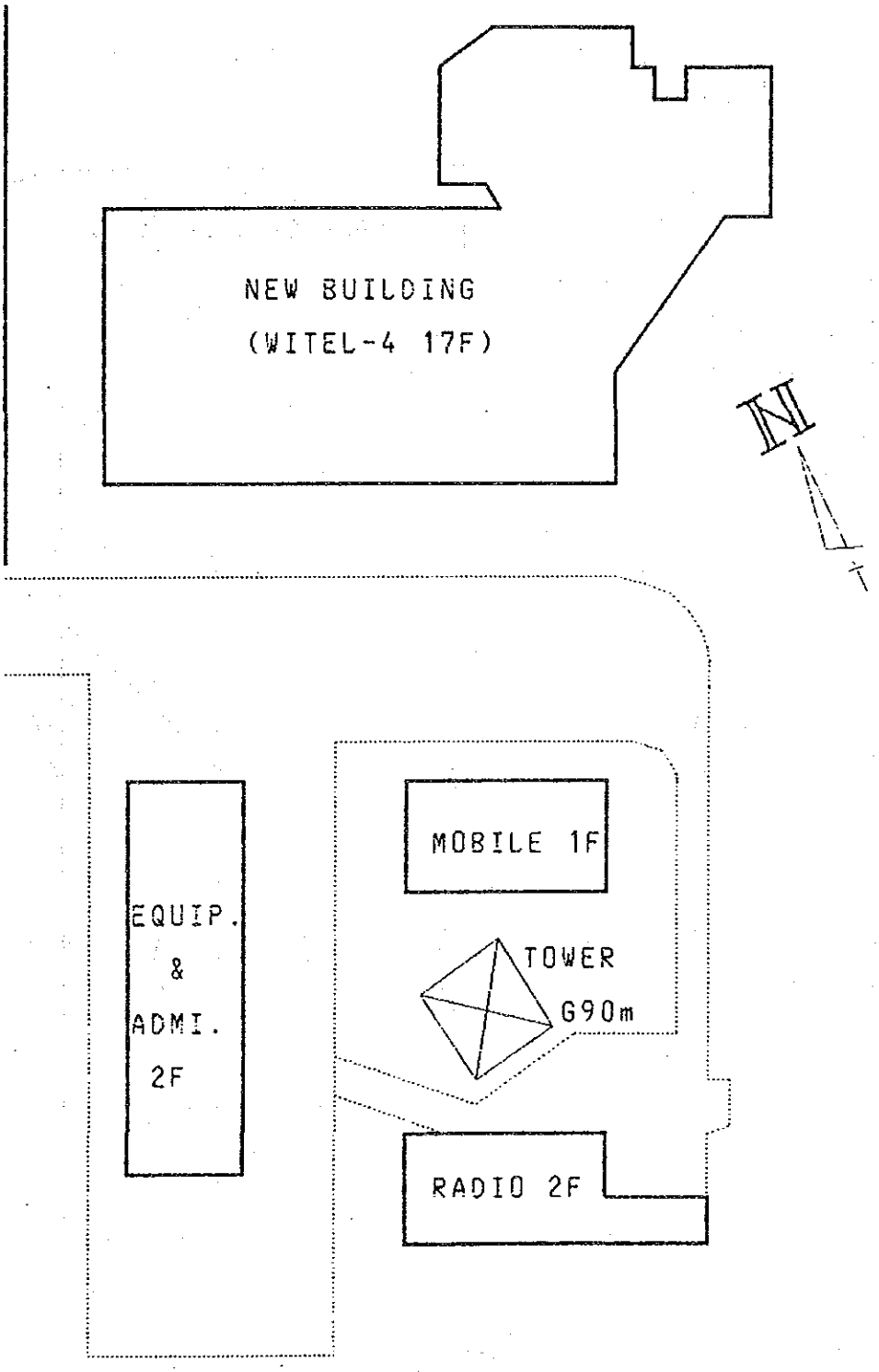


RAWAMANGUN Building Layout

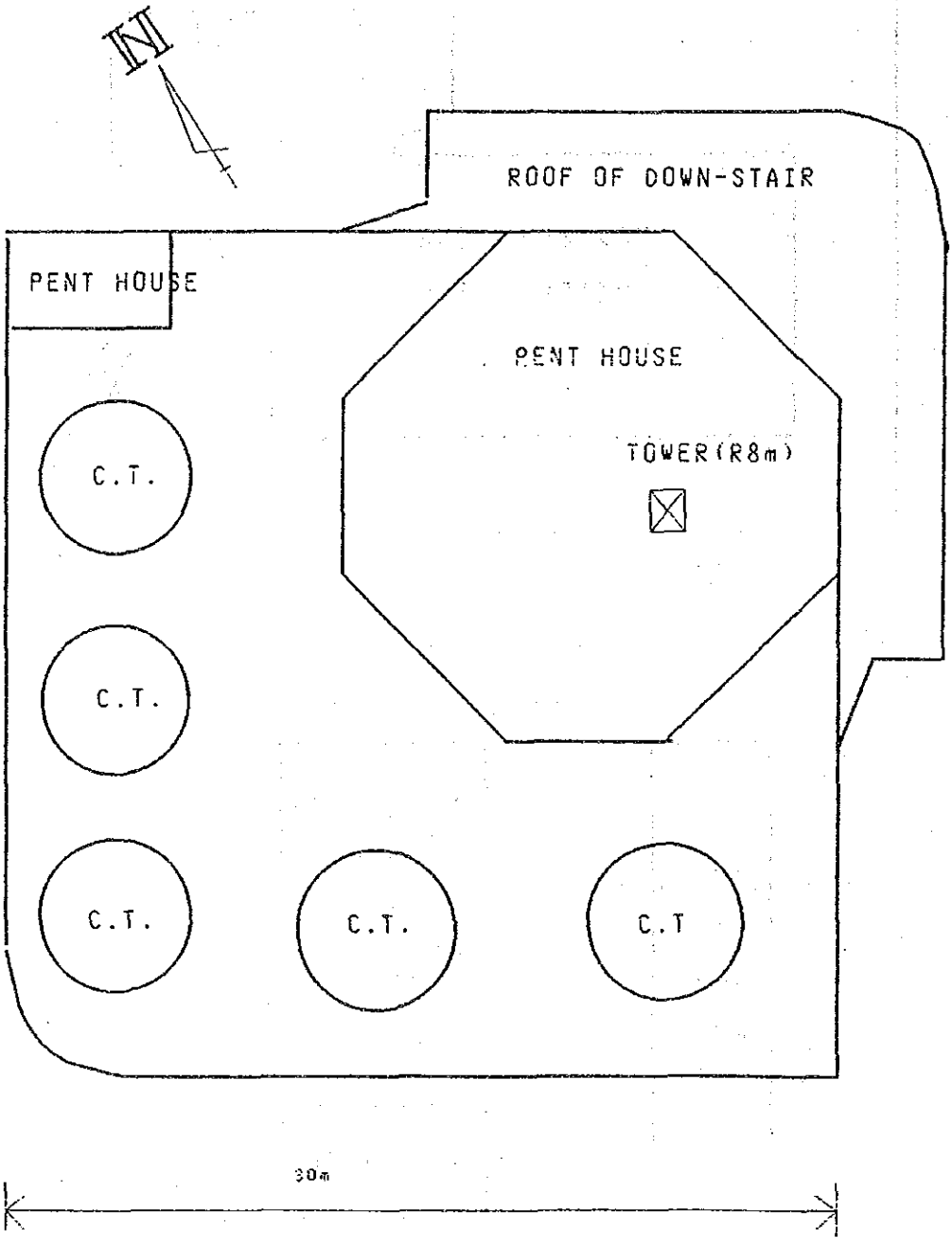


RAWAMANGUN Floor Layout

(1F)

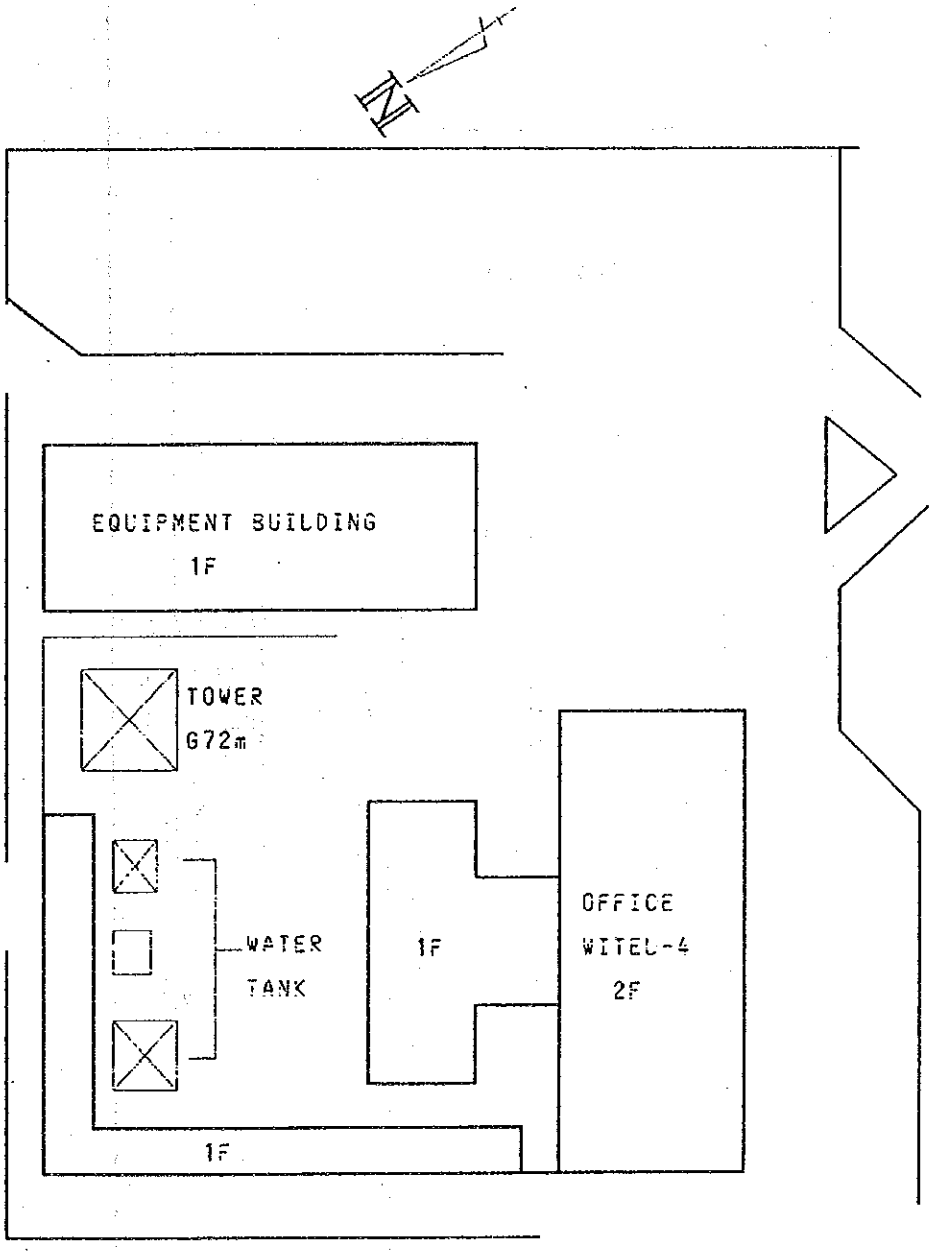


SEMANGGI-2 Building Layout
(NEW WITEL-IV)

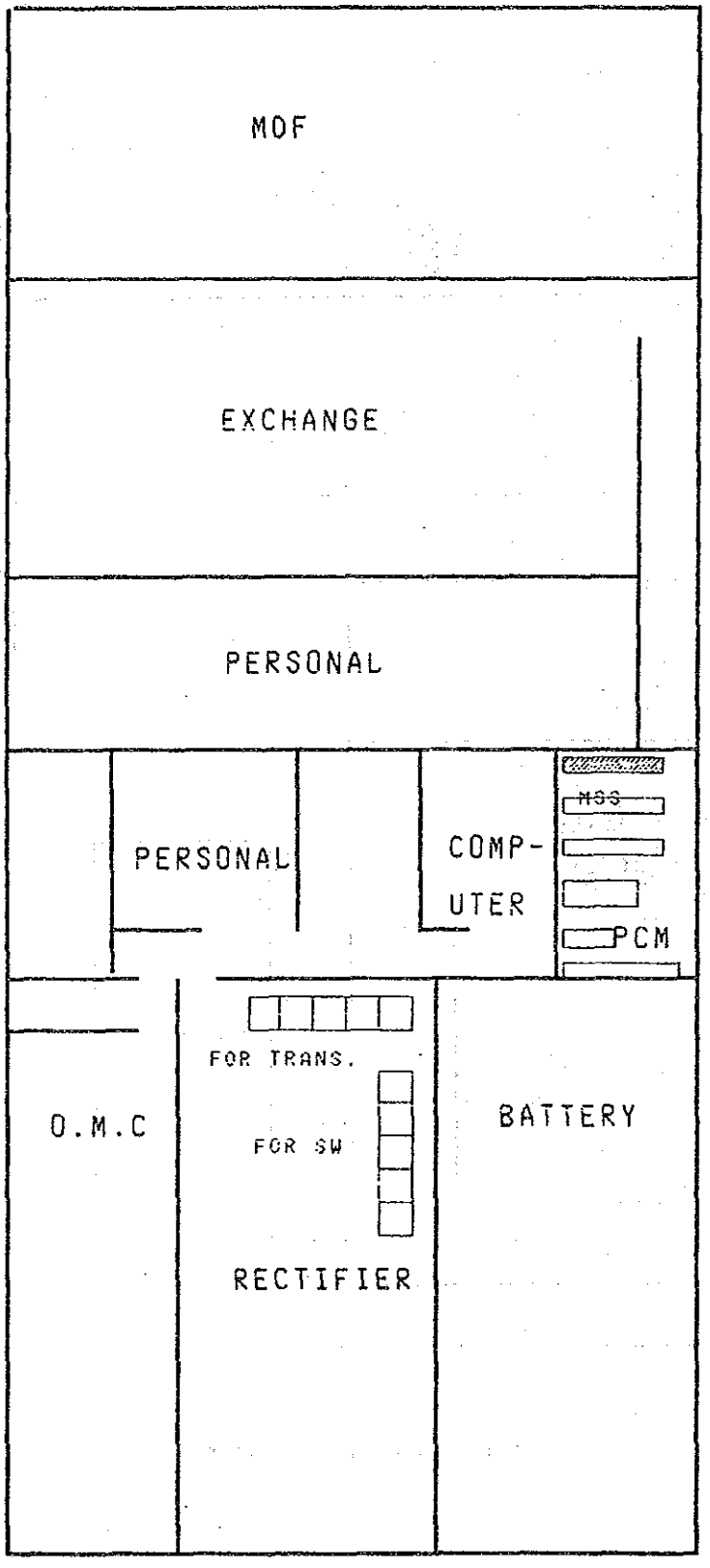


NEW WITEL-IV ROOF

(SEMANGGI-2)

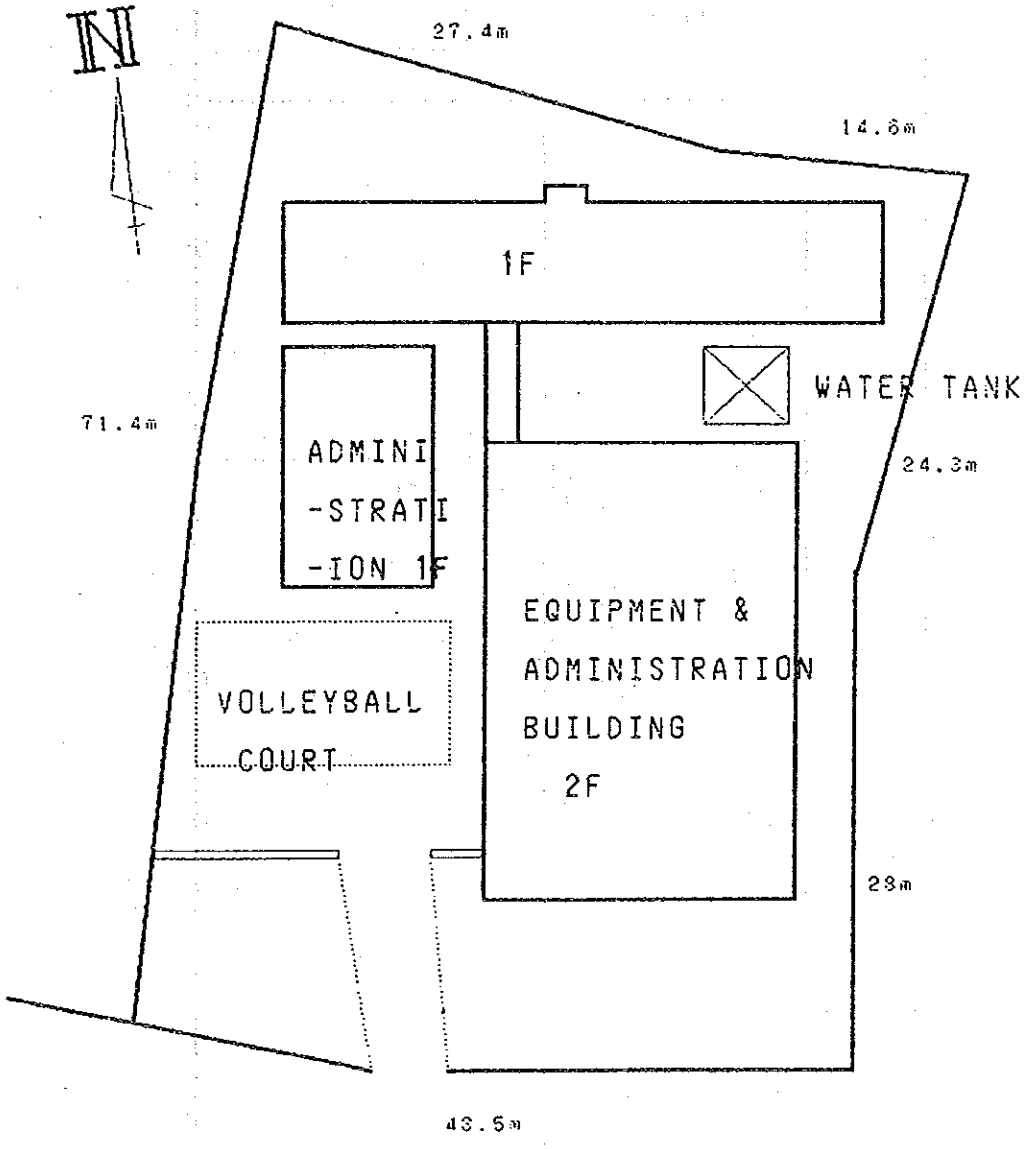


SLIPI Building Layout

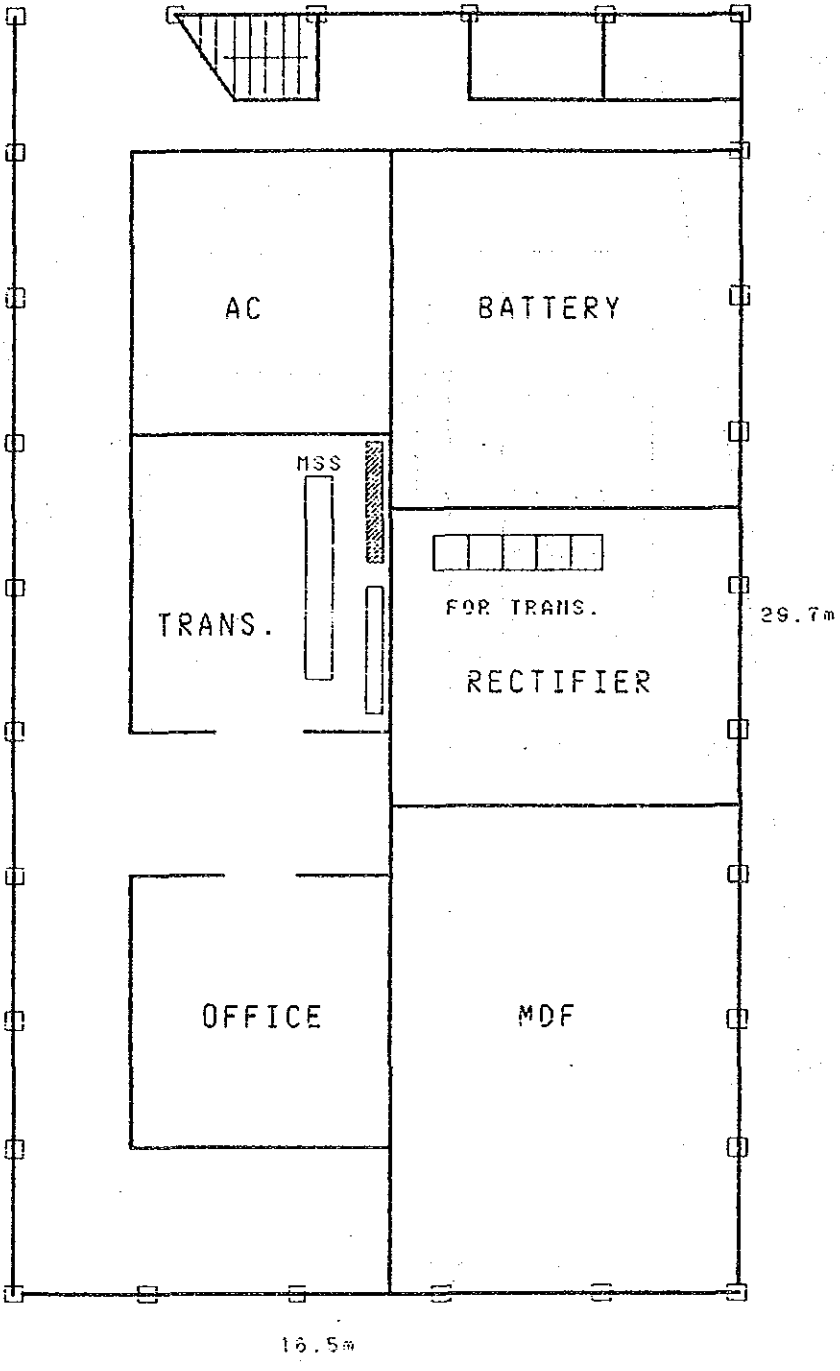


SLIPI Floor Layout

(1F)



TEBET Building Layout


AC
BATTERY
MSS
TRANS.
FOR TRANS.
RECTIFIER
29.7m
OFFICE
MDF
16.5m

Attachment - 9 : Alternative Cases

Result of the Study for Alternative Cases

1) Implementation Schedule

The three (3) kinds of alternative project implementation schedule are drawn up in Tables AT9-1 to AT9-3.

2) Investment Cost

The investment costs within each phase are shown in Tables AT9-4 to AT9-6. It can be seen that the cost is increased in proportion to the number of Areas. In other words, the cost becomes higher in the following order of the alternative cases 3, 1 and 2.

3) FIRR

The FIRR calculation is carried out to examine the variation of benefit by the alternatives. The result of calculation is shown in Table AT9-7.

The alternative case 1 indicates the highest FIRR, because No. 1 Group is composed of the areas where generates the largest amount of average revenue per line unit among the subject Areas and the number of line units in this Group occupies 75% of the total number of the subject subscriber lines.

The alternative case 2 also indicates a higher FIRR. The reason is considered to be that the number of line units reaches 92% of the basic case, however the cost reaches 87% compared with the basic case.

The alternative case 3 indicates the lowest FIRR among the three alternatives. Because the contribution to the total revenue by SM-2 is regarded to be extremely large. The one reason is that the number of line units only in SM-2 reaches 27% of the total number of the subject subscriber lines. The other reason is that SM-2 generates a high average revenue per line unit.

Table AT9-1 Project Implementation Schedule (Alternative Case 1)

MONTH NUMBER	-14 -13 -12 -11	-10 -9 -8 -7	-6 -5 -4 -3	-2 -1 1 2	3 4 5 6	7 8 9 10	11 12 13 14	15 16 17 18	19 20 21 22	23 24 25 26	27 28 29 30	31 32 33 34	35 36 37 38	39 40 41 42	43 44 45 46	47 48 49 50	51 52 53 54	55 56 57 58
CALENDAR YEAR	1989			1990			1991			1992			1993			1994		
MONTH	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12
EVENT / SERVICE ITEMS				▲ CONTRACT FOR CONSULTING SERVICE	▲ CONTRACT OF PROJECT		▲ COMMENCEMENT OF INSTALLATION WORK		▲ COMPLETION OF WORK COMMENCEMENT OF SERVICE									
												*2) BY PERUMTEL			*2) BY PERUMTEL			*2) BY PERUMTEL
PMC OPTION I. PMC OPTION 1) DESIGN 2) TENDER/EVALUATION/AWARD 3) CONSTRUCTION	———	———	———	EXPECTED SCHEDULE					*1)									
PERUMTEL'S TASK II. SELECTION OF CONSULTANT 1) PREPARATION/APPROVAL OF TOR, S/L, L/I 2) TENDER 3) EVALUATION/AWARD/APPROVAL			———	———	———													
CONSULTANT'S TASK III. 1) SURVEY, ENGINEERING DESIGN AND RECEIVING PERMISSION 2) SELECTION OF CONTRACTOR 3) SUPERVISION OF DETAILD DESIGN 4) WITNESSING FACTORY TEST 5) SUPERVISION OF INSTALLATION WORK 6) WITNESS ACCEPTANCE TEST				———	———	———	———	———	———									
CONTRACTOR'S TASK IV. 1) IMPLEMENTATION DESIGN 2) MANUFACTURING 3) TRANSPORTATION 4) EQUIPMENT INSTALLATION a) BASE STATION b) SUBSCRIBER STATION 5) CABLE AND OTHER a) BASE STATION b) SUBSCRIBER STATION 6) TEST 7) TRAINING a) FACTORY (CLASS ROOM) b) LOCAL (CLASS ROOM) (ON THE JOB) 8) ONE YEAR MAINTENANCE ASSISTANCE				———	———	———	———	———	———	———	———	———	———	———	———	———	———	———

Note. *1) DEPEND ON SCHEDULE FOR CABLE MANUFACTURING, APPROVAL FOR EXCAVATION AND FINANCE ARRANGEMENT
*2) PERUMTEL SHALL DIRECTLY CONDUCT THIS WORK AS OPTIONAL WORK TO THE CONTRACTOR'S CONCERNED
3) ——— : CONTINUOUSLY EXECUTED
---- : OCCASIONALLY EXECUTED

Table AT9-2 Project Implementation Schedule (Alternative Case-2)

	MONTH NUMBER	-14 -13 -12 -11	-10 -9 -8 -7	-6 -5 -4 -3	-2 -1 1 2	3 4 5 6	7 8 9 10	11 12 13 14	15 16 17 18	19 20 21 22	23 24 25 26	27 28 29 30	31 32 33 34	35 36 37 38	39 40 41 42	43 44 45 46	47 48 49 50	51 52 53 54	55 56 57 58
	CALENDAR YEAR	1989			1990			1991			1992			1993			1994		
	MONTH	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12
	EVENT / SERVICE ITEMS				▲ CONTRACT FOR CONSULTING SERVICE		▲ CONTRACT OF PROJECT	▲ COMMENCEMENT OF INSTALLATION WORK		▲ COMPLETION OF WORK COMMENCEMENT OF SERVICE									
											*2) BY PERUMTEL			*2) BY PERUMTEL			*2) BY PERUMTEL		
PMC OPTION	I. PMC OPTION 1) DESIGN 2) TENDER/EVALUATION/AWARD 3) CONSTRUCTION					EXPECTED SCHEDULE				*1)									
PERUMTEL'S TASK	II. SELECTION OF CONSULTANT 1) PREPARATION/APPROVAL OF TOR, S/L, L/I 2) TENDER 3) EVALUATION/AWARD/APPROVAL																		
CONSULTANT'S TASK	III. 1) SURVEY, ENGINEERING DESIGN AND RECEIVING PERMISSION 2) SELECTION OF CONTRACTOR 3) SUPERVISION OF DETAILD DESIGN 4) WITNESSING FACTORY TEST 5) SUPERVISION OF INSTALLATION WORK 6) WITNESS ACCEPTANCE TEST																		
CONTRACTOR'S TASK	IV. 1) IMPLEMENTATION DESIGN 2) MANUFACTURING 3) TRANSPORTATION 4) EQUIPMENT INSTALLATION a) BASE STATION NO. 1 GROUP NO. 2 GROUP NO. 3 GROUP b) SUBSCRIBER STATION NO. 1 GROUP NO. 2 GROUP 5) CABLE AND OTHER a) BASE STATION NO. 1 GROUP NO. 2 GROUP b) SUBSCRIBER STATION NO. 1 GROUP NO. 2 GROUP 6) TEST 7) TRAINING a) FACTORY (CLASS ROOM) b) LOCAL (CLASS ROOM) (ON THE JOB) 8) ONE YEAR MAINTENANCE ASSISTANCE																		

Note: *1) DEPEND ON SCHEDULE FOR CABLE MANUFACTURING, APPROVAL FOR EXCAVATION AND FINANCE ARRANGEMENT
*2) PERUMTEL SHALL DIRECTLY CONDUCT THIS WORK AS OPTIONAL WORK TO THE CONTRACTOR'S CONCERNED
3) ——— : CONTINUOUSLY EXECUTED
---- : OCCASIONALLY EXECUTED

Table AT9-3 Project Implementation Schedule (Alternative Case 3)

		MONTH NUMBER	-14 -13 -12 -11	-10 -9 -8 -7	-6 -5 -4 -3	-2 -1 1 2	3 4 5 6	7 8 9 10	11 12 13 14	15 16 17 18	19 20 21 22	23 24 25 26	27 28 29 30	31 32 33 34	35 36 37 38	39 40 41 42	43 44 45 46	47 48 49 50	51 52 53 54	55 56 57 58
		CALENDAR YEAR	1989			1990			1991			1992			1993			1994		
		MONTH	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12	1 2 3 4	5 6 7 8	9 10 11 12
	EVENT / SERVICE ITEMS					CONTRACT FOR CONSULTING SERVICE	CONTRACT OF PROJECT		COMMENCEMENT OF INSTALLATION WORK	COMPLETION OF WORK COMMENCEMENT OF SERVICE			*2) BY PERUMTEL			*2) BY PERUMTEL			*2) BY PERUMTEL
PMC OPTION	I. PMC OPTION 1) DESIGN 2) TENDER/EVALUATION/AWARD 3) CONSTRUCTION					EXPECTED SCHEDULE					*1)									
PERUMTEL'S TASK	II. SELECTION OF CONSULTANT 1) PREPARATION/APPROVAL OF TOR, S/L, L/I 2) TENDER 3) EVALUATION/AWARD/APPROVAL																			
CONSULTANT'S TASK	III. 1) SURVEY, ENGINEERING DESIGN AND RECEIVING PERMISSION 2) SELECTION OF CONTRACTOR 3) SUPERVISION OF DETAILD DESIGN 4) WITNESSING FACTORY TEST 5) SUPERVISION OF INSTALLATION WORK 6) WITNESS ACCEPTANCE TEST																			
CONTRACTOR'S TASK	IV. 1) IMPLEMENTATION DESIGN 2) MANUFACTURING 3) TRANSPORTATION 4) EQUIPMENT INSTALLATION a) BASE STATION b) SUBSCRIBER STATION 5) CABLE AND OTHER a) BASE STATION b) SUBSCRIBER STATION 6) TEST 7) TRAINING a) FACTORY (CLASS ROOM) b) LOCAL (CLASS ROOM) (ON THE JOB) 8) ONE YEAR MAINTENANCE ASSISTANCE																			

Note: *1) DEPEND ON SCHEDULE FOR CABLE MANUFACTURING, APPROVAL FOR EXCAVATION AND FINANCE ARRANGEMENT
*2) PERUMTEL SHALL DIRECTLY CONDUCT THIS WORK AS OPTIONAL WORK TO THE CONTRACTOR'S CONCERNED
3) ——— : CONTINUOUSLY EXECUTED
---- : OCCASIONALLY EXECUTED

Table AT9-4 Total Project Cost (Alternative Case 1)

	PHASE 1				PHASE II		PHASE III		PHASE IV		Total		Grand Total in Rp.
	1990		1991		1992		1993		1994				
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	
1. Equipment/Material													
P-MP System			217		7		11		6		242		3,019
P-P System			623		91		42		75		830		10,380
2. Design/Installation	24	275	76	1,367	11	148	12	115	13	152	137	2,057	3,766
3. Measuring Equipment			29								29		362
4. Training			20	23							20	23	277
5. Maintenance Assistance			16	66							16	66	262
6. Consultant	63	293	65	123							128	416	2,021
7. Subtotal (1.+2.+3.+4.+5.+6.)	88	567	1,047	1,580	110	148	64	115	93	152	1,402	2,562	20,085
8. Contingency	9	57	105	158	11	15	6	12	9	15	140	256	2,009
9. Total	96	624	1,151	1,738	121	163	71	127	103	167	1,542	2,819	
10. Grand Total in Rp.	1,828		16,127		1,678		1,011		1,450		-		22,094

Note 1: Foreign Currency: Million ¥
: Local Currency : Million Rp.
Note 2: ¥1 = Rp.12.5

Table AT9-5 Total Project Cost (Alternative Case 2)

	PHASE 1				PHASE II		PHASE III		PHASE IV		Total		Grand Total in Rp.
	1990		1991		1992		1993		1994				
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	
1. Equipment/Material													
P-MP System			394		18		19		9		440		5,505
P-P System			689		91		100		108		988		12,352
2. Design/Installation	31	376	84	1,725	14	171	15	191	16	199	161	2,662	4,674
3. Measuring Equipment			29								29		362
4. Training			20	23							20	23	277
5. Maintenance Assistance			16	66							16	66	262
6. Consultant	70	331	74	151							145	482	2,290
7. Subtotal (1.+2.+3.+4.+5.+6.)	102	707	1,307	1,965	123	171	134	191	133	199	1,799	3,233	25,722
8. Contingency	10	71	131	197	12	17	13	19	13	20	180	323	2,572
9. Total	112	778	1,438	2,162	136	188	148	210	146	219	1,979	3,556	
10. Grand Total in Rp.	2,175		20,132		1,885		2,054		2,049		-		28,295

Note 1: Foreign Currency: Million ¥
: Local Currency : Million Rp.
Note 2: ¥1 = Rp.12.5

Table AT9-6 Total Project Cost (Alternative Case 3)

	PHASE 1				PHASE II		PHASE III		PHASE IV		Total		Grand Total in Rp.
	1990		1991		1992		1993		1994				
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	
1. Equipment/Material													
P-MP System			138		3		7		3		152		1,895
P-P System			457		8				75		540		6,747
2. Design/Installation	20	182	67	1,043	3	25	4	34	12	142	106	1,425	2,746
3. Measuring Equipment			29								29		362
4. Training			20	23							20	23	277
5. Maintenance Assistance			16	66							16	66	262
6. Consultant	61	178	60	118							121	296	1,808
7. Subtotal (1.+2.+3.+4.+5.+6.)	81	360	787	1,250	14	25	11	34	90	142	983	1,810	14,096
8. Contingency	8	36	79	125	1	3	1	3	9	14	98	181	1,410
9. Total	89	396	866	1,375	16	28	12	37	99	156	1,081	1,991	
10. Grand Total in Rp.	1,510		12,195		222		190		1,389		-		15,506

Note 1: Foreign Currency: Million ¥
: Local Currency : Million Rp.
Note 2: ¥1 = Rp.12.5

Table AT9-7 Result of FIRR Calculation

Case	FIRR (%)	Total Cost in Million Rp.	Share of line units (%)
Basic Case	24.9	32,369	100
Alternative Case 1	27.7	22,094	75
Alternative Case 2	26.6	28,295	92
Alternative Case 3	23.7	15,506	48

Attachment - 10 : Cash Flow Table/SER Calculation

Table AT10-1 Cash Flow Table (Where revenue increases at 3% a year)

Unit: Million Rp.

Year	Inflow				Outflow					In-Out
	Installation Fee	Monthly Fee	Usage Charge	Total Revenue	Capital Cost	Working Capital	Operation Cost	Tax	Total Cost	
1990	0	0	0	0	2,373	0	0	0	2,373	-2,373
1991	4,148	58	1,272	5,477	23,295	997	509	0	24,800	-19,323
1992	1,006	348	7,860	9,215	2,061	1,677	924	1,593	6,256	2,959
1993	944	433	10,060	11,436	2,148	1,751	1,148	2,236	7,283	4,153
1994	1,113	512	12,259	13,884	2,491	2,173	1,389	2,741	8,794	5,090
1995	0	606	14,931	15,537		2,638	1,563	3,968	8,169	7,368
1996	0	606	15,379	15,985		2,952	1,603	4,000	8,556	7,429
1997	0	606	15,841	16,446		3,037	1,645	4,117	8,800	7,647
1998	0	583	15,716	16,300		0	1,632	5,134	6,766	9,534
1999	133	572	15,879	16,584		0	1,657	5,224	6,882	9,702
2000	133	561	16,037	16,731		0	1,753	5,242	6,995	9,736
2001	133	550	16,188	16,871		0	1,765	5,287	7,052	9,818
2002	133	561	17,013	17,707		0	1,841	5,553	7,394	10,313
2003	0	561	17,523	18,084		0	1,792	5,702	7,494	10,590
2004	0	561	18,049	18,610		0	1,840	5,870	7,709	10,901
2005	0	561	18,590	19,151		0	1,888	6,042	7,930	11,221
2006	0	561	19,148	19,709		0	1,939	6,220	8,158	11,551
2007	0	561	19,722	20,283		0	1,990	6,403	8,393	11,890
2008	0	561	20,314	20,875		0	2,044	6,591	8,635	12,240
2009	0	561	20,923	21,484		0	2,098	6,785	8,884	12,601
2010	0	561	21,551	22,112		0	2,155	6,985	9,140	12,972
2011	0	561	22,198	22,759		-15,225	2,213	12,520	-492	23,251
Total	7,741	11,046	336,454	355,240	32,369	0	35,388	108,213	175,970	179,270

FIRR= 27.7%

Table AT10-2 Cash Flow Table (Where total cost increases by 10%)

Unit: Million Rp.

Year	Inflow				Outflow					In-Out
	Installation Fee	Monthly Fee	Usage Charge	Total Revenue	Capital Cost	Working Capital	Operation Cost	Tax	Total Cost	
1990	0	0	0	0	2,611	0	0	0	2,611	-2,611
1991	4,148	58	1,272	5,477	26,624	1,097	559	0	27,280	-21,803
1992	1,006	348	7,631	8,986	2,268	1,799	994	1,374	6,434	2,551
1993	944	433	9,482	10,859	2,363	1,878	1,205	1,894	7,341	3,518
1994	1,113	512	11,218	12,844	2,740	2,269	1,425	2,243	8,677	4,166
1995	0	606	13,266	13,872		2,684	1,555	3,372	7,611	6,262
1996	0	606	13,266	13,872		0	1,555	4,311	5,866	8,006
1997	0	606	13,266	13,872		0	1,555	4,311	5,866	8,006
1998	0	583	13,266	13,850		0	1,552	4,304	5,857	7,993
1999	133	572	12,779	13,484		0	1,516	4,189	5,705	7,779
2000	133	561	12,535	13,229		0	1,581	4,077	5,658	7,571
2001	133	550	12,291	12,974		0	1,556	3,996	5,552	7,421
2002	133	561	12,046	12,740		0	1,533	3,922	5,455	7,284
2003	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2004	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2005	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2006	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2007	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2008	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2009	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2010	0	561	12,290	12,851		0	1,454	3,989	5,443	7,409
2011	0	561	12,290	12,851		-9,727	1,454	7,394	-880	13,731
Total	7,741	11,046	242,933	261,719	35,606	0	29,669	77,300	142,575	119,145

FIRR= 21.9%

Table AT10-3 Cash Flow Table (Where inflation escalates at 7.5% a year)

Unit: Million Rp.

Year	Inflow				Outflow					In-Out
	Installation Fee	Monthly Fee	Usage Charge	Total Revenue	Capital Cost	Working Capital	Operation Cost	Tax	Total Cost	
1990	0	0	0	0	2,373	0	0	0	2,373	-2,373
1991	4,148	58	1,272	5,477	23,475	1,072	547	0	25,094	-19,616
1992	1,006	348	7,631	8,986	2,094	1,890	1,044	1,385	6,413	2,573
1993	944	433	9,482	10,859	2,203	2,121	1,361	1,811	7,496	3,363
1994	1,113	512	11,218	12,844	2,579	2,755	1,730	2,023	9,087	3,757
1995	0	606	13,266	13,872		3,503	2,029	2,919	8,451	5,421
1996	0	606	13,266	13,872		0	2,181	4,092	6,273	7,599
1997	0	606	13,266	13,872		0	2,345	4,035	6,379	7,493
1998	0	583	13,266	13,850		0	2,517	3,966	6,483	7,366
1999	133	572	12,779	13,484		0	2,643	3,794	6,437	7,047
2000	133	561	12,535	13,229		0	2,963	3,593	6,556	6,673
2001	133	550	12,291	12,974		0	3,134	3,444	6,578	6,396
2002	133	561	12,046	12,740		0	3,320	3,297	6,617	6,123
2003	0	561	12,290	12,851		0	3,383	3,314	6,697	6,154
2004	0	561	12,290	12,851		0	3,637	3,225	9,862	5,989
2005	0	561	12,290	12,851		0	3,910	3,129	7,039	5,812
2006	0	561	12,290	12,851		0	4,203	3,027	7,230	5,621
2007	0	561	12,290	12,851		0	4,518	2,917	7,435	5,416
2008	0	561	12,290	12,851		0	4,857	2,798	7,655	5,196
2009	0	561	12,290	12,851		0	5,222	2,670	7,892	4,959
2010	0	561	12,290	12,851		0	5,613	2,533	8,147	4,705
2011	0	561	12,290	12,851		-11,341	6,034	6,355	1,048	11,803
Total	7,741	11,046	242,933	261,719	32,724	0	67,192	64,327	164,244	97,476

FIRR= 21,9%

Calculation of SER (Shadow Exchange Rate)

The SER is calculated to conjecture a price distortion index of the local currency. The SER can be calculated by the weighted average tariff rate of the total trade amount, which represents a price index of traded goods.

$$SER = \frac{IM + Tm + EX + Sx - Tx}{IM + EX}$$

where IM: total amount of import
Tm: total amount of import tariff
EX: total amount of export
Sx: total amount of export subsidy
Tx: total amount of export tariff

The import tariff escalates the domestic price of traded goods, on the other hand, the export tariff deteriorates the domestic price of them. In general the SER is higher than one (1) in developing countries, reflecting the viepoint of the import substitution policy and the protection of domestic products.