

Present Conditions of Transmission System

Station Name	Jinja	3/4	Survey Date	19/Nov./93
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Link Name	Jinja - Kakira	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	1 CH		
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Jinja - Busessa	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	1 CH		
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Jinja - Nkokonju	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	2 CH Equipped, 0 CH in use (Fault)		
Manufact. Year:	OW sys is used (1 CH)		
Manufacturer:			
Other Equipment			

Link Name	Jinja - Bulikwe	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	2 CH Equipped, 0 CH in use (Fault)		
Manufact. Year:	OW sys is used (1 CH)		
Manufacturer:			
Other Equipment			

Present Conditions of Transmission System

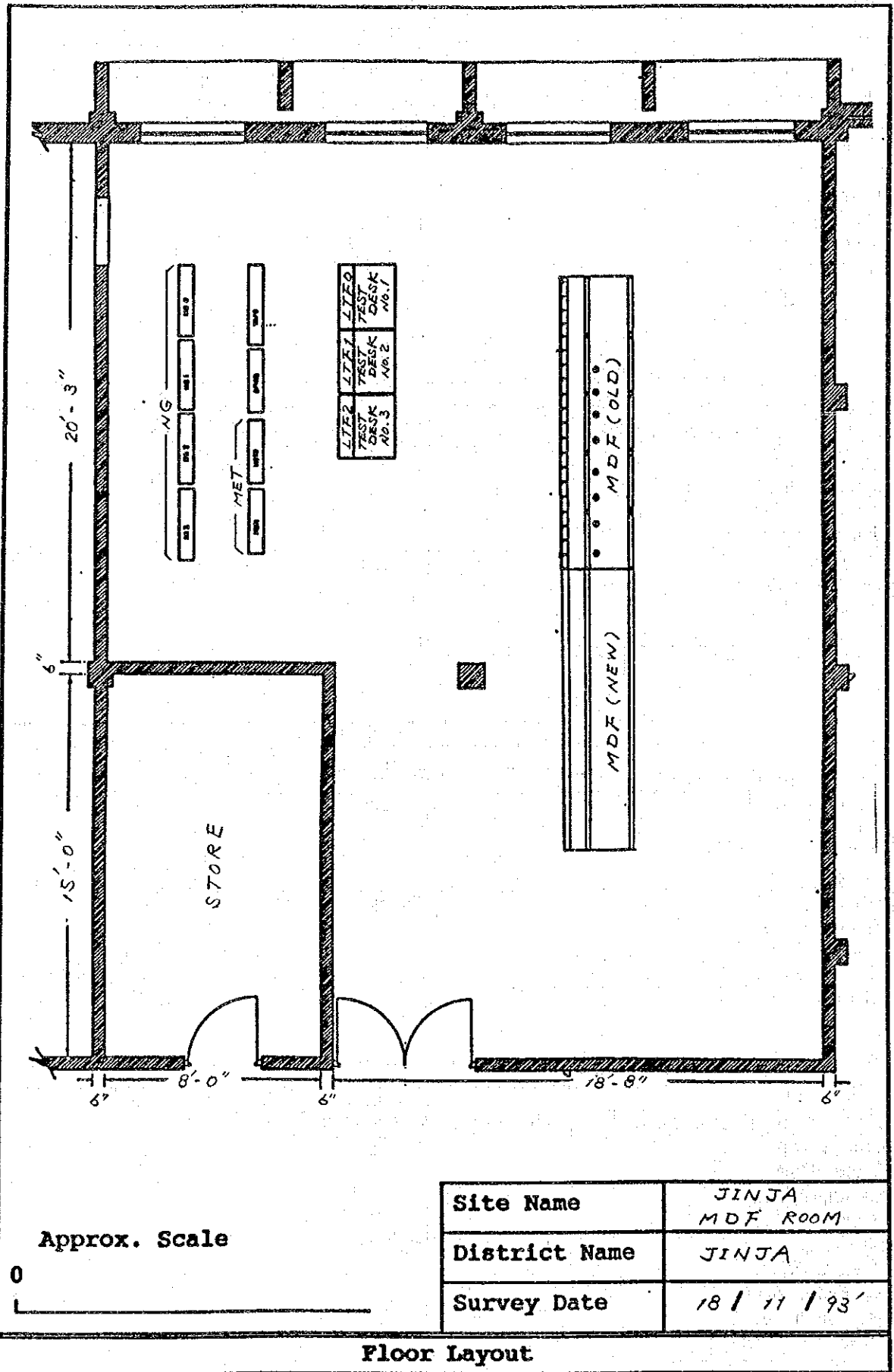
Station Name	Jinja	4/4	Survey Date	19/Nov. 1993
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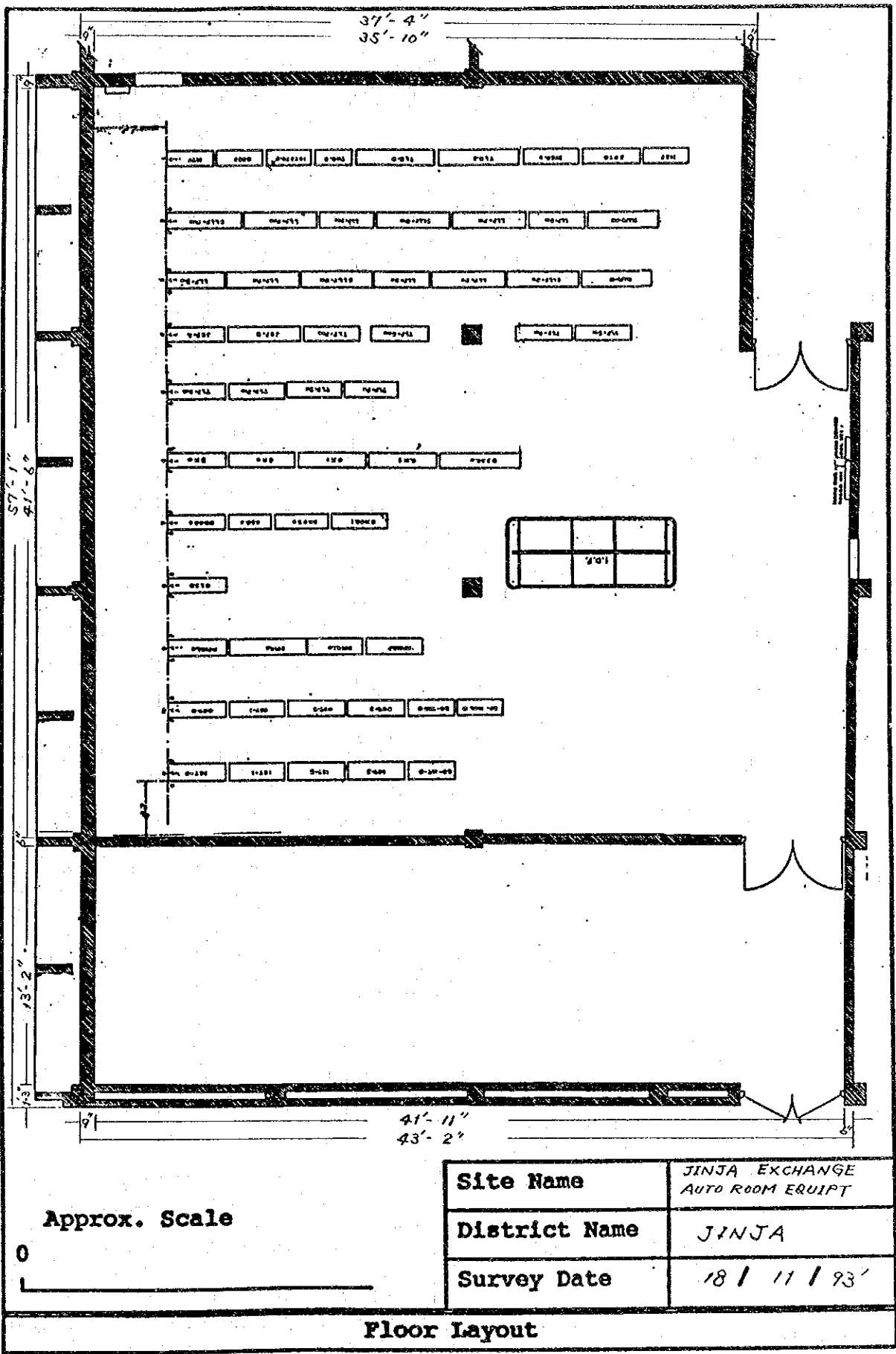
Link Name	Jinja - Nyanga	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	1 CH.		
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Jinja - Bwenge	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



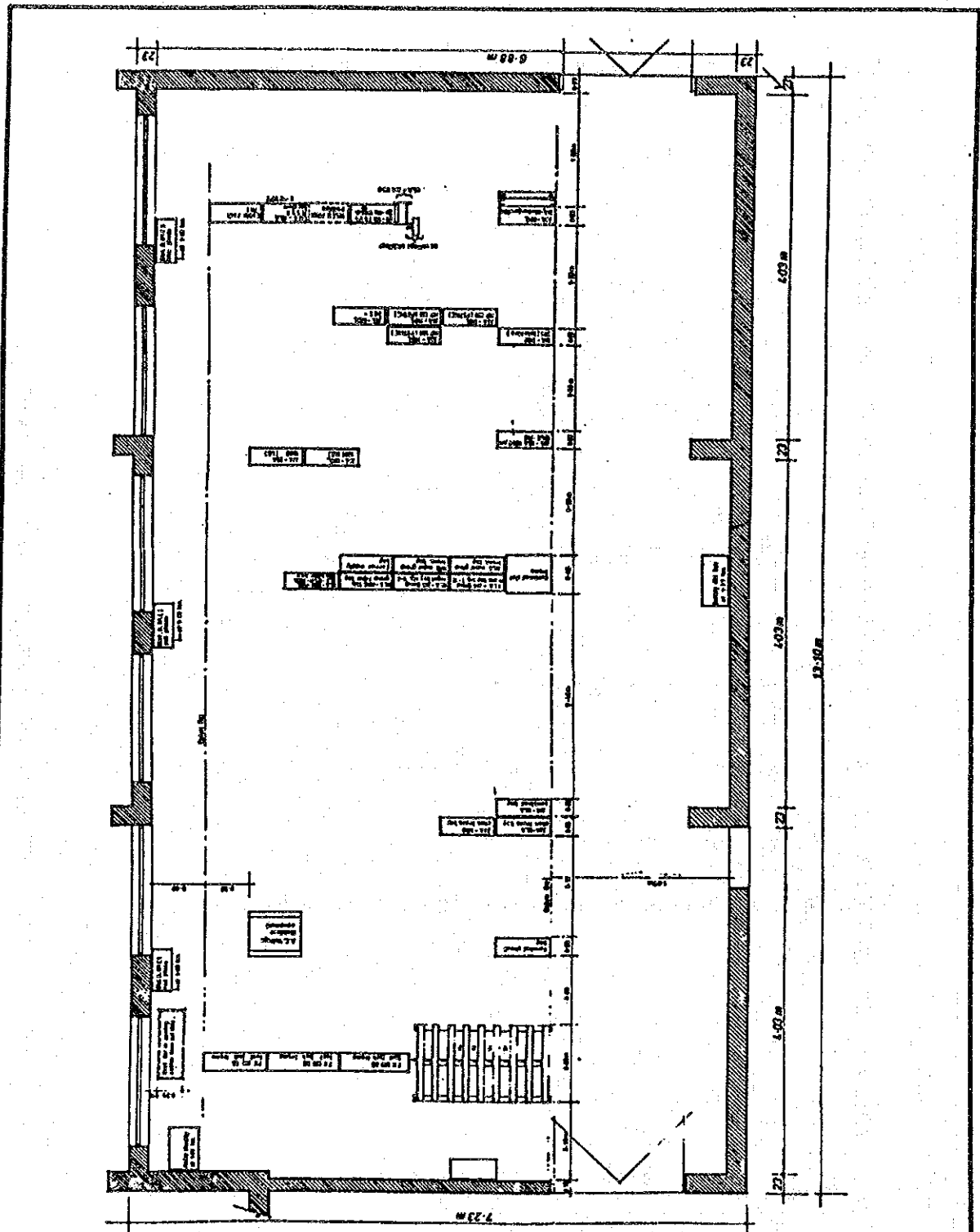


Approx. Scale



Site Name	JINJA EXCHANGE AUTO ROOM EQUIPT
District Name	JINJA
Survey Date	18 / 11 / 93'

Floor Layout

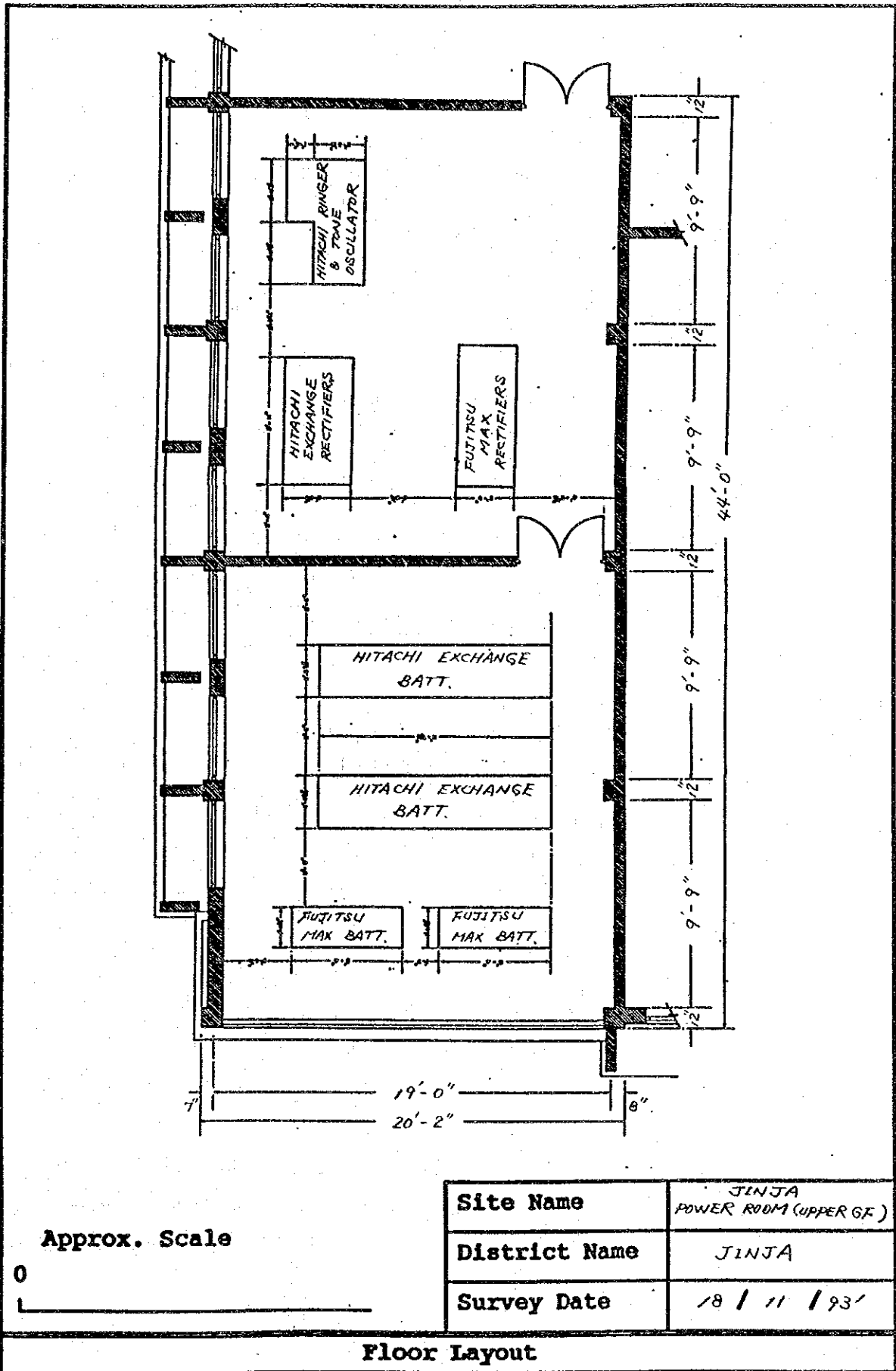


Approx. Scale



Site Name	JINJA CARRIER ROOM
District Name	JINJA
Survey Date	18 / 11 / 93'

Floor Layout



IGANGA  
Present Conditions of ~~Manual~~ Exchange

Date: 19-11-1993  
Exch. Name: IGANGA

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	_____	_____	_____
Business use:	_____	_____	_____
Resident use:	_____	_____	_____
Total:	_____	_____	_____

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	<u>_____</u> calls	<u>_____</u> calls	<u>_____</u> x
Holding time	<u>_____</u> min.	<u>_____</u> min.	

3. Facilities			
Switch board	Type <u>C22X-BAR</u>	<del>Common Batt. / Magneto</del>	
	Capacity	<u>800</u>	lines
	Manufacturer	<u>HITACHI</u>	
	Manufact. year	<u>1967</u>	
Trunk lines	Destination	(Route-1) <u>JINSA</u>	(Route-2) <u>KAMPALA</u>
	Type of lines	<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
	Signalling	<u>DP Automat/Manual</u>	<u>DP 6/4</u>
	No. of channels	<u>273</u>	
	Manufacturer	<u>TELETRA</u>	
	Manufact. year	<u>?</u>	
Engine generator	Capacity	<u>16.5 kVA</u>	
<u>LISTER-PETTER (UK)</u>	Manufact. year	_____	
Local cables	Total pairs	<u>200 pairs</u>	
	Usable pairs	<u>130 pairs</u>	

4. No. of Staff		
Post master:	<u>1</u>	8.00 - 5.00 PM
Tel. operator:	<u>2 (PCO)</u>	Day time: _____ Night time: <u>NIL</u>
Tel. maintenance:	<u>5</u>	
Postal services:	<u>4</u>	

5. Problems

Reasons of waiting applicant:  
Local network - very poor.  
Exd termination. SN are fast.

Other problems:  
Transport.

rse → John Mbako  
IAE → Ashinya KIRYA  
ISTO  
ITO  
ISSE

Present Conditions of Transmission System

Station Name	Iganga	Survey Date	19 / Nov / 93
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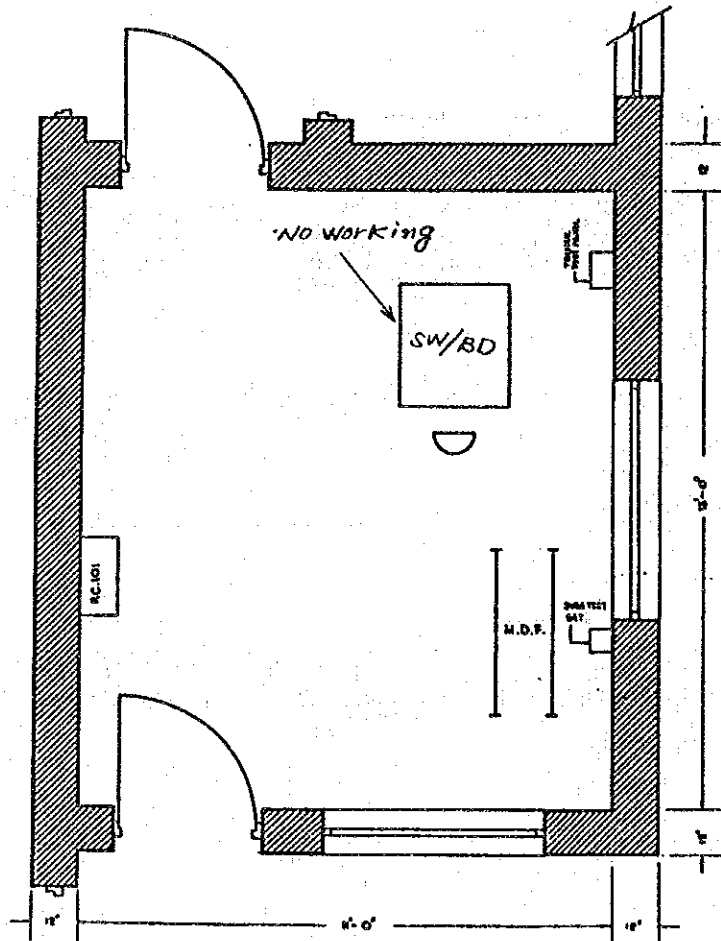
Link Name	Jinja - Iganga	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC, OW)	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details: Equipped In Use		
System Type : PST L12 x 2	To Jinja ... 12CH ... (0G 2CH, IC 3CH)		
Manufact. Year:	To Kampala ... 12CH ... (0G 6CH, IC 4CH)		
Manufacturer : Telettra			
Other Equipment	24CH UHF Link is under planning.		

Link Name	Iganga - Busembatia	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC, OW)	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	3CH ... 1CH Faulty		
Manufact. Year:			
Manufacturer: Telettra			
Other Equipment			

Link Name	Iganga - Kaliro	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC, OW)	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type: TD2	3CH ... 1CH Faulty		
Manufact. Year:			
Manufacturer: Telettra			
Other Equipment			

Link Name	Iganga - Busesa, Namungalwe	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), (OWC, OW)	Analog / Digital	
Equipment	Details:		
System Type: 1CH each connection			
Manufact. Year: to the both stations			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



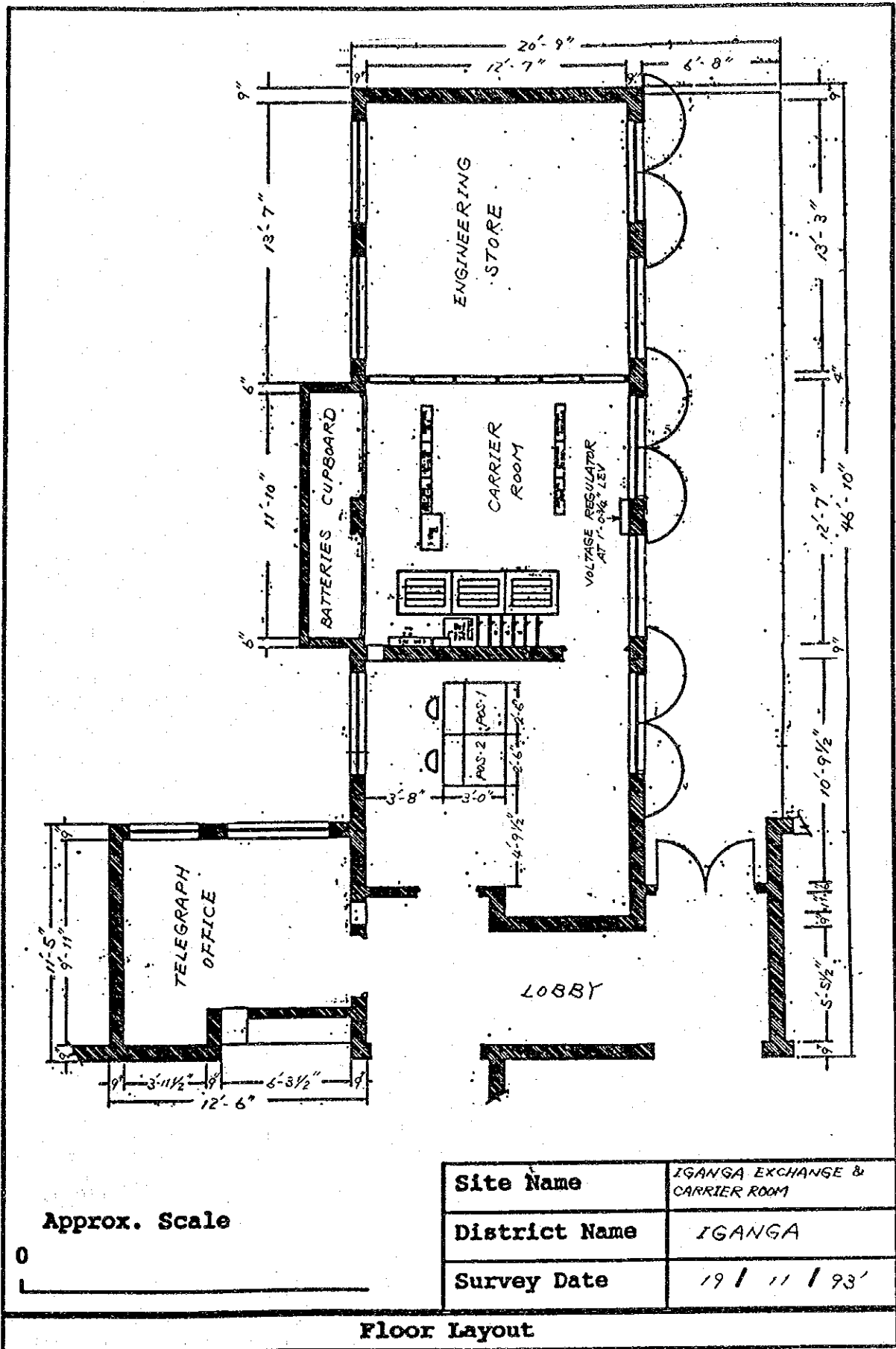


Approx. Scale



Site Name	IGANGA MDF ROOM (OLD)
District Name	IGANGA
Survey Date	19 / 11 / 73'

**Floor Layout**



KAKIRA  
Present Conditions of Manual Exchange

Date: 19-Nov-1993  
Exch. Name: KAKIRA

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	_____	_____	_____
Business use:	_____	_____	_____
Resident use:	_____	_____	_____
Total:	_____	_____	_____

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	_____ calls	_____ calls	_____
Holding time	_____ min.	_____ min.	_____

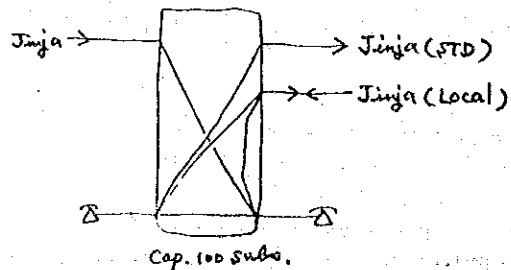
3. Facilities	Type		Capacity
Switch board	<u>C23 X-BAR</u>	<del>Common Batt./Magneto</del>	<u>100 lines</u>
	Manufacturer	<u>HITACHI JAPAN (IRELAND 移設)</u>	
	Manufact. year	<u>JAN. 1971</u>	

Trunk lines	Destination	(Route-1)	(Route-2)
		Type of lines	<u>OW/OWC/Cable</u>
	Signalling	<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
	No. of channels	<u>Automat/Manual</u>	<u>Automat/Manual</u>
	Manufacturer	_____	_____
	Manufact. year	_____	_____

Engine generator	Capacity	<u>NIL KVA</u>
<u>BATT MS-400x2 4A</u>	Manufact. year	<u>(normally commercial power)</u>
Local cables	Total pairs	<u>200 pairs</u>
	Usable pairs	<u>_____ pairs</u>

4. No. of Staff	Post master:	Tel. operator:	Tel. maintenances:	Postal services:	Day time:	Night time:
	<u>1</u>	_____	_____	_____	_____	_____

5. Problems  
Reasons of waiting applicant:  
  
Other problems:



KAKIRA SUGAR WORKS 157 1279 V (with Post Office)

Present Conditions of Transmission System

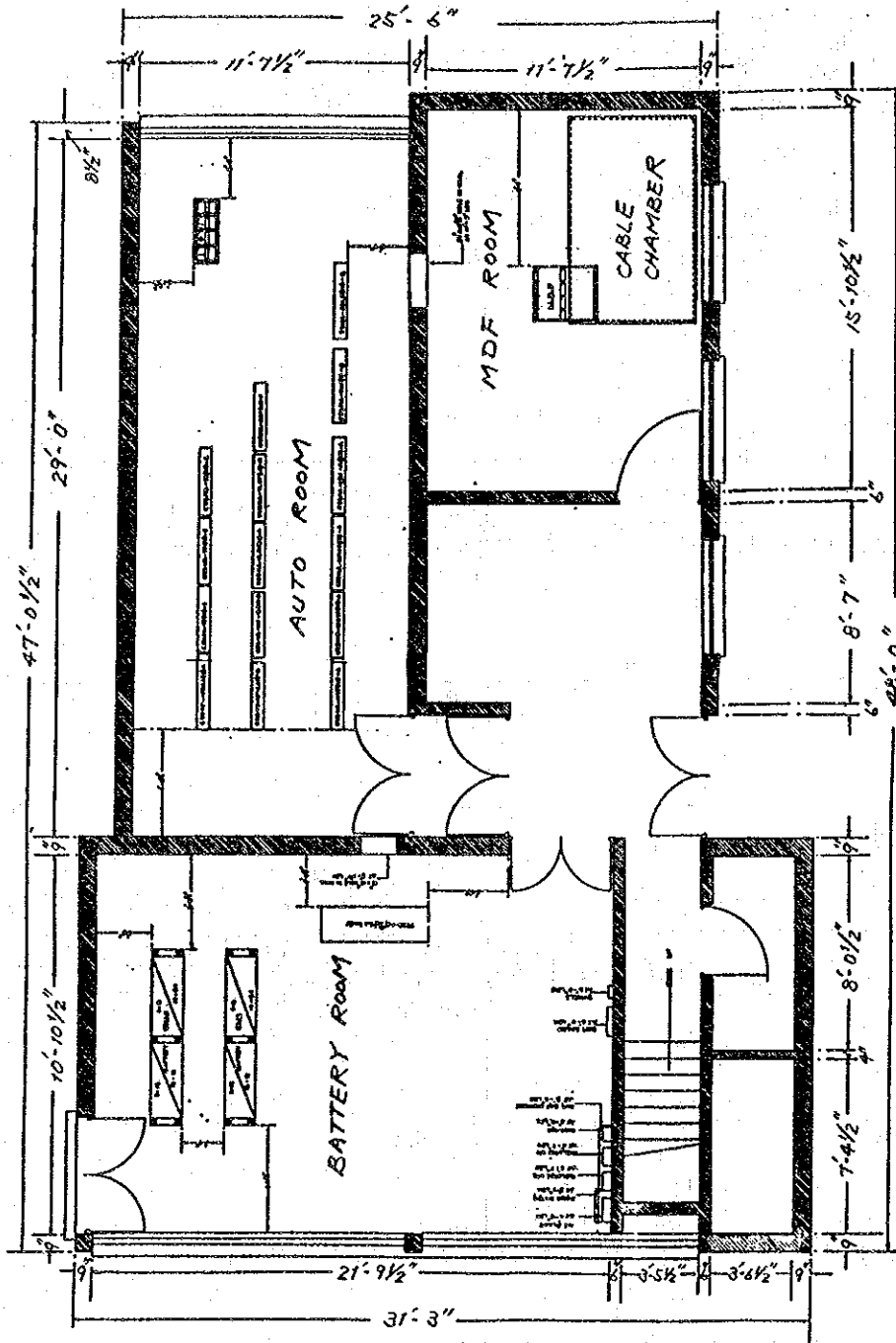
Station Name	Kakira	Survey Date	19/11/93
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Link Name	Jinja - Kakira	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:	6ch OG / 6ch IC for STD.		
Manufact. Year:			
Manufacturer:	5ch B.W. Cct.		
MUX Equipment	Details:		
System Type :	No MUX Facilities.		
Manufac. Year:			
Manufacturer :			
Other Equipment	PCM 30CH Line was installed. But MUX Equip. is not installed yet.		

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



Approx. Scale

0

Site Name	KAKIRA EXCHANGE
District Name	JINJA
Survey Date	19 / 11 / 193'

Floor Layout

Present Conditions of Transmission System

Station Name	Mwiri Rep.	Survey Date	19/Nov./93
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Link Name	Kampala-Jinja-Nairobi	Function	<del>Terminal</del> / Repeater
TR System	Radio(Micro,UHF, VHF, HF), OWC, OW	(Analog / Digital	2 GHz
Equipment	System Type: FM24-2, M-20055 Manufact. Year: 1973 (Installed) Manufacturer: Fujitsu	Details:	
MUX Equipment	System Type : Manufact. Year: Manufacturer :	Details:	
Other Equipment			

Link Name	Jinja - Mbale	Function	<del>Terminal</del> / Repeater
TR System	Radio(Micro,UHF, VHF, HF), OWC, OW	Analog / Digital	800MHz
Equipment	System Type: TR-800D120-5A UHF Tx/Rx Manufact. Year: 1977 Manufacturer: NEC	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment Private Radio System (Government Use) is at same site.			

Link Name		Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Present Conditions of Manual Exchange

Date: 22/11 1993  
 Exch. Name: Mbarara

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>174</u>	<u>100</u>	}
Business use:	<u>302</u>		
Resident use:	<u>429</u>		
Total:	<u>905</u>	<u>100</u>	

\*

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
Oct. 93 { No. of calls/month	<u>96,180 calls</u>	<u>162,120 calls</u>	<u>8 %</u>
Holding time	<u>1.9 min.</u>	<u>1.1 min.</u>	
	(Included Ineffective calls)		

3. Facilities	Type	Common Batt. / Magneto
Switch <del>board</del> <u>HDX 10</u>	Capacity	<u>2000 lines</u>
	Manufacturer	<u>HITACHI</u>
	Manufact. year	<u>NOV. 1984</u>
	INSTALLATION	<u>Dec. 1987 (1985)</u>
		(Route-1) (Route-2)
Trunk lines	Destination	
	Type of lines	OW/OWC/Cable UHF/Microwave
	Signalling	Automat/Manual
	No. of channels	
	Manufacturer	
	Manufact. year	
✓ Engine generator	Capacity	<u>70 kVA</u>
	Manufact. year	<u>1987 (Commissioning Year)</u>
Local cables	Total pairs	<u>2010 pairs</u>
* Usable pairs		<u>1000 pairs</u>

4. No. of Staff	
Post master:	<u>1</u>
Tel. operator:	<u>16</u>
Tel. maintenance:	<u>14</u>
Postal services:	<u>17</u>
Telegraphists:	<u>10</u>
Other staff:	<u>2</u>

Day time: 8.00 Am - 13.00 Night time: 19.00 - 8.00

5. Problems  
 Reasons of waiting applicant: (i) Inadequate local cable network  
 (ii) Inadequate staff and tools

Other problems:

P.T. Structure, where Planning and Construction are at H/Quarters.

INADEQUATE

Present Conditions of Transmission System

Station Name	Mbarara	1/2	Survey Date	23/Nov/93
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Link Name	Kampala - Masaka - Mbarara	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	24 Hz
Equipment	System Type: HA-2F Manufact. Year: 1984 Manufacturer: Telettra	Details:	1+1 460ch
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment	TV Codec, VFT.		

Link Name	Mbarara - Kabale	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	60 / 0 Hz
Equipment	System Type: STI 60Hz 16QAM Manufact. Year: 1991 Manufacturer: Siemens	Details:	1+1 140Mbps
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	34Mbps x 2 - Mbarara - Kihuniro - Kabale - Mbarara - Kihuniro - Kigali
Other Equipment	T-MUX (Grandev)		

Link Name	Mbarara - Rwagaju	Function	Terminal / Repeater
TR System	Radio (Micro, UHF) VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM12-1A Manufact. Year: 1991 Manufacturer: NEC	Details:	1+0 12ch.
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	6ch
Other Equipment	<p>Rwagaju (VHF)</p> <ul style="list-style-type: none"> <li>Rushere 1ch</li> <li>Ibanda 1ch</li> <li>Rwakitura 1ch x 3</li> <li>Lyantonde 1ch</li> </ul>		

Link Name	Mbarara - Busyenyi	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: T12/L Manufact. Year: Manufacturer: Telettra	Details:	12ch in use
Other Equipment			



Present Conditions of Transmission System

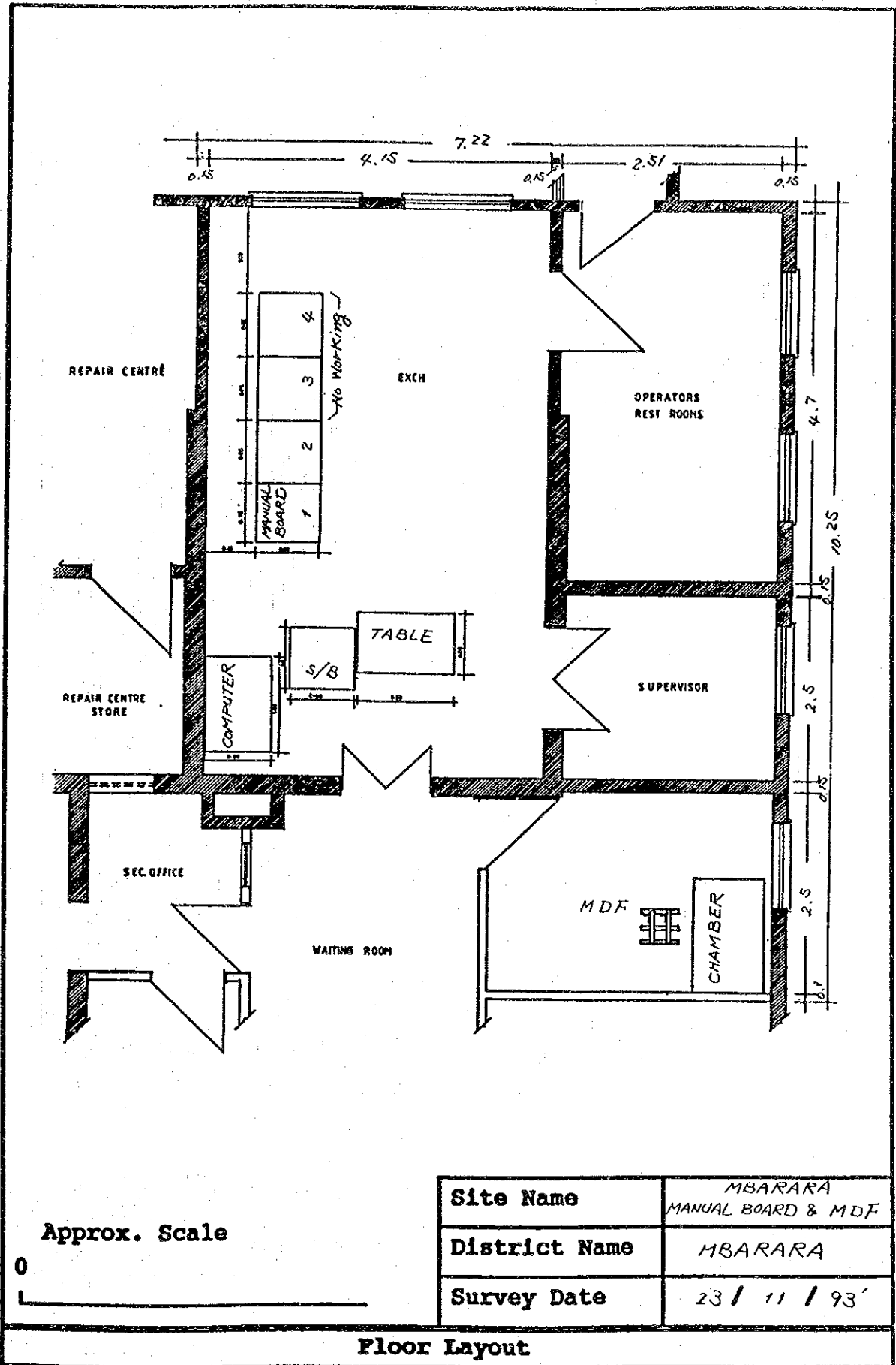
Station Name	Mbarara	2/2	Survey Date	23/Nov./93
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Link Name	Mbarara - Kinoni	Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	1 ch		
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Mbarara - Ntungamu	Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:	1 CH		
Manufact. Year:			
Manufacturer:			
Other Equipment			

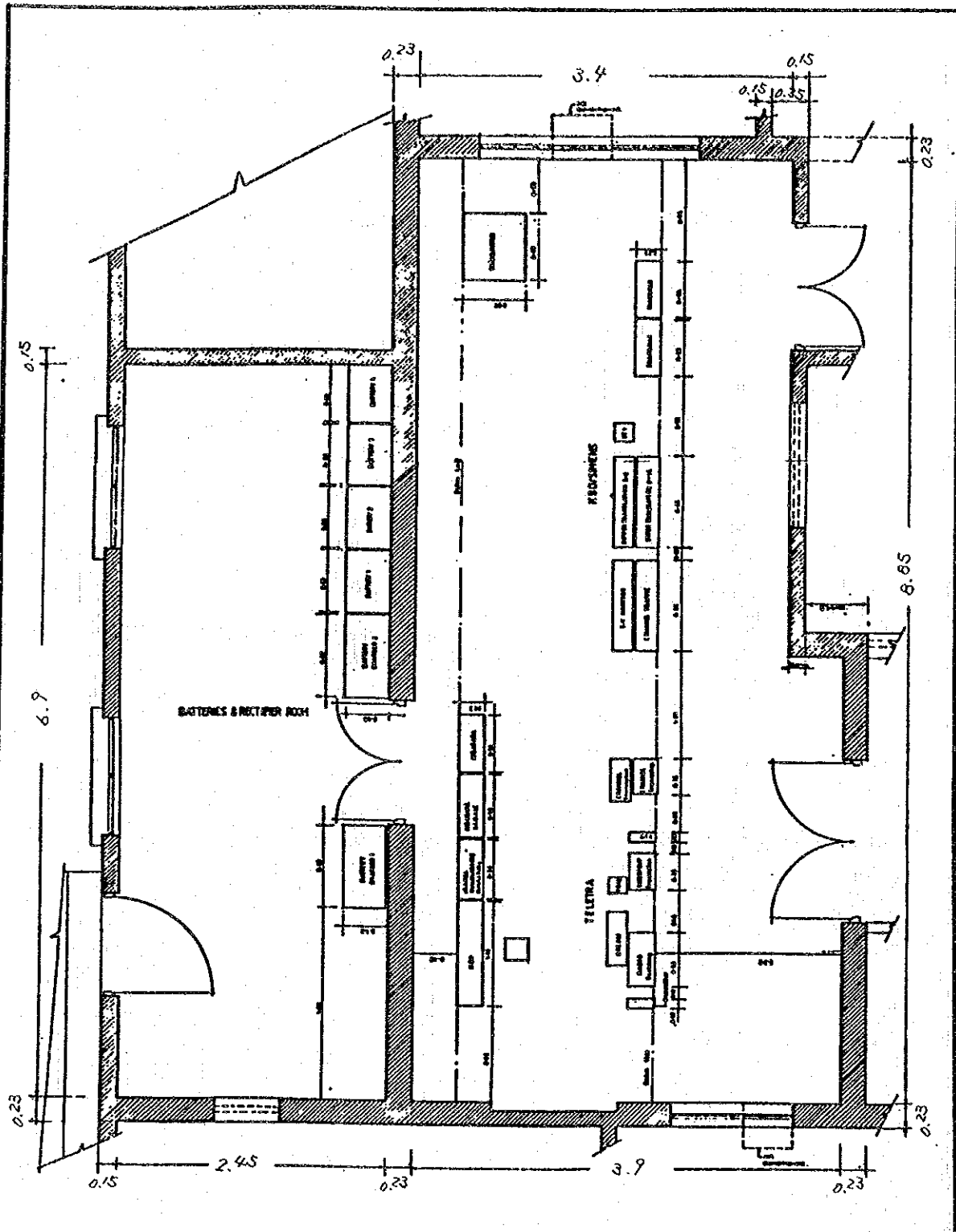
Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



Site Name	MBARARA MANUAL BOARD & MDF
District Name	MBARARA
Survey Date	23 / 11 / 93'

Floor Layout



Approx. Scale



Site Name	MBARARA CARRIER ROOM BATTERIES & RECTIFIERS ROOM
District Name	MBARARA
Survey Date	23 / 11 / 93

Floor Layout

Present Conditions of Manual Exchange

Date: 23-11-1993  
 Exch. Name: BUSHENYI

Bns 20  
 Govt. 59  
 Res 51  
140

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>59</u>	_____	_____
Business use:	<u>30</u>	_____	_____
Resident use:	<u>51</u>	_____	_____
Total:	<u>140</u>	<u>200</u>	<u>800</u>

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
No. of calls/month	_____ calls	_____ calls	_____
Holding time	_____ min.	_____ min.	_____

3. Facilities	Type	Common Batt./ Magneto
Switch <del>board</del>	Capacity	<u>1000</u> lines
	Manufacturer	<u>HITACHI</u>
	Manufact. year	<u>May 1979</u>
	INSTALLATION	<u>(5-10-93)*</u>
		<i>trial as 25/12 1993.</i>
Trunk lines	Destination	(Route-1) <u>MBARARA</u> (Route-2) _____
	Type of lines	OW(OWC) Cable UHF/Microwave
	Signalling	Automat/Manual
	No. of channels	<u>6/6</u>
	Manufacturer	<u>TELETRA</u>
	Manufact. year	<u>1970</u>
Engine generator	Capacity	<u>16.5</u> kVA
	Manufact. year	<u>1991</u>
		<i>LISTER Generator STAMFORD Alternator</i>
Local cables	Total pairs	<u>250</u> pairs
	Usable pairs	<u>100</u> pairs

4. No. of Staff	Post master:	Tel. operator:	Tel. maintenance:	Postal services:	Day time:	Night time:
	<u>1</u>	<u>1+1</u>	<u>3</u>	<u>2</u>	<u>8.00AM - 17.00HRS</u>	_____

5. Problems  
 Reasons of waiting applicant:  
Local cable not enough.  
 Other problems:  
Trunk is poor & old.

Present Conditions of Transmission System

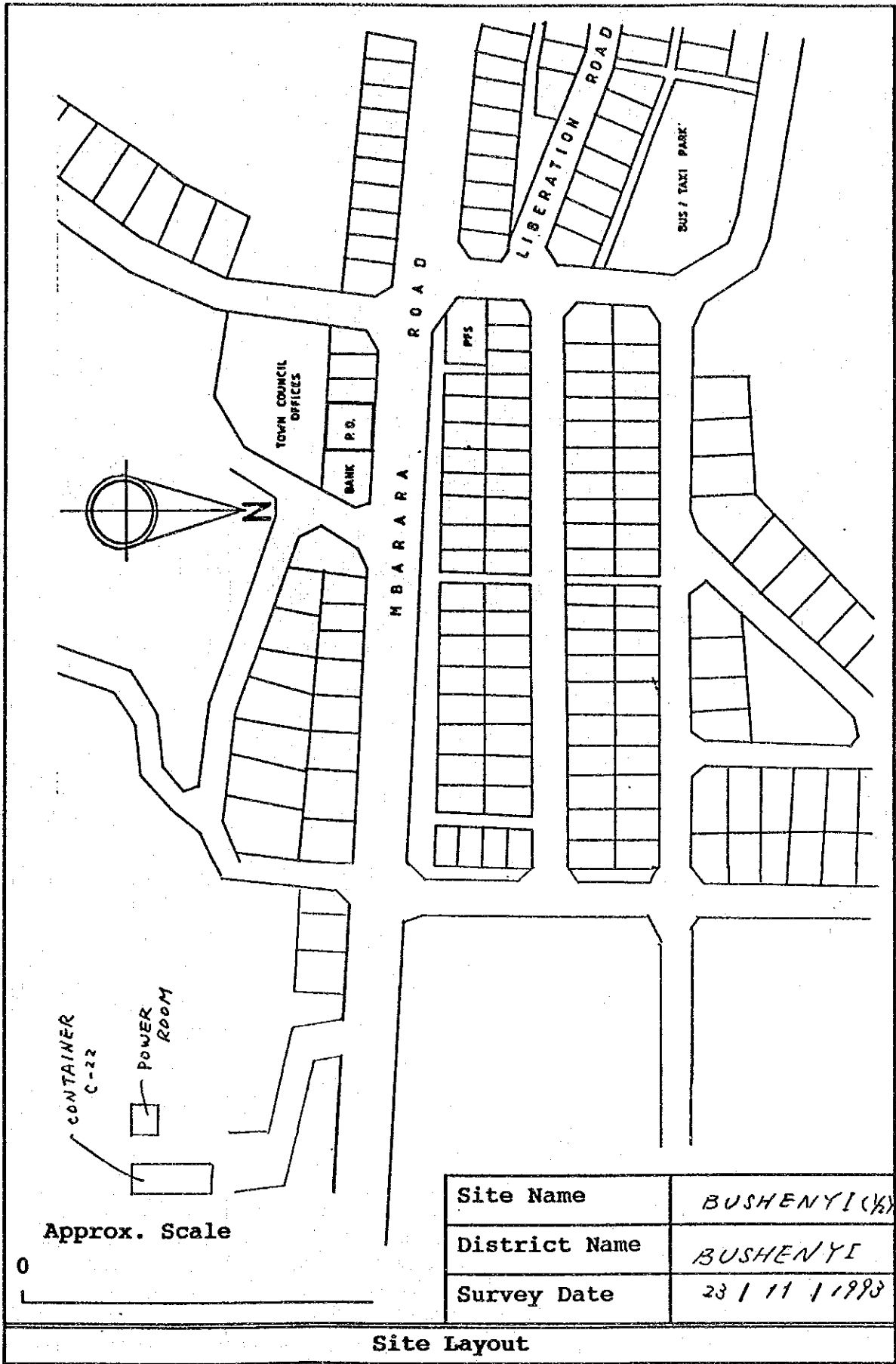
Station Name	Bushenyi	Survey Date	23/Nov.1993
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Link Name	Mbarara - Bushenyi	Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :	TS 12/L		
Manufac. Year:	1970?		
Manufacturer :	Telettra		
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

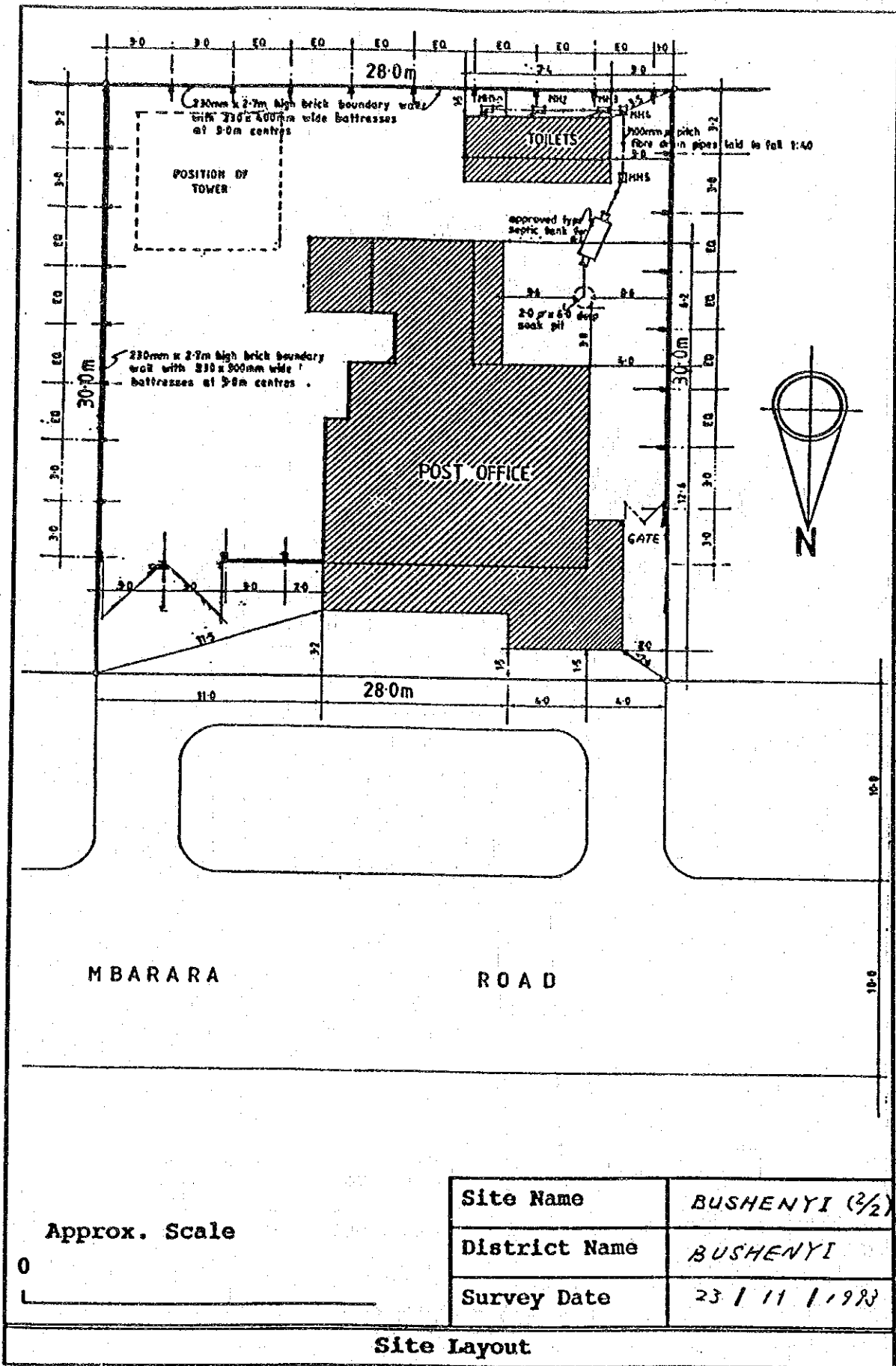
Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



Site Name	BUSHENYI (K)
District Name	BUSHENYI
Survey Date	23 / 11 / 1993

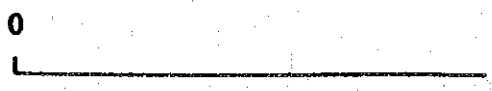
Site Layout



MBARARA

ROAD

Approx. Scale



Site Name	BUSHENYI (2/2)
District Name	BUSHENYI
Survey Date	23 / 11 / 1982

Site Layout

Present Conditions of Manual Exchange

Date: 24-11-1993  
 Exch. Name: KABALE

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>68</u>	_____	_____
Business use:	<u>144</u>	_____	_____
Resident use:	<u>472</u>	_____	_____
Total:	<u>684</u>	<u>10</u>	<u>2,000</u>

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
Feb. 93 { No. of calls/month	<u>64,950 calls</u>	<u>94,290 calls</u>	<u>2.2 x</u>
Holding time	<u>1.13 min.</u>	<u>2.08 min.</u>	
	<i>(Effective Calls only)</i>		

3. Facilities

Switch board	Type	Common Batt./ Magneto
<u>FEXEX 150</u>	Capacity	<u>3000 lines</u> (1991.10. inst.)
	Manufacturer	<u>FUJITSU</u>
	Manufact. year	<u>1988.11</u>

Trunk lines	Destination	(Route-1)	(Route-2)
		Destination	_____
Type of lines		<u>OW/OWC/Cable</u>	<u>OW/OWC/Cable</u>
		<u>UHF/Microwave</u>	<u>UHF/Microwave</u>
Signalling		<u>Automat/Manual</u>	<u>Automat/Manual</u>
No. of channels		_____	_____
Manufacturer		_____	_____
Manufact. year		_____	_____

Engine generator	Capacity	Manufact. year
	<u>100 kVA</u> STAMFORD x 28 Reat FFC	<u>1990.2</u>
		<u>1990.2</u>

Local cables	Total pairs	Usable pairs
	<u>2410 pairs</u>	<u>1845 pairs</u>
	<u>1900-2800</u>	<u>1300-1900</u>
	<u>0200-300 RE</u>	

FC200x4  
 Cont 400  
 100A R13

4. No. of Staff

Post master:	<u>1</u>	
Tel. operator:	<u>5</u>	Day time: _____ Night time: _____
Tel. maintenance:	<u>10</u>	
Postal services:	<u>110</u>	

5. Problems

Reasons of waiting applicant:  
 Some DP's are full up. *< James Ntwire >*  
 Long distance subs cannot be served. NO open wire

Other problems:  
 Transport. Only one lorry is available for local network maintenance.



Present Conditions of Transmission System

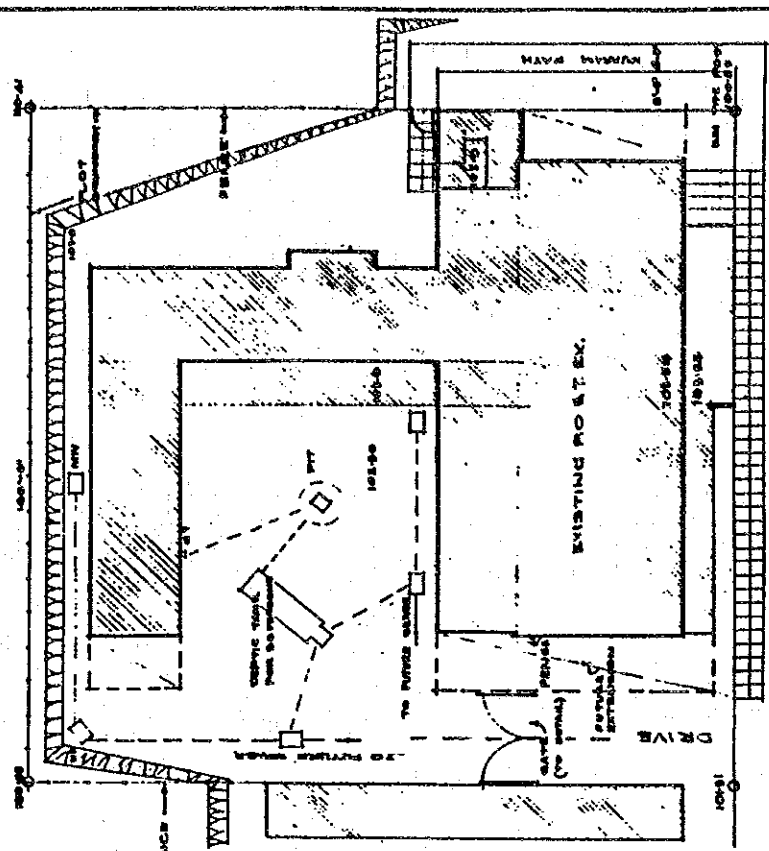
Station Name	Kabale	Survey Date	24/Nov.1993
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Link Name	Mbarara - Kabale	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	2 GHz
Equipment	System Type: CTR190/2 Manufact. Year: 1991 Manufacturer: Siemens	Details: 1+1	
MUX Equipment	System Type : Manufac. Year: Manufacturer :	Details: 34MB x 1	
Other Equipment			

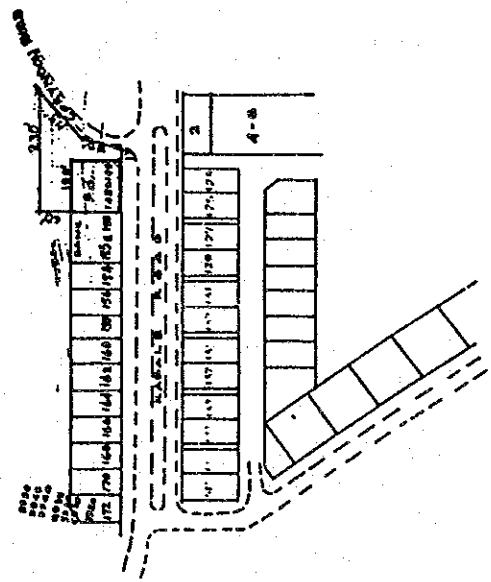
Link Name	Kabale - Kigabo	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM12-1A Manufact. Year: 1989 Manufacturer: NEC	Details: 1+0	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: 5 CH in use	
Other Equipment			

Link Name	Kabale - Bukungiri	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM12-1A Manufact. Year: 1989 Manufacturer: NEC	Details: 1+0	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: 5 CH in use. Modification for MUX expansion is ongoing	
Other Equipment			

Link Name	Kabale - Bukinda (PCO)	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details: 1 CH	
Other Equipment			



SITE PLAN



BLOCK PLAN

Approx. Scale



Site Name	KABALE UHF & M/W TOWER MAST (SINGLE ENGINE)
District Name	KABALE
Survey Date	24 / 11 / 93'

Site Layout

Present Conditions of Transmission System

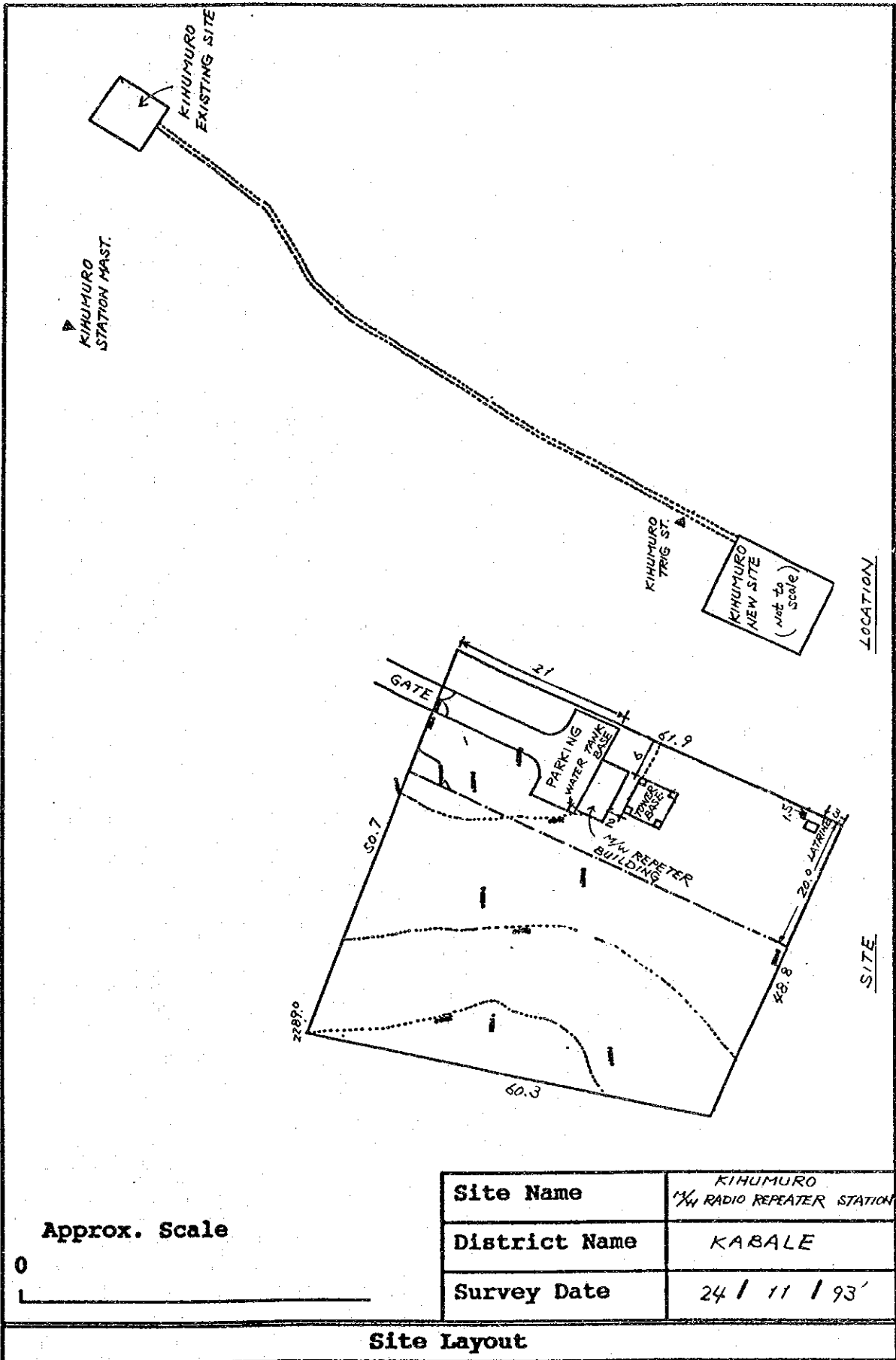
Station Name	Kihumiro Rep.	Survey Date	24/Nov/93
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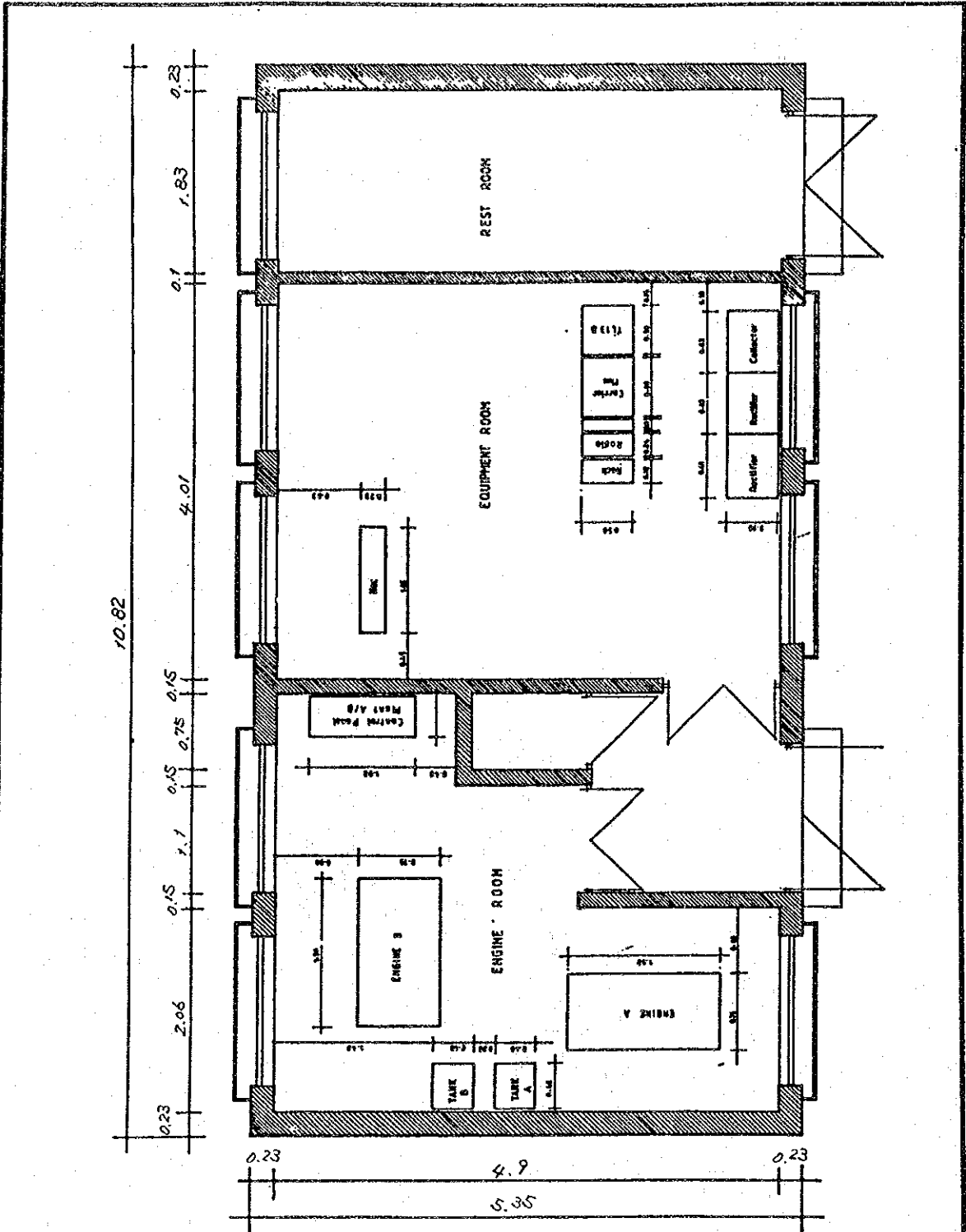
Link Name	Mbarara - Kabale - Kigali	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	64/0 Hz 24 Hz
Equipment	System Type: CTR260 (to Mbarara), CTR 190 (to Kabale) - 2GHz Manufact. Year: 1991 Manufacturer: Siemens	Details:	(to Kigali) - 2GHz
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment	TV Codec		

Link Name	Kabale - Kisoro	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM12-1B Manufact. Year: 1989 Manufacturer: NEC	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	12CH
Other Equipment			

Link Name	Kabale - Bukungiri	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	400MHz
Equipment	System Type: TR4FM12-1B Manufact. Year: 1989 Manufacturer: NEC	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	12CH
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			



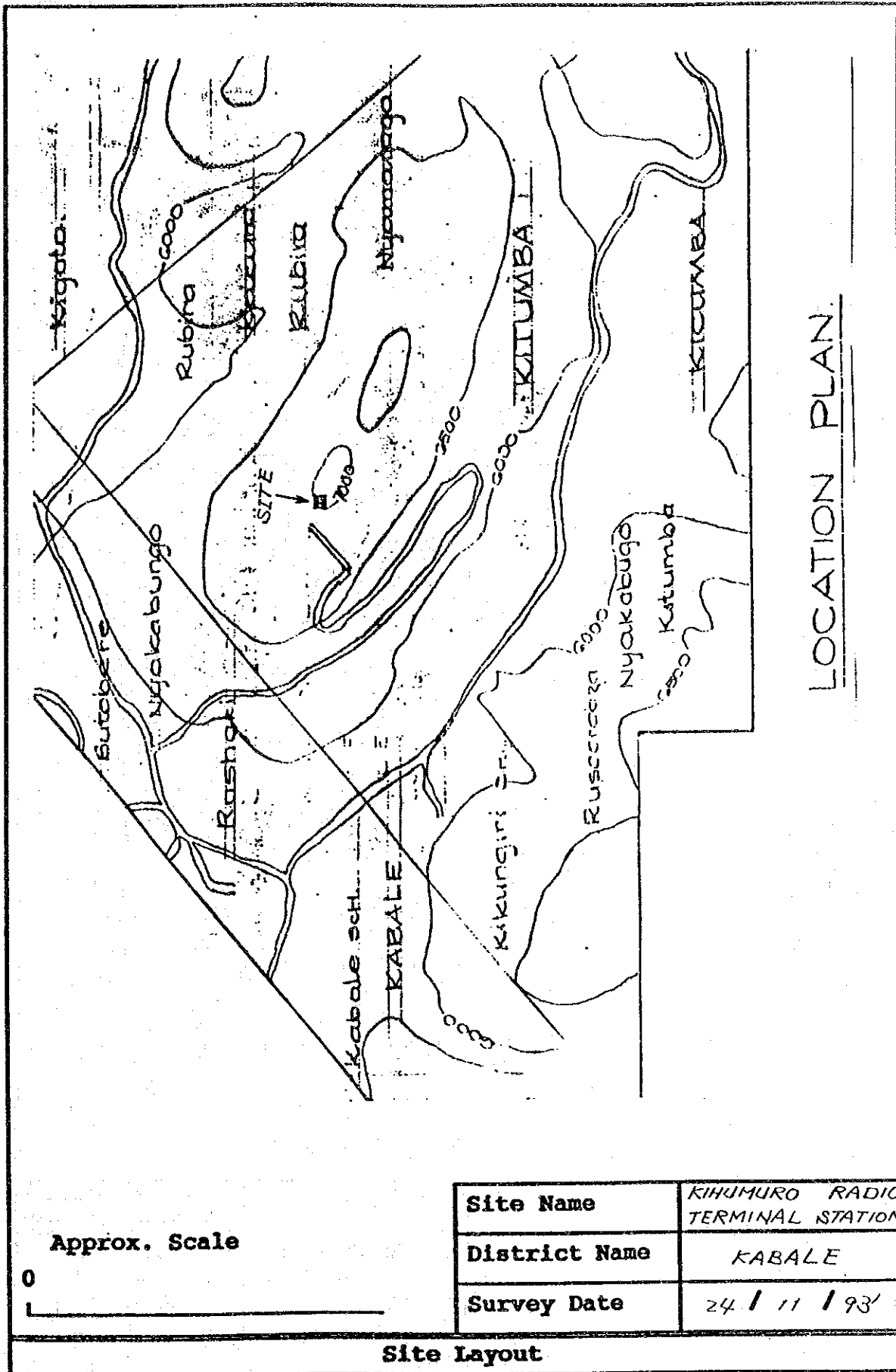


Approx. Scale

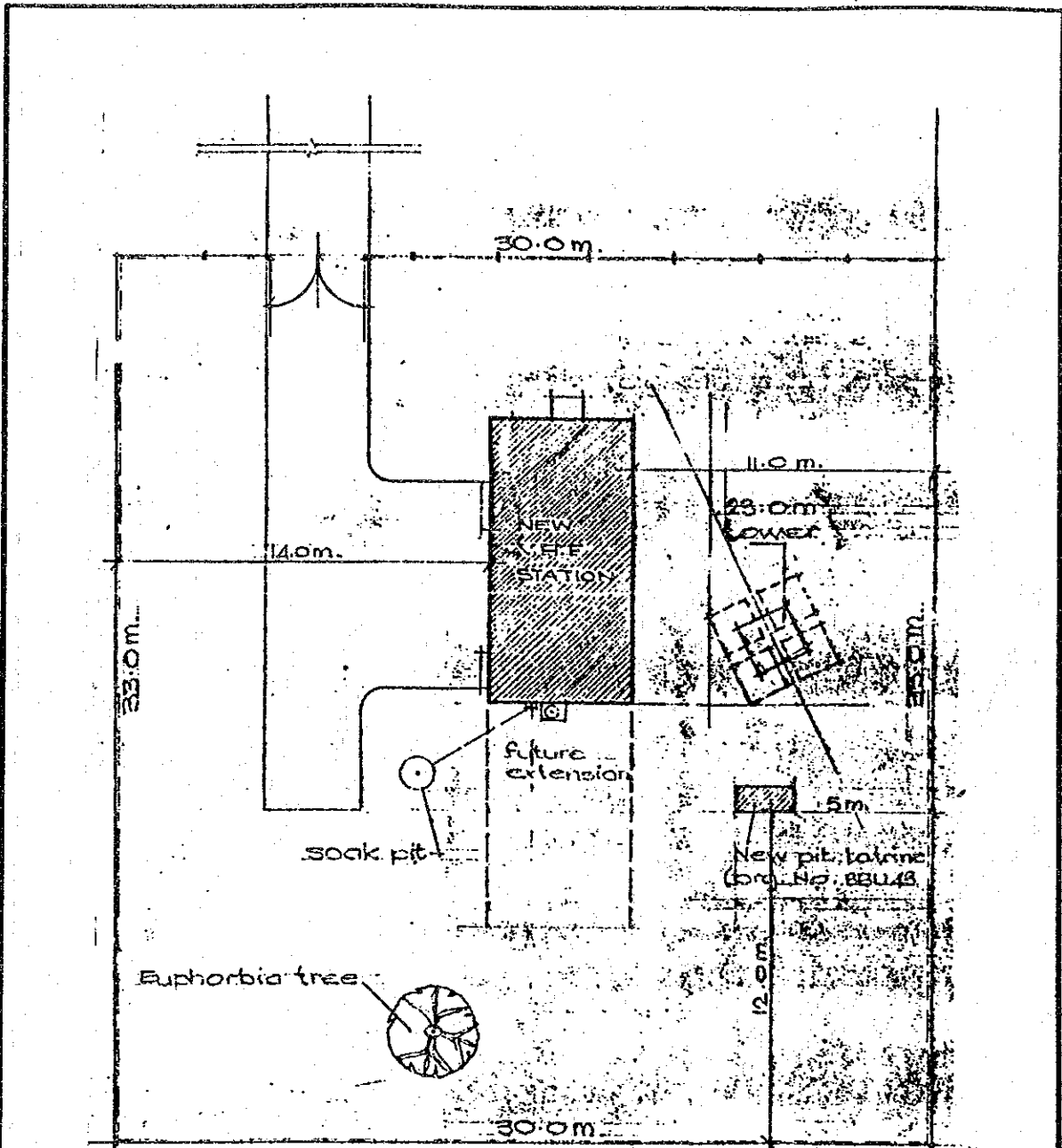


Site Name	KIHUMURO REPEATER STATION
District Name	KABALE
Survey Date	24 / 11 / 93

Floor Layout



LOCATION PLAN



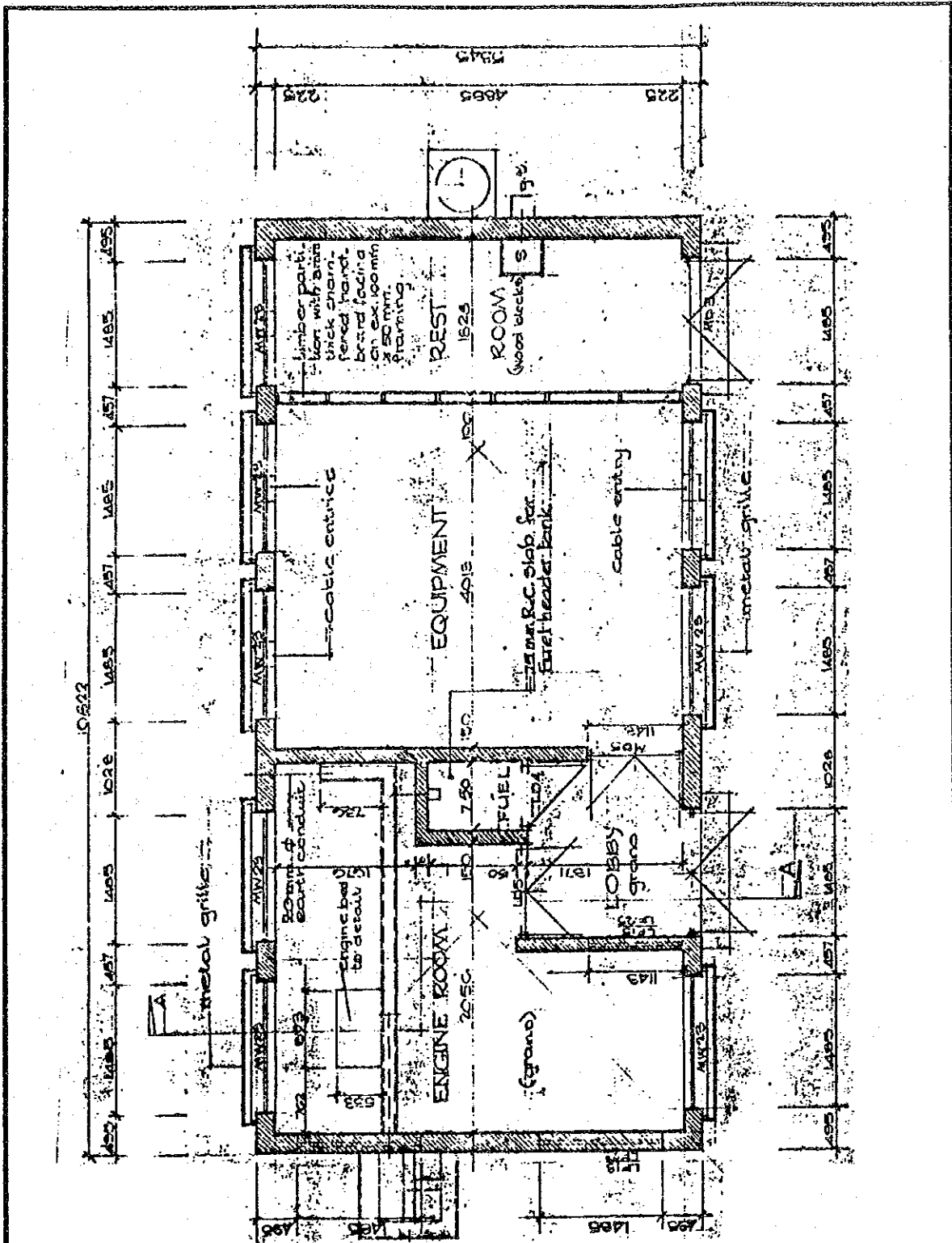
**BLOCK PLAN**

Approx. Scale



Site Name	KIHUMURO RADIO TERMINAL STATION
District Name	KABALE
Survey Date	24 / 11 / 93

**Site Layout**



Approx. Scale



Site Name	KIHUMURO RADIO TERMINAL STATION
District Name	KABALE
Survey Date	24 / 11 / 93'

Floor Layout



Present Conditions of Manual Exchange

Date: 26.11.1993  
 Exch. Name: MASARA

1. Subscribers	No. of Connected Subscribers	No. of Waiting Applicant	Expected Demand after 5 Years
Government use:	<u>74</u>	<u>—</u>	<u>—</u>
Business use:	<u>134</u>	<u>—</u>	<u>—</u>
Resident use:	<u>451</u>	<u>—</u>	<u>—</u>
Total:	<u>659</u>	<u>114</u>	<u>—</u>

2. Call Traffic	Local Calls	Trunk Calls	Trunk calls in same GSC
MANUAL PDMS			
Sep. 93 { No. of calls/month	<sup>54,390</sup> <u>45</u> calls	<sup>26,740</sup> <u>1500</u> calls	<u>7</u>
{ Holding time	<u>3.6</u> min.	<u>3.8</u> min.	
	<i>Included Ineffective Calls</i>		

3. Facilities	Type	Common Batt. / Magneto
Switch-board		
<u>11BX-10</u>	Capacity <u>2000</u> lines	
	Manufacturer <u>HITACHI</u>	
	Manufact. year <u>1984 DECEMBER</u>	
	INSTALLATION YEAR <u>1985</u>	
	(Route-1)	(Route-2)
Trunk lines	Destination	
	Type of lines	OW/OWC/Cable
		UHF/Microwave
	Signalling	Automat/Manual
	No. of channels	
	Manufacturer	
	Manufact. year	
Engine generator	Capacity <u>70</u> kVA	BAT: <u>1800AH</u>
	Manufact. year <u>1987 (1986.10)</u>	TRANSLITE
	INSTALLATION YEAR	I-V-DEUTE
Local cables	Total pairs <u>2800</u> pairs	
	Usable pairs <u>2085</u> pairs	

4. No. of Staff	Day time	Night time
Post master:	<u>1</u>	
Tel. operator:	<u>6</u>	<u>1</u>
Tel. maintenance:	<u>7</u>	
Postal services:	<u>14</u>	

[ 8-13 ]  
 [ 13-18 ]  
 [ 18-8 ]

5. Problems  
 Reasons of waiting applicant:  
NOT YET SURVEYED

Other problems:  
Local network - not very good  
Staffing  
Training - w/g local network

Present Conditions of Transmission System

Station Name	Masaka	1/3	Survey Date	26/Nov./93
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Link Name	Kampala - Masaka - Mbarara	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	24Hz
Equipment	Details:		
System Type:	HA-2P	960CH	
Manufact. Year:	1984	1+1	
Manufacturer:	Telettra		
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment	T-MUX, TV Codec		

Link Name	Masaka - Bukoba	Function	Terminal / Repeater
TR System	Radio (Micro) UHF, VHF, HF), OWC, OW	Analog / Digital	24Hz
Equipment	Details:		
System Type:	CTR190/2 24Hz Tx/Rx	34Mbps x 2	
Manufact. Year:	1991	1+1	
Manufacturer:	Siemens		
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Masaka - Bulb	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	160MHz
Equipment	Details:		
System Type:	?	1CH	
Manufact. Year:	1990		
Manufacturer:	Telectron		
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Masaka - Lukaya	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:		1CH	
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Present Conditions of Transmission System

Station Name	Masaka	2/3	Survey Date	26/Nov. 1993
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Link Name	Masaka - Kalungu	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, (OW)		Analog / Digital
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name	Masaka - Buyoga (P.O)	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, (OW)		Analog / Digital
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Masaka - Bukoto	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, (OW)		Analog / Digital
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name	Masaka - Kalisizo	Function	Terminal / Repeater
TR System	Radio (Micro, UHF, VHF, HF), OWC, (OW)		Analog / Digital
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Present Conditions of Transmission System

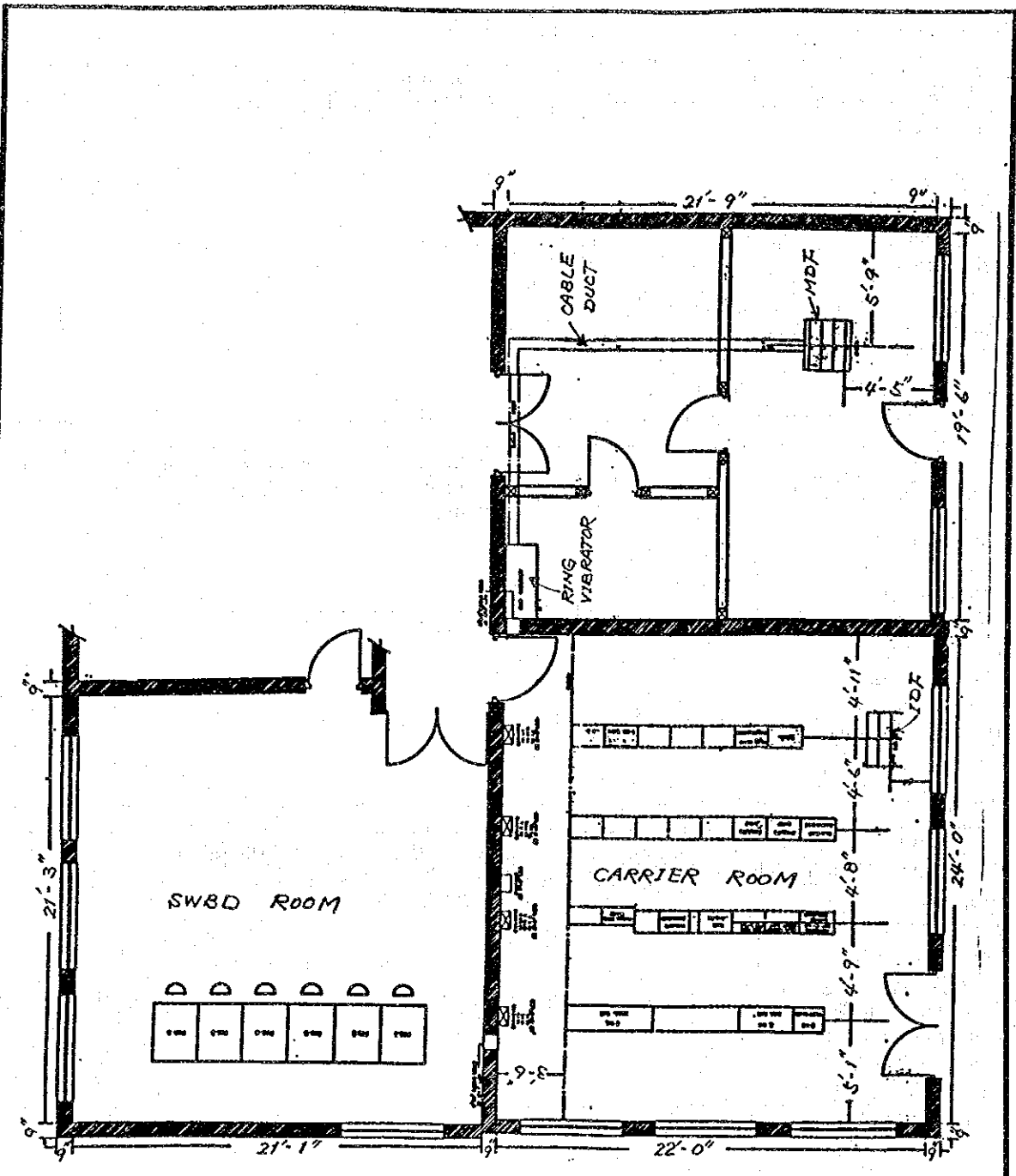
Station Name	Masaka	3/3	Survey Date	26/Nov/93
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Link Name	Masaka - Kyotera	Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analogue / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



Approx. Scale



Site Name	MASAKA CARRIER ROOM
District Name	MASAKA
Survey Date	26 / 11 / 93

Floor Layout

Present Conditions of Transmission System

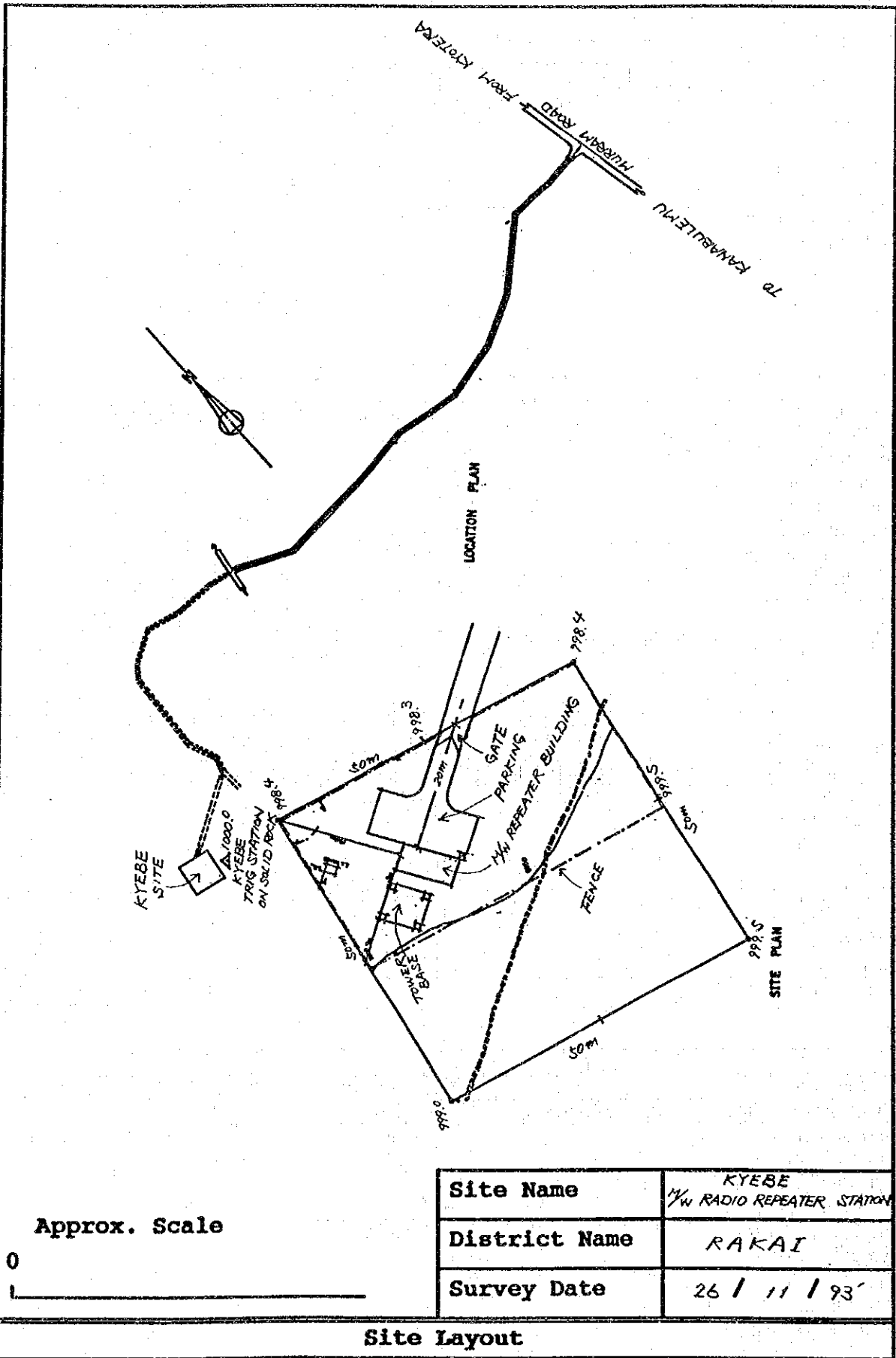
Station Name	Kyobe Rep.	Survey Date	26/Nov. 193
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Link Name	Masaka - Bukoba	Function	Terminal / Repeater
TR System	Radio(Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	64/0 Hz
Equipment	Details:		
System Type:	34Mbps x 2		
Manufact. Year:	1991		
Manufacturer:	Siemens		
MUX Equipment	Details:		
System Type :			
Manufac. Year:			
Manufacturer :			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

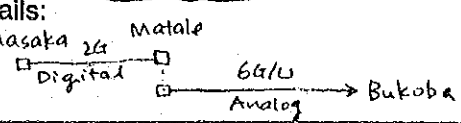
Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF ), OWC, OW	Analog / Digital	
Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
MUX Equipment	Details:		
System Type:			
Manufact. Year:			
Manufacturer:			
Other Equipment			



Present Conditions of Transmission System

Station Name	Matale Rep.	Survey Date	24/Nov/93
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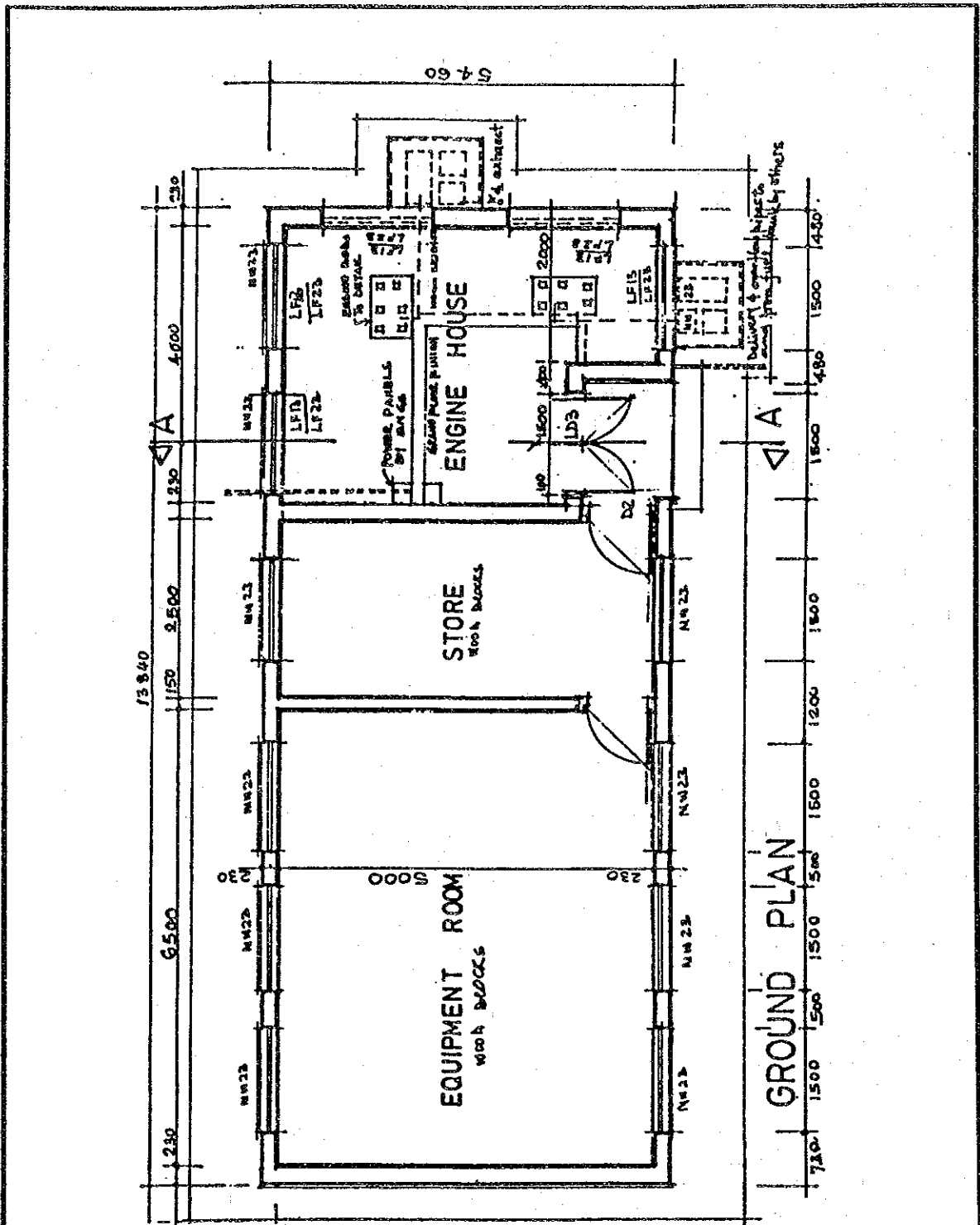
Link Name	Masaka - Bukoba	Function	Terminal / Repeater
TR System	Radio((Micro)UHF, VHF, HF), OWC, OW	(Analog/Digital)	24, 64/U Hz
Equipment	System Type: CTR190/2, CTR147C Manufact. Year: 1991 Manufacturer: Siemens	Details:  <pre> graph LR     A[Masaka 24] -- Digital --&gt; B[Matale]     B -- Analog --&gt; C[Bukoba]             </pre>	
MUX Equipment	System Type: Manufac. Year: Manufacturer:	Details:	
Other Equipment	T-MUX		

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			

Link Name		Function	Terminal / Repeater
TR System	Radio( Micro, UHF, VHF, HF), OWC, OW	Analog / Digital	
Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
MUX Equipment	System Type: Manufact. Year: Manufacturer:	Details:	
Other Equipment			





Approx. Scale



Site Name	MATALE V.H.F REPEATER STATION
District Name	RAKAI
Survey Date	26 / 11 / 93'

Floor Layout

## **6. Collected Data List**



## 1. Socio-Economic Data

No.	Title	Remarks
1	Draft Estimates of Revenue and Expenditure (Recurrent and Devpt. 1993/94)	
2	Jinja Structure Plan (1994)	Min. of Land, Housing and Urban Devpt.
3	Manpower and Employment in Uganda	Manpower Planning Dept. Min. of Finance and Econ. Planning
4	A National Shelter Strategy for Uganda	
5	Uganda National Census of Agric. and Livestock	Min. of Agriculture
6	Key Economic Indicators 15th Issue	Min. of Finance and Econ. Planning
7	Population Factors in National Reconstruction & Devpt. 1990	Min. of Finance and Econ. Planning
8	Industrialization Policy Final Draft	Min. of Commerce, Industry & Cooperatives
9	Draft Report of the Working Group on Project AID Data and PAP 1993	Min. of Finance and Econ. Planning
10	The 1991 Population Census	Statistics Dept. Min. of Finance and Econ. Planning
11	Popn. & Housing Census	Statistics Dept.
12	Key Econ. Indicators Jan. 93	Statistics Dept.
13	Gross Domestic Product 81 - 90	Statistics Dept.
14	Index of Industrial Prod.	Statistics Dept.
15	External Trade Statistics	Statistics Dept.

## 2. Network and Facility Data

No.	Title	Remarks
1	Television Service Charges	
2	Traffic Profile (National/Int'nal)	9/5/90, 5-6/92
3	Hourly Observation of Telephone Traffic on Int'nal Routes	28 Sept. 93
4	Number of Circuits on Direct Int'nal Routes	as of May 93
5	Tariff (Telephone, Telex, Telegram) in 1990	
6	Leased Circuits Lists (National/Int'nal)	
7	JTEC Report (English)	
8	The 1992 Global Conference of Representatives	
9	History and Structure	1979
10	Int'nal TEL. & TLX Traffic Data	TEL. 88-92, TLX 87-93
11	Voicecast & Telecast Traffic Data	
12	Frequency Management	
13	Uganda Int'nal Ccts/Routes Activation Data	
14	Mpoma Earth Station Transit & Receive Configuration (Satellite Cct's)	
15	TVRO Information	
16	Int'nal TEL. & TLX Routing Lists	
17	VFT Cct	
18	Extract of Operation and Maintenance Handbook for Communication system of Uganda Vol.I	NEC
19	Orgn. Chart of Mpoma (Satellite Earth Station)	
20	Mpoma E/S Duty Roster	Oct. 93
21	Mpoma-1A. E/S Simplified Commn. Equipt. Block Diagram (Proposed Additions)	10-6-93
22	Outline Plan for Digital Implementation in Uganda	
23	Updated Record of Private Wire Cct.	
24	TLX Traffic Profile	93, 92, 90, 88
25	Interconnection of the E10B Digital ITE with Exist. Network	
26	Questionnaire for TLX Spec.	
27	E10B Repair Center Performance	Oct. 93
28	Int'nal No. of TLX Circuits	88-93

No.	Title	Remarks
29	Questionnaire for TLX Spec.	
30	GTM 1993 Delegate Report of PSN Forecast Submissions by Origin, Dest., Satellite the Sys. type	8/5/93
31	Equipment Maintenance Record for Mpoma E/S	1988 to 93
32	MTBF, Availability for Mpoma E/S	
33	Weekly Highlights	Oct. 93, O&M Dept.
34	Tariff Lists (Latest Data)	
35	Int'nal Acc. Lists (Dest., Type of Acc. etc.) for Sample	
36	Acc-ting for Int'nal Tel. Traffic	
37	Schematic Diagram for E10B (ITE)	
38	ITE (E10B) Maintenance Records	
39	ITE (E10B) Orgn. & No. of Ccts List	88 - 93
40	Tel., Tlx, Telegram Traffic Vol.	88 - 93
41	Tel. Bill (July 1993) Copy for One Subsc.	For Sample
42	Carrier Room Orgn. (Kampala Carrier Room Staff Establishment Chart)	
43	Carrier Duty Roster	Nov. 93
44	Carrier Room Layout Sketch	
45	Fiber Optic Route Map	Fujitsu
46	Fiber Optic System Configuration, etc.	
47	Tel. Terminal Traffic 1988	
48	Tel. Terminal Traffic 1989	
49	Tel. Terminal Traffic 1990	
50	Tel. Terminal Traffic 1991	
51	Traffic Results E10B	
52	National/Int'nal Traffic 90/92	
53	Questionnaire	
54	Questionnaire (General)	
55	Line Plant	
56	Cable Network	
57	Switching, Traffic Forecast	

No.	Title	Remarks
58	Radio Frq. Control	
59	Fundamental Plans	
60	Commercial Power Supply	
61	Numbering Plan	
62	Signalling Plan	
63	Other Special Questions	
64	Int'nal Satellite Network	

3. O&M, Management, Organization and Finance Data

No.	Title	Remarks
1	Staff Appraisal Report	The World Bank
2	Government White Paper Educ. Policy Review	
3	Background to the Budget	Min. Fin. & Econ. Plan.
4	Rehab. & Devpt. Plan Vol. I	Min. Fin. & Econ. Plan.
5	Rehab. & Devpt. Plan Vol. II	Min. Fin. & Econ. Plan.
6	UPTC Draft Corp. Plan 1992 - 97	
7	Telecom. Devpt. Prog. 1994 - 98	
8	Uganda Rural Devpt. Studies	
9	UPTC Orgn. Charts Jan. 91	
10	National Trunk Systems	
11	Local Telephone Exchanges	
12	Proposed Training Policy	
13	Banks & Insurance Co.	
14	Banks Balances as at 30 Nov. 92	
15	Tariffs 15 March 93	
16	Tel. Fault Analysis Feb. 93	
17	Commercial Air Traffic 79 - 91	Entebbe Airport
18	UPTC Organization & Management	
19	Special Request of Training Assist. to Japanese Govt.	
20	Education Qualifications	
21	Information on Infrastructure	
22	Planning Approach to Digitn. of Uganda Network	
23	Postal Services	
24	Quarterly Progress Report Oct. - Dec. 92	
25	Quarterly Progress Report April - June 1992	
26	Departmental Problems	
27	Copy of the Letter of the MWTC on 24 Nov. 1993, for Exemption of Duty and Taxes	
28	Staffing Study Report Vol. 1	Telecom Eireann Services Int'nal
29	Staffing Study Report Vol. 2	Telecom Eireann Services Int'nal



No.	Title	Remarks
30	The Finance Bill, 1993 Fourth Schedule Tariff Rates	
31	Report of an Independent Working Group on the Uganda Economy	Gerry Helleiner, William Kalema and others
32	Flow Chart - Budget Formulation	
33	Flow Chart - Billing Cycle	
34	Flow Chart - Stores Section	
35	Flow Chart - Payment Subsystem	
36	Flow Chart - Acc'ting System at Vehicles Workshop	
37	UPTC Recurrent and Capital Budgets for FY 90/91	
38	UPTC Recurrent and Capital Budgets for FY 91/92	
39	UPTC Recurrent and Capital Budgets for FY 92/93	
40	UPTC Recurrent and Capital Budgets for FY 93/94	
41	UPTC Recurrent and Capital Budgets for FY 94/95	
42	Valuation Report for Fire Insurance and Current Assets Value of UPTC Properties as at 1st May 1987	Kalema Kayondo & Co.
43	Subscriber Records Verification, Sept. 1992	
44	Management Paper regarding Customer Care Dec. 1993	
45	Temporary Out of Service for July 93 Accounts	
46	Quarterly Progress Report to The World Bank - July - Sept. 1993	
47	Quarterly Progress Report to The World Bank - Oct. - Dec. 1993	
48	Quarterly Progress Report to The World Bank - Jan. - Mar. 1994	
49	Quarterly Progress Report to The World Bank - Apr. - June 1994	
50	Verified List of Debt Swapping with the Ugandan Government as at 30th June, 1993	
51	Bills Adjustment Committee Meeting Minutes 23/9/93 & 27/11/93	
52	List of Accounts of Parastatal Bodies, Large Companies and Embassies	
53	Job Responsibilities	
54	Job Inspection, Career/Succession Planning	



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