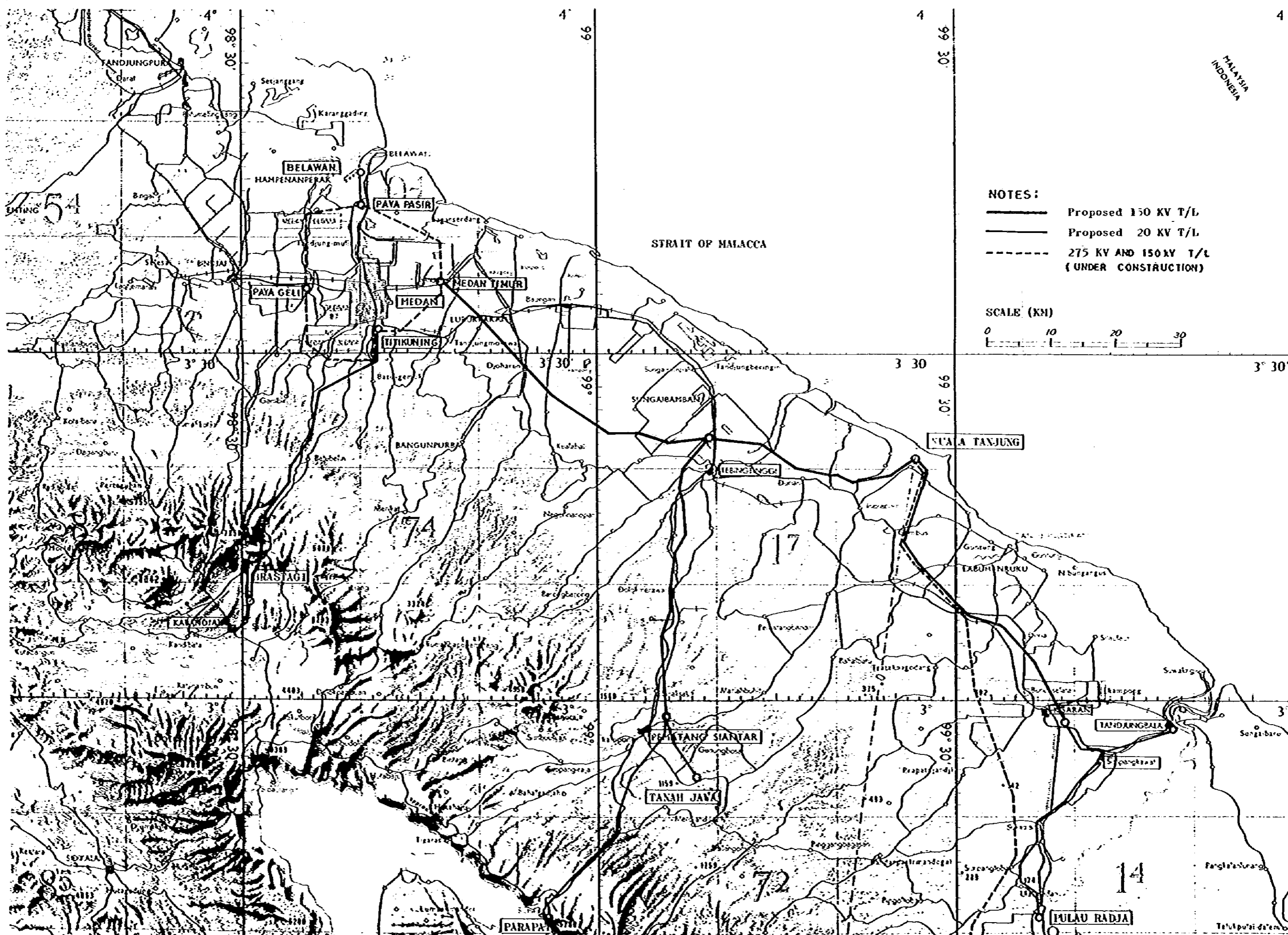


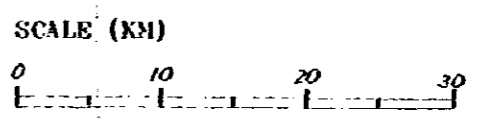
APPENDIX - IV DRAWINGS

NSTL-001



**NOTES:**

- Proposed 150 KV T/L
- Proposed 20 KV T/L
- - - - - 275 KV AND 150KV T/L (UNDER CONSTRUCTION)

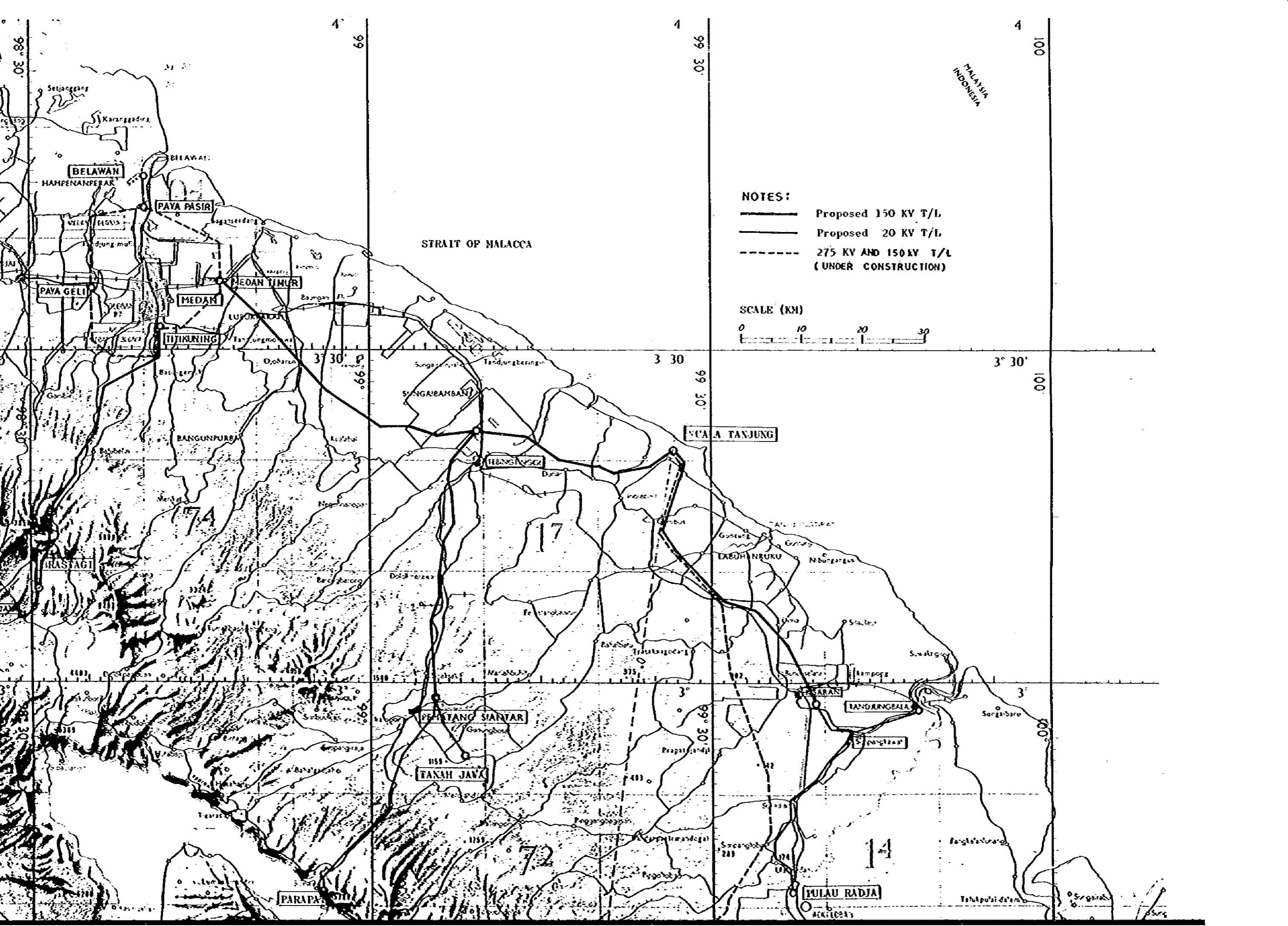


54

74




72

14

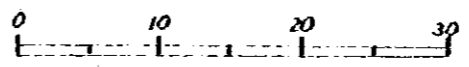


MALAYSIA  
INDONESIA

NOTES:

-  Proposed 150 KV T/L
-  Proposed 20 KV T/L
-  275 KV AND 150 KV T/L (UNDER CONSTRUCTION)

SCALE (KM)



STRAIT OF MALACCA

SUMATRA TANJUNG

PEMATANG SIANTAR

TANAH JAWA

TANJUNGPALKA

PULAU RADJA

BELAWAN

PAYA PASIR

PAYA GELI

MEDAN

MEDAN TIMUR

TIKUNING

BANGUNPURA

BRASTAGI

TEBINGTINGGI

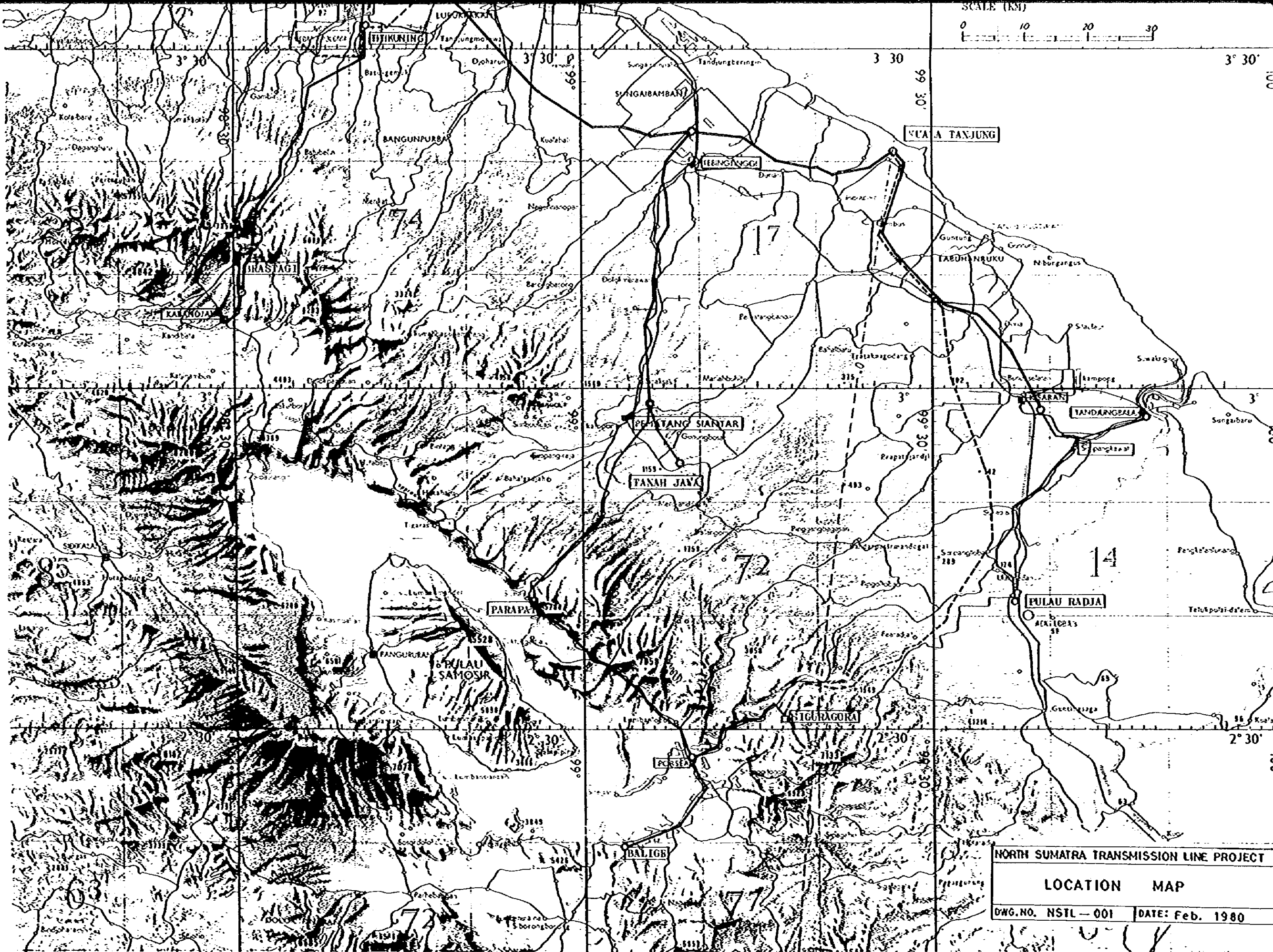
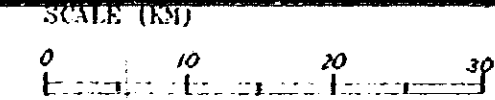
SINGAIAMBAN

LABOH NURUKU

SIPONGGAL

PARAPAN

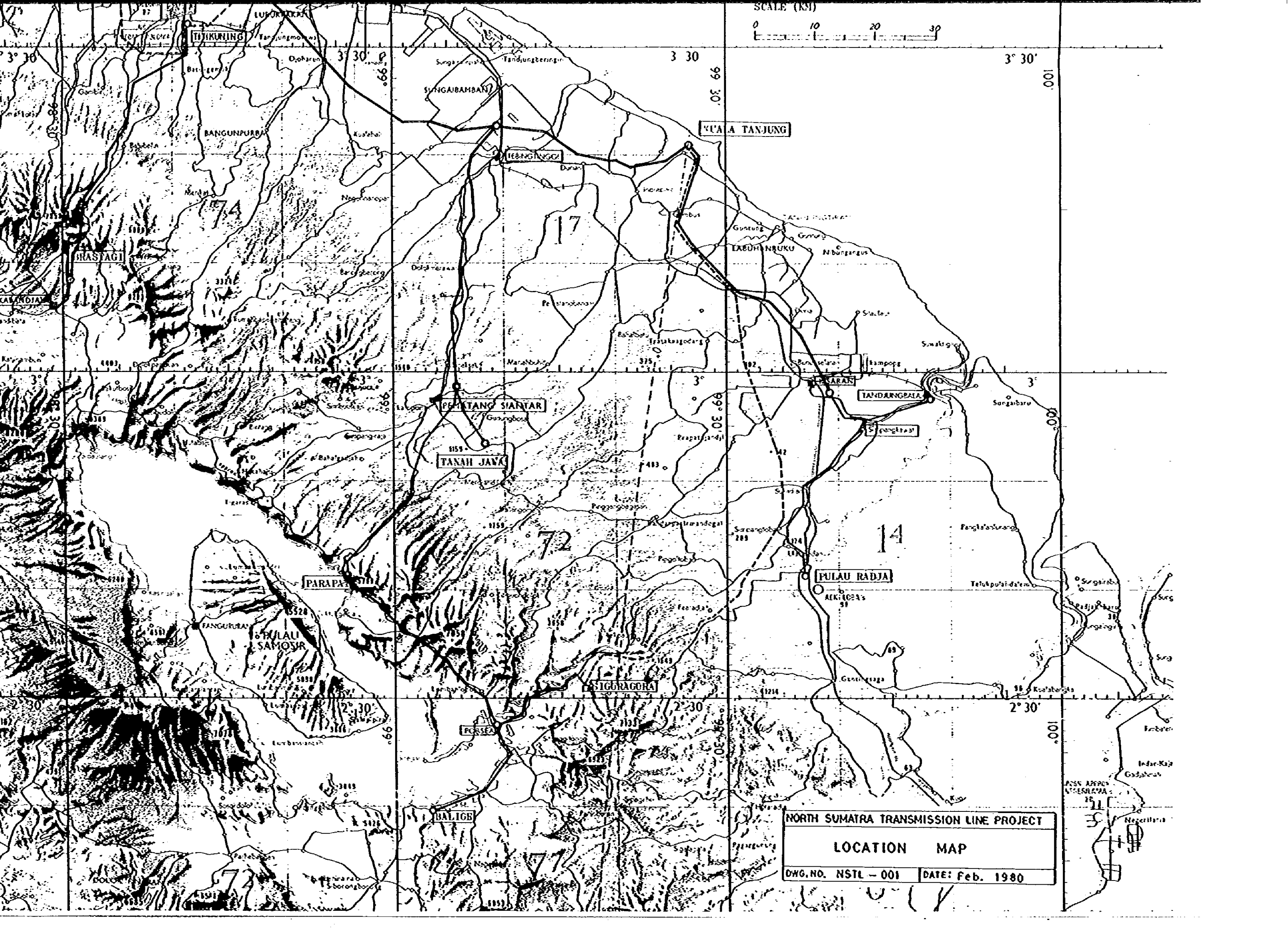
ACK: 102A



**NORTH SUMATRA TRANSMISSION LINE PROJECT**

**LOCATION MAP**

DWG. NO. NSTL-001    DATE: Feb. 1980



SCALE (KM)  
0 10 20 30

**NORTH SUMATRA TRANSMISSION LINE PROJECT**  
**LOCATION MAP**  
DWG. NO. NSTL - 001 | DATE: Feb. 1980

TIKURING

KUALA TANJUNG

TEBINGNOCO

PEMATANG SIANTAR

TANAH JAWA

PULAU RADJA

SIGORAGORA

BALIGE

PARAPAN

PULAU SAMOSIR

FANGURURAN

BRASTAGI

BANGUNPURBA

SINGAIBAMBAN

LESARAN

TANDUNGPAJA

FORSEA

7A

17

72

14

77

3° 30'

3° 30'

3° 30'

3° 30'

3°

3°

3°

3°

2° 30'

2° 30'

2° 30'

2° 30'

99° 30'

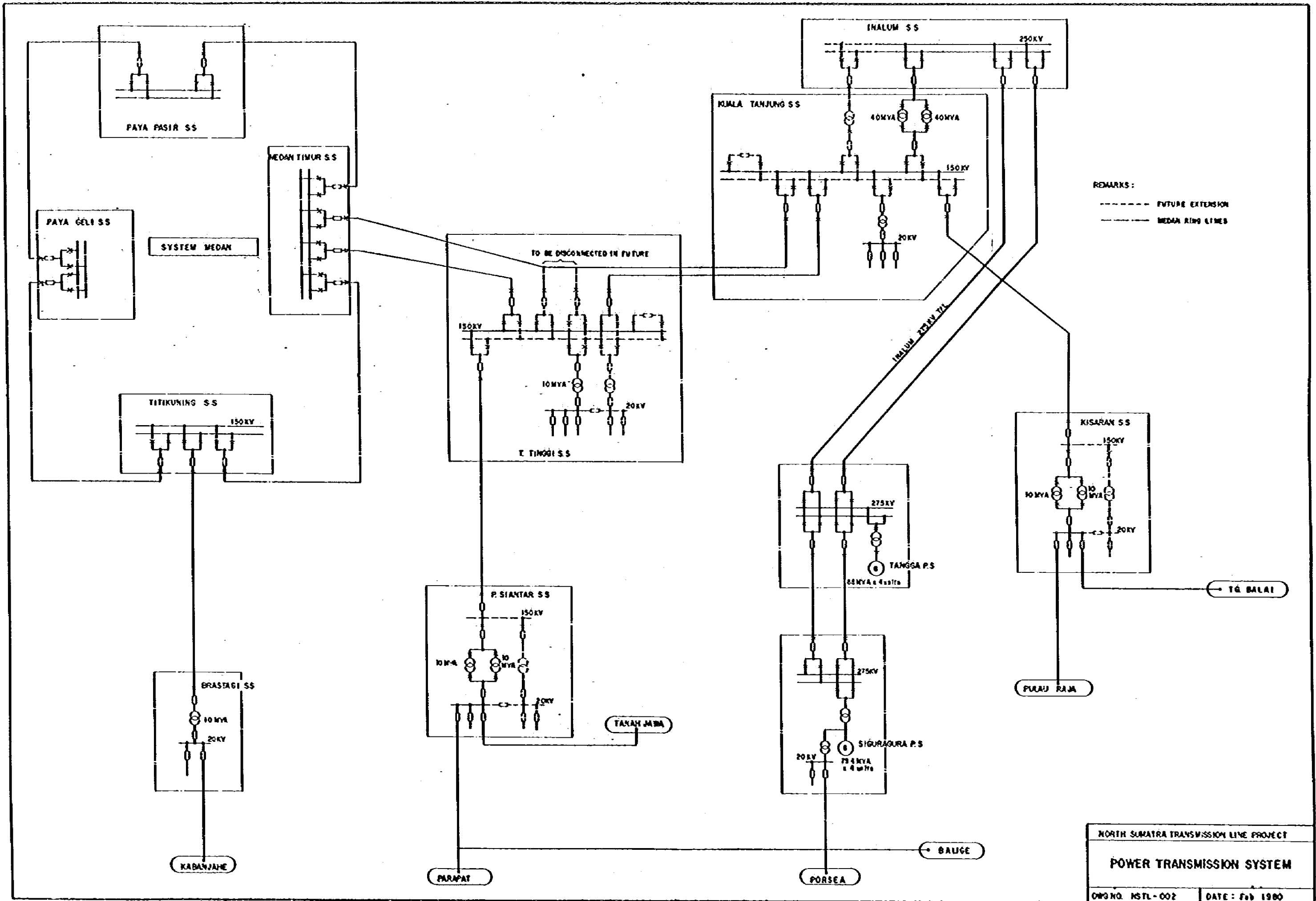
99° 30'

99° 30'

100°

100°

100°



REMARKS:  
 - - - - - FUTURE EXTENSION  
 ———— MEDAN RING LINES

150KV T/L (MAIN LINE)

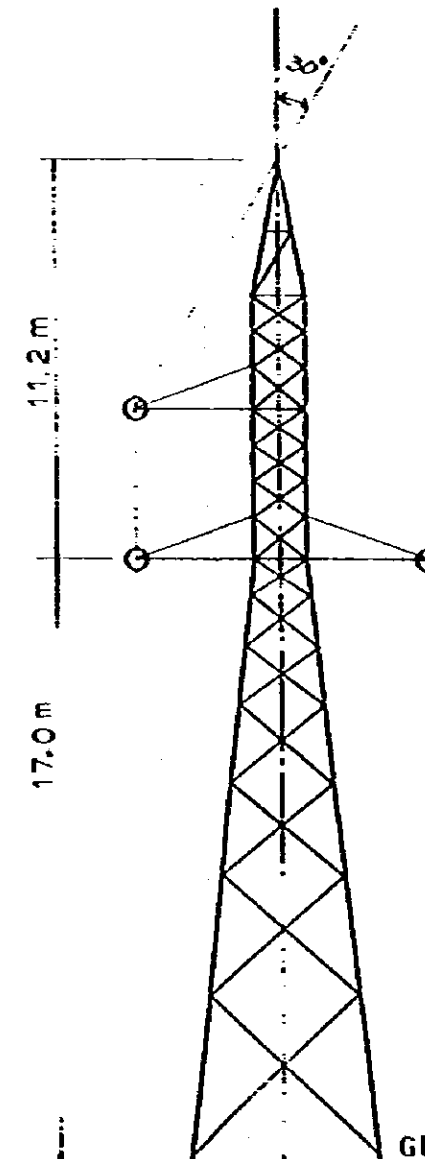
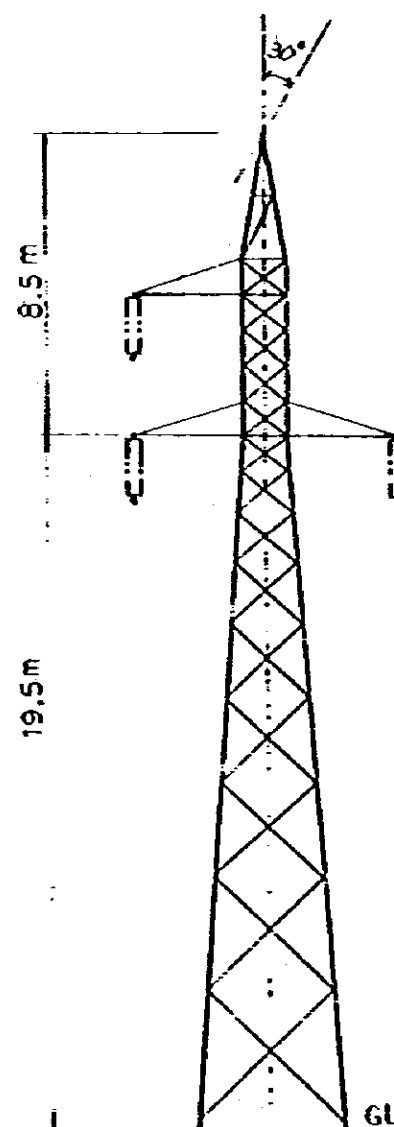
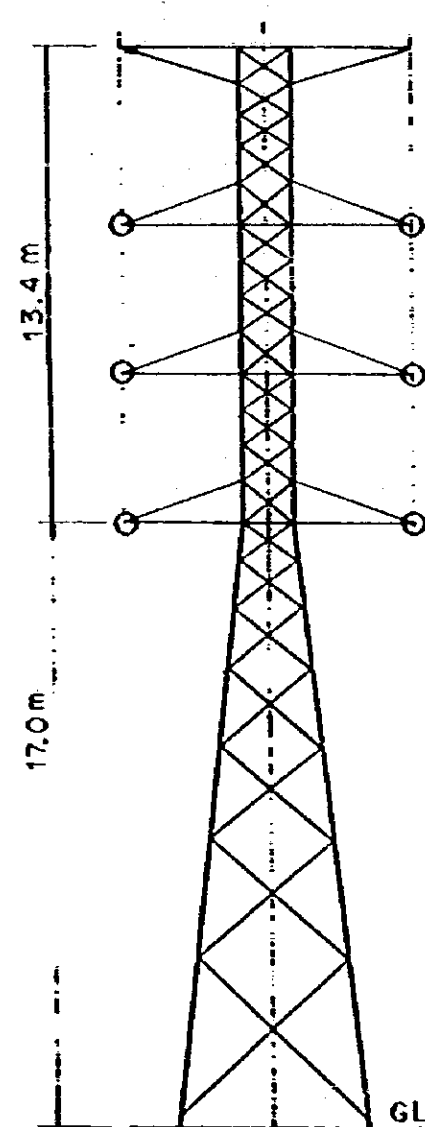
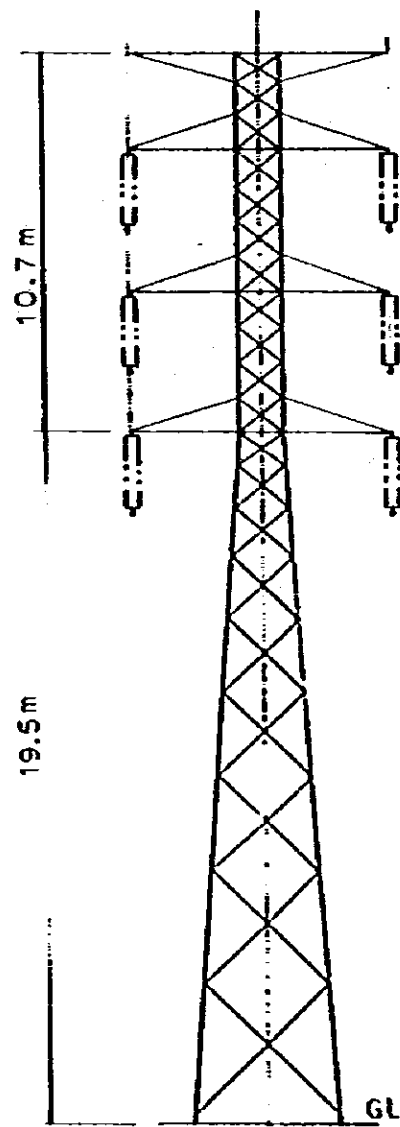
150KV T/L (BRANCH LINE)

SUSPENSION TOWER

TENSION TOWER

SUSPENSION TOWER

TENSION TOWER



NORTH SUMATRA TRANSMISSION LINE PROJECT	
PRELIMINARY DESIGN OF TOWER FOR 150KV T/L	
DWG. NO. NSIL-003	DATE: Feb. 1980

20KV D/L (TOWER SECTION)

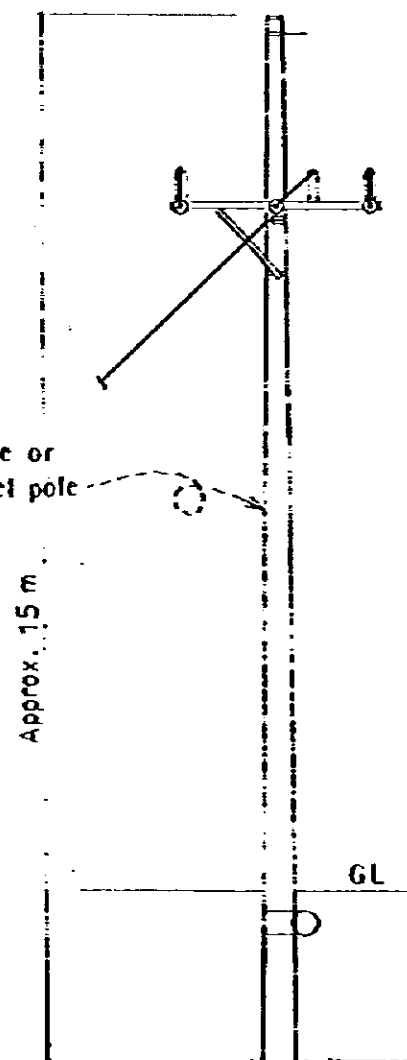
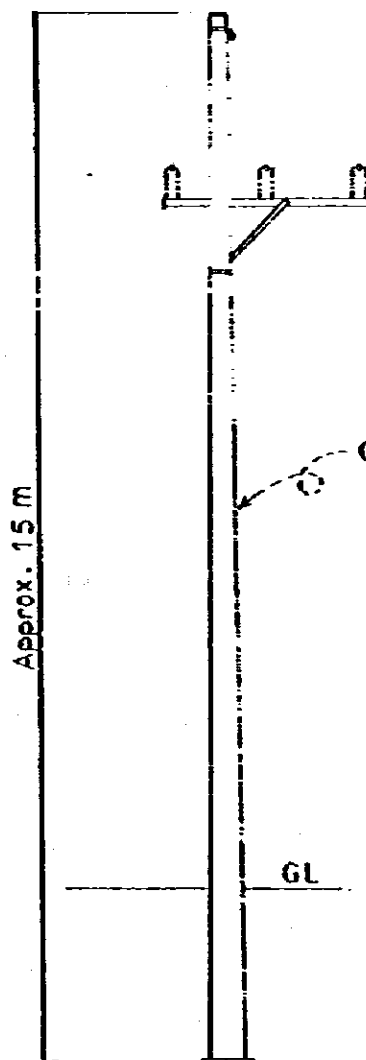
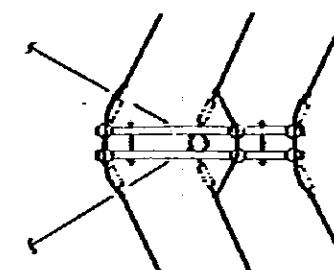
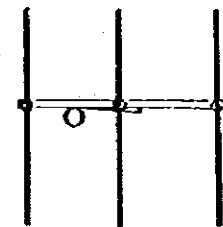
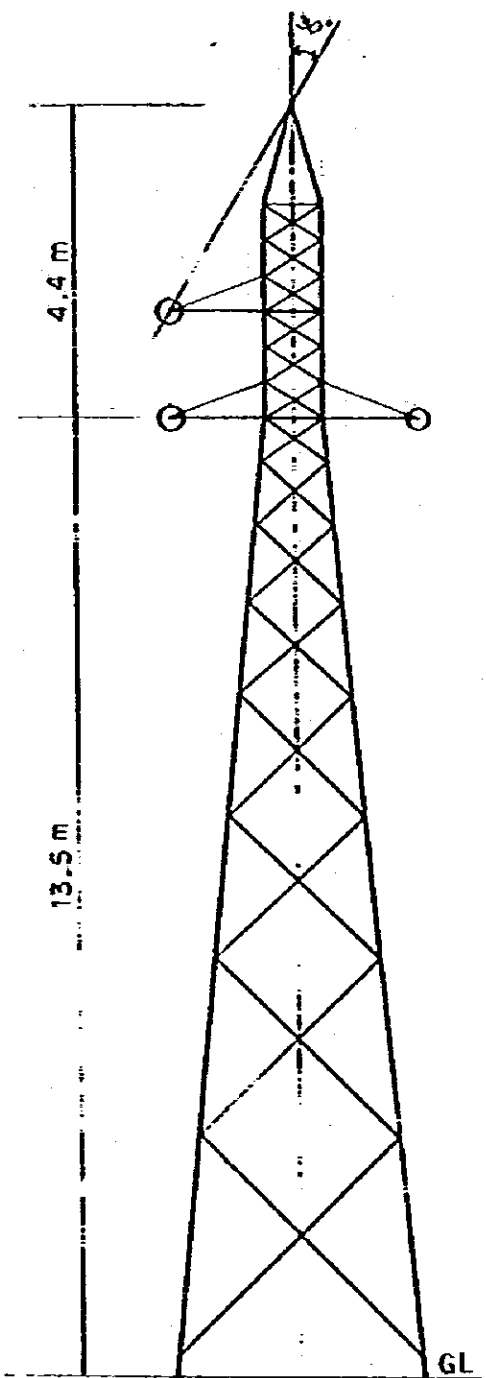
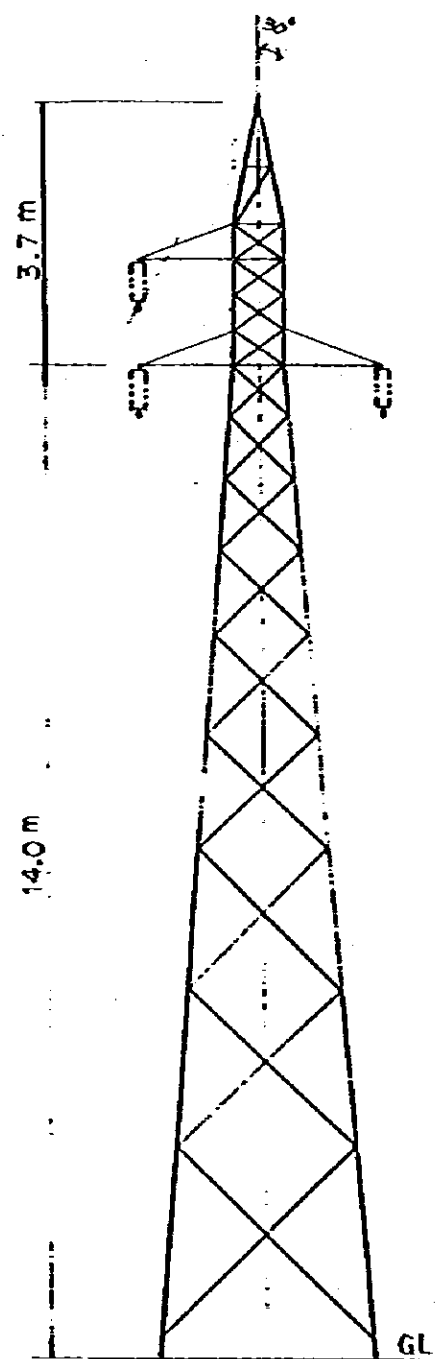
20KV D/L (POLE SECTION)

SUSPENSION TOWER

TENSION TOWER

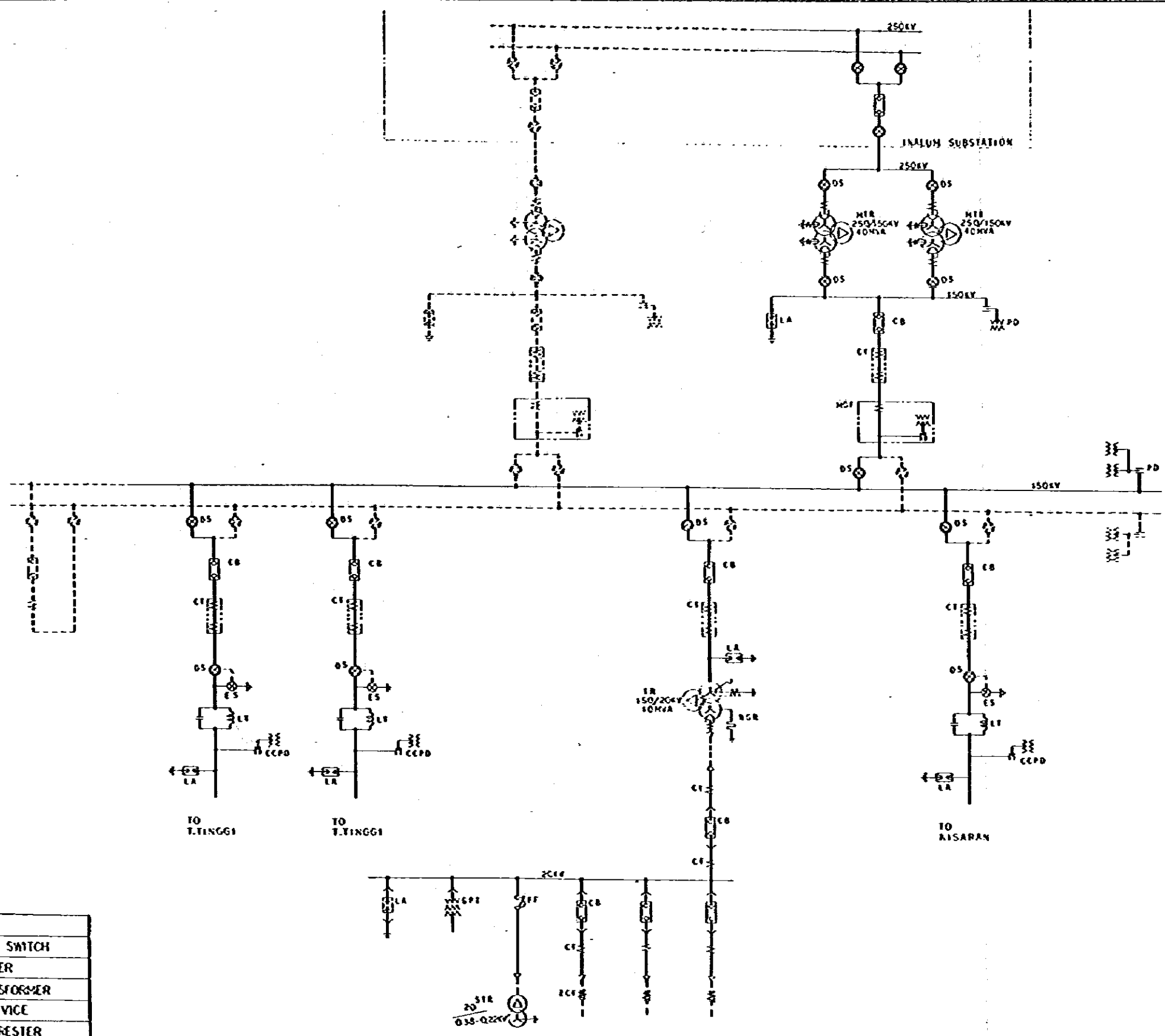
SUSPENSION TYPE

TENSION TYPE



NORTH SUMATRA TRANSMISSION LINE PROJECT  
PRELIMINARY DESIGN OF SUPPRI  
FOR 20KV D/L  
DWG.NO. NSTL-004 [DATE: Feb. 1980



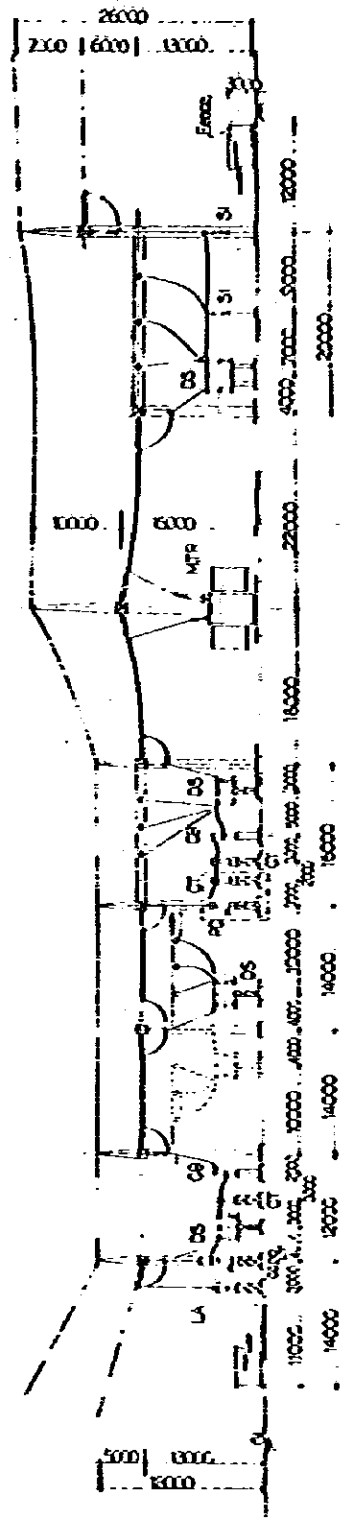


LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

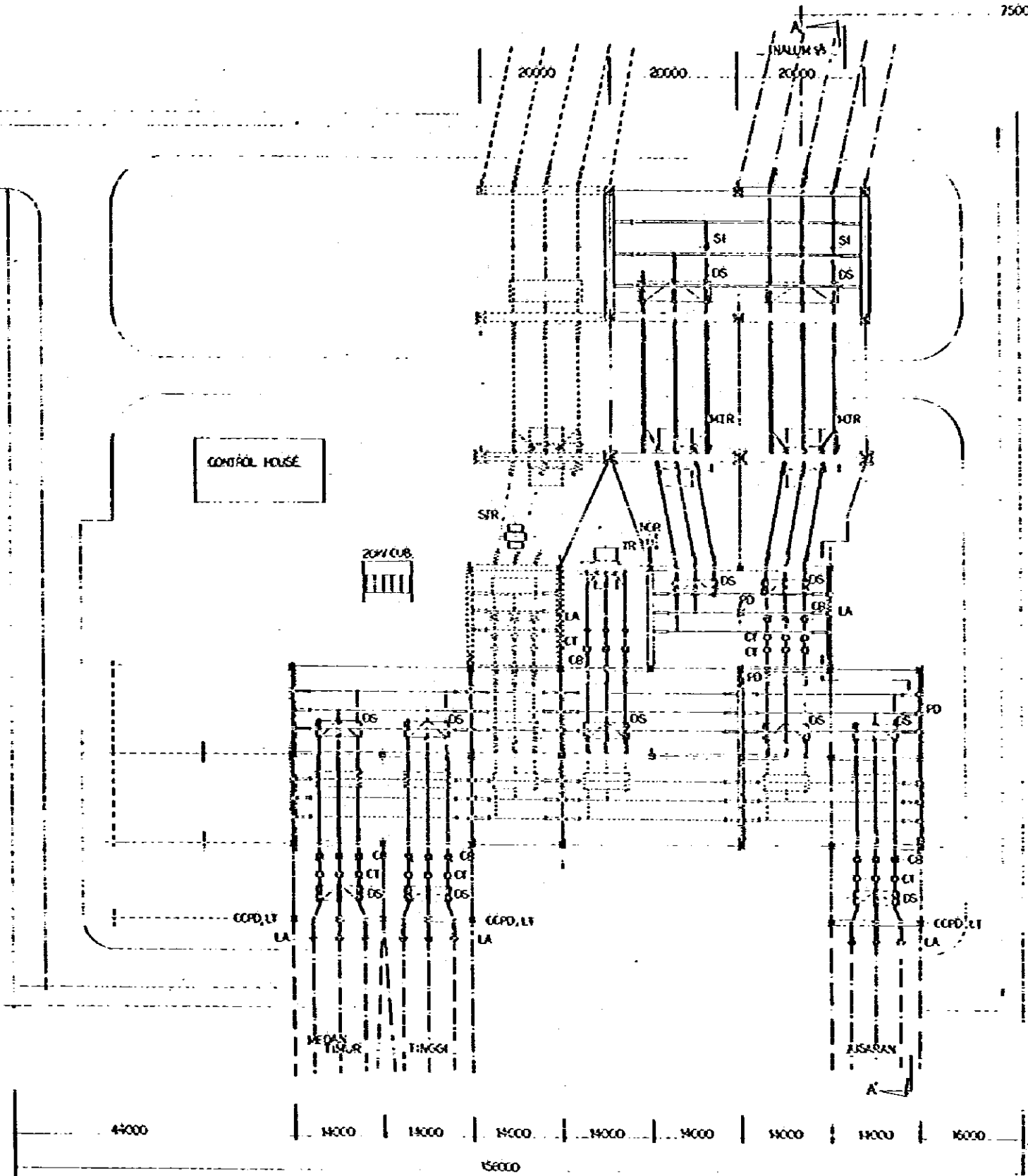
REMARK:  
 ..... FUTURE EXTENSION

NORTH SUMATRA TRANSMISSION LINE PROJECT  
 SINGLE LINE CONNECTION DIAGRAM  
 KUALA TAJUNG 5/5  
 DWG.NO. NSTL-005 | DATE: Feb. 1980

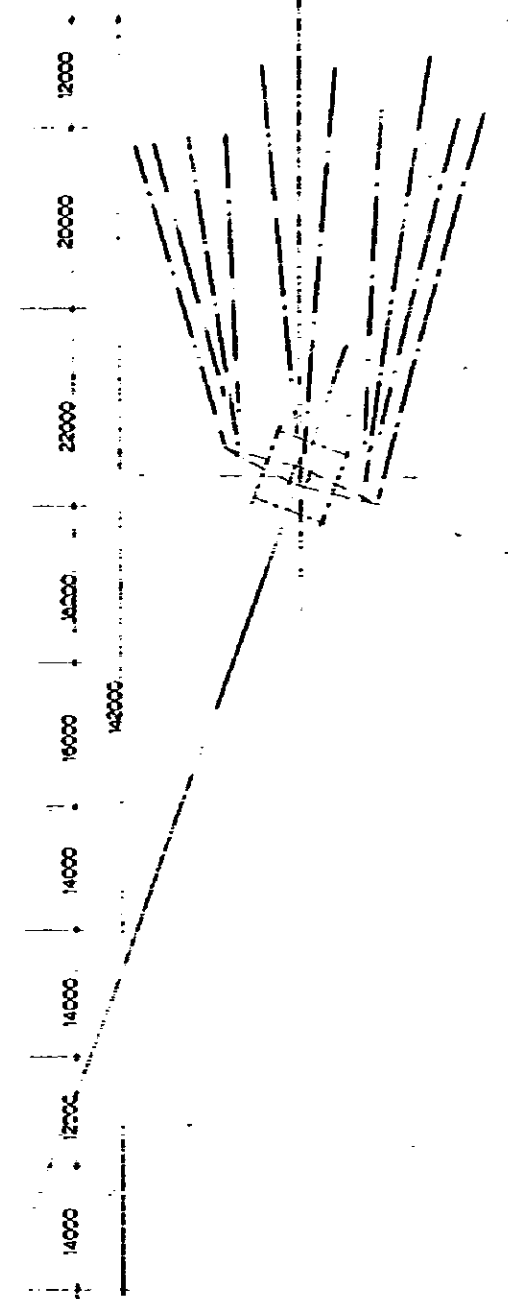
150KV 275KV



A-A SECTION



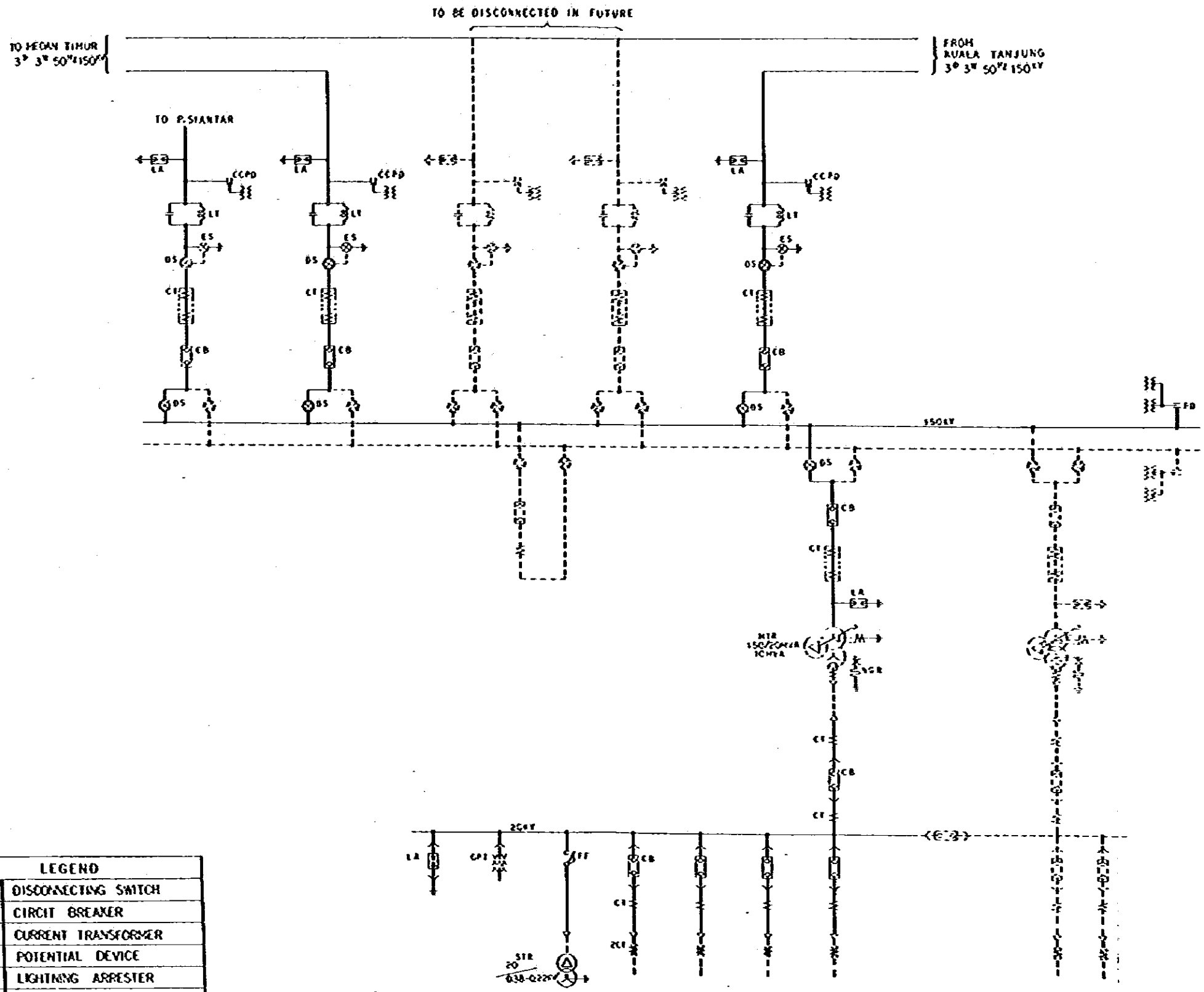
75000



LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

REMARK:  
 ..... FUTURE EXTENSION

NORTH SUMATRA TRANSMISSION LINE PROJECT	
ARRANGEMENT OF OUTDOOR EQUIPMENT	
KUALA TANJUNG 5/6	
DWG. NO. NSTL-006	DATE: Feb. 1980



LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

REMARK:  
 ..... FUTURE EXTENSION

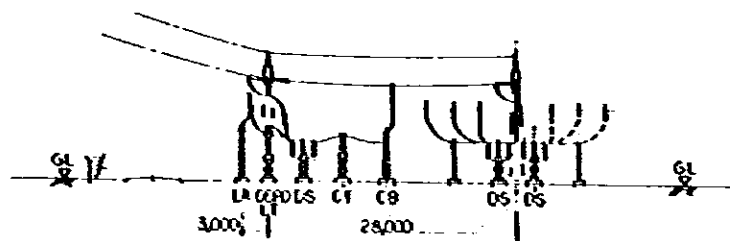
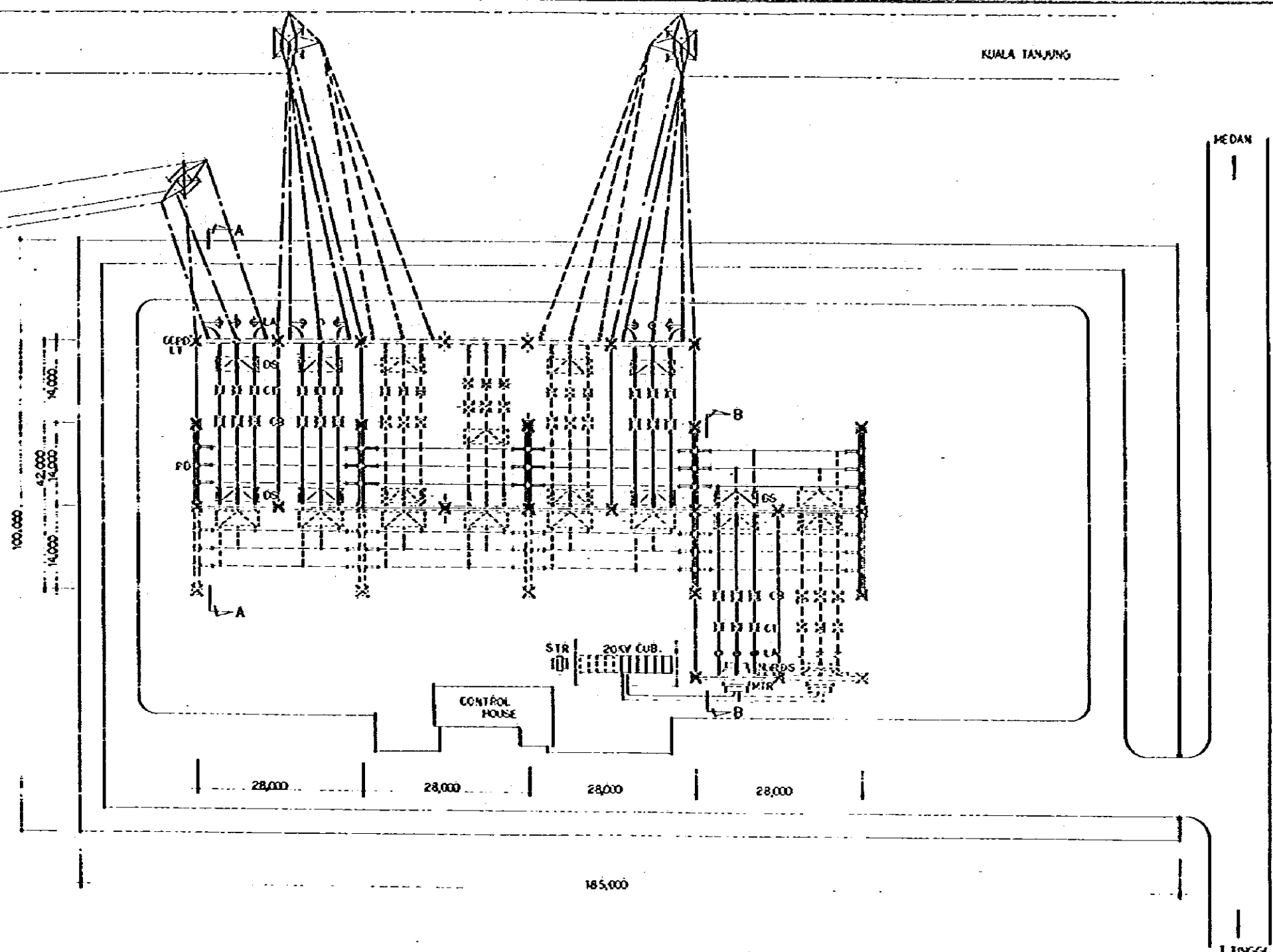
NORTH SUMATRA TRANSMISSION LINE PROJECT	
SINGLE LINE CONNECTION DIAGRAM	
TEBING TINGGI 5/8	
DWG. NO. NSTL-007	DATE: Feb. 1980

MEKAN TUMBUH

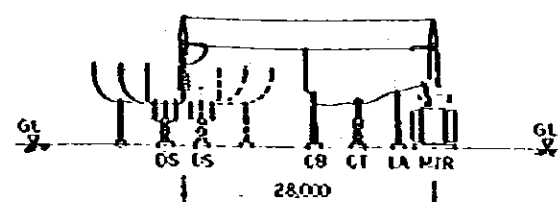
KUALA TANJUNG

P. SIANJAR

MEKAN



SECTION A-A

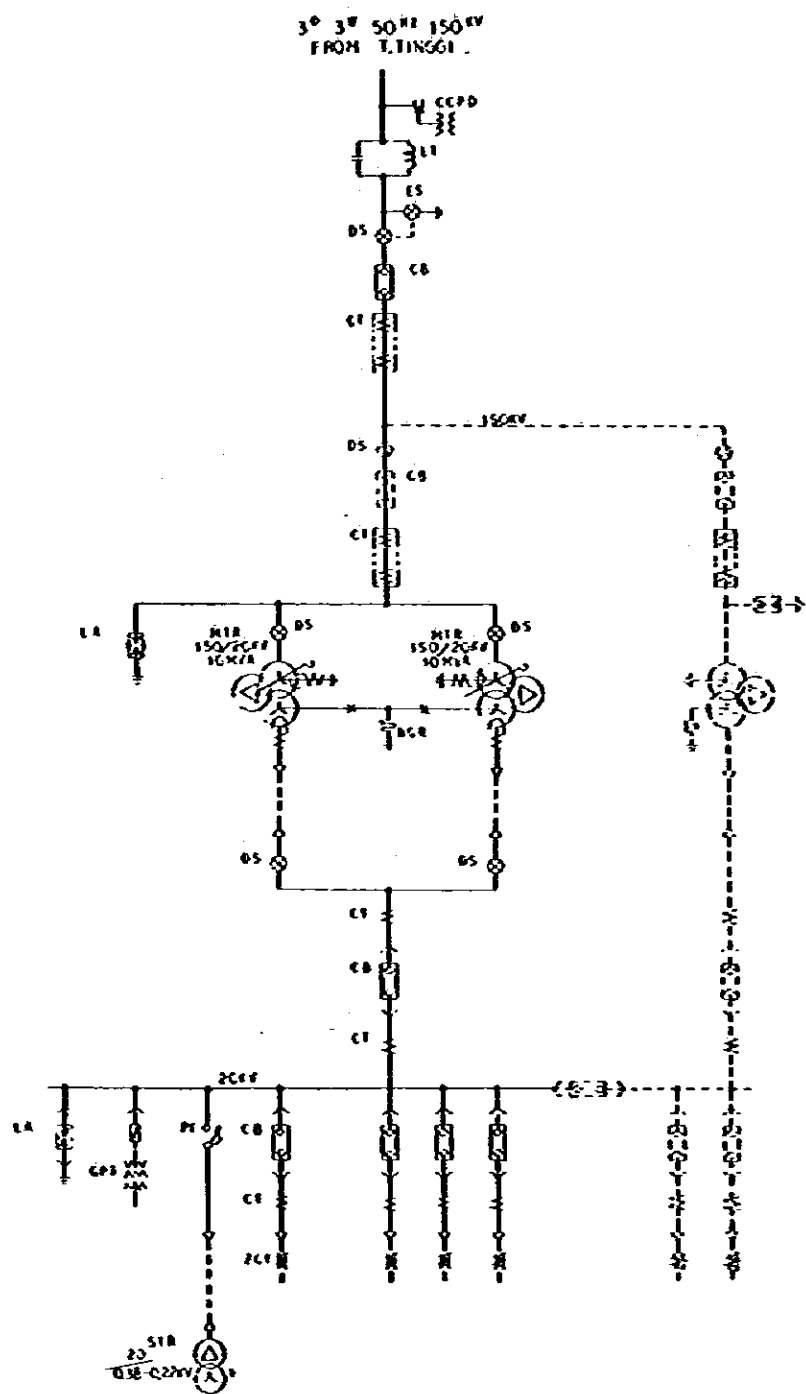


SECTION B-B

LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

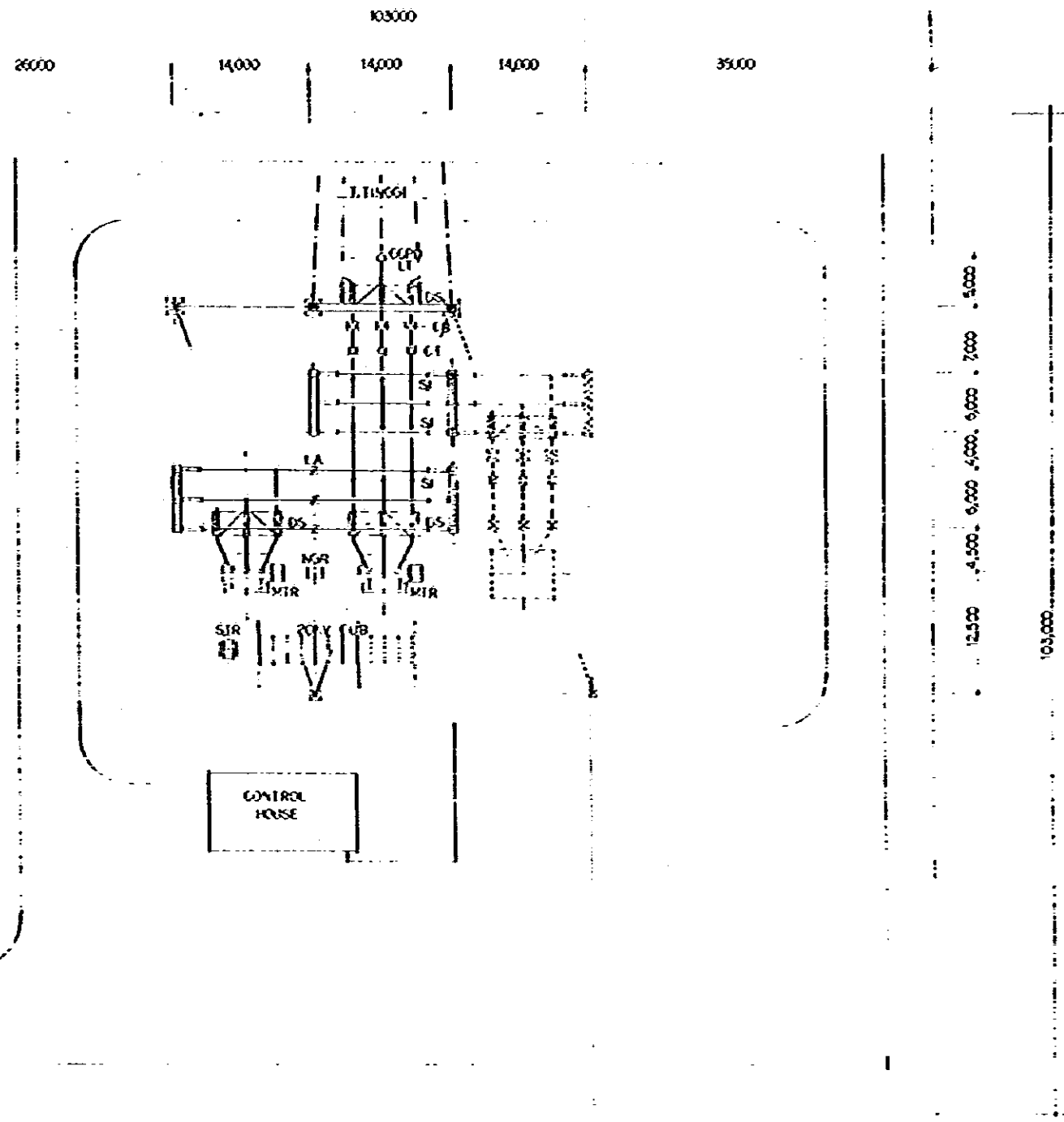
REMARK:  
 ..... FUTURE EXTENSION

NORTH SUMATRA TRANSMISSION LINE PROJECT	
ARRANGEMENT OF OUTDOOR EQUIPMENT	
TEBING TINGGI 5/8	
DWG. NO. NSTL-008	DATE: Feb. 1980



P.S'ANTAR

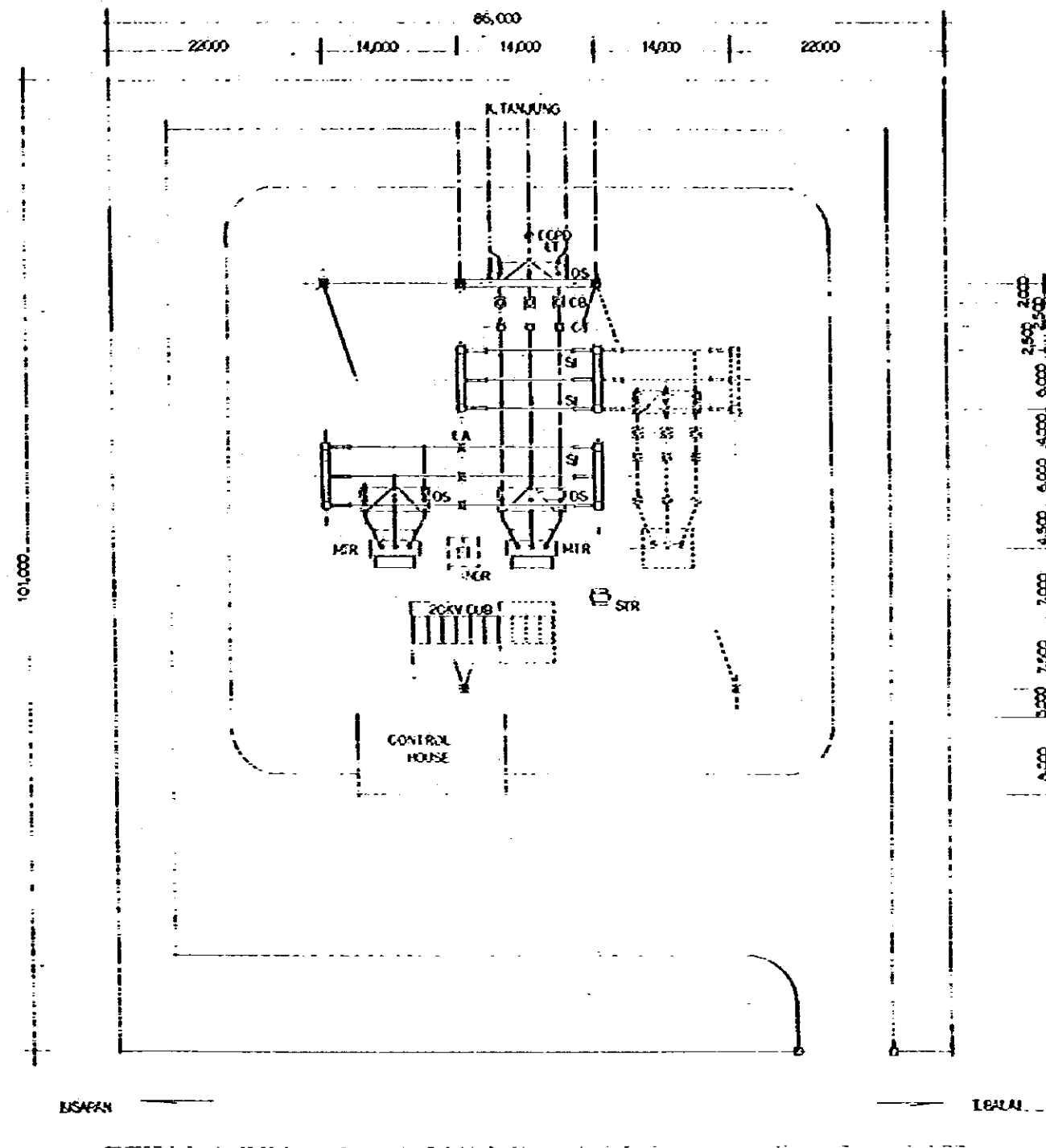
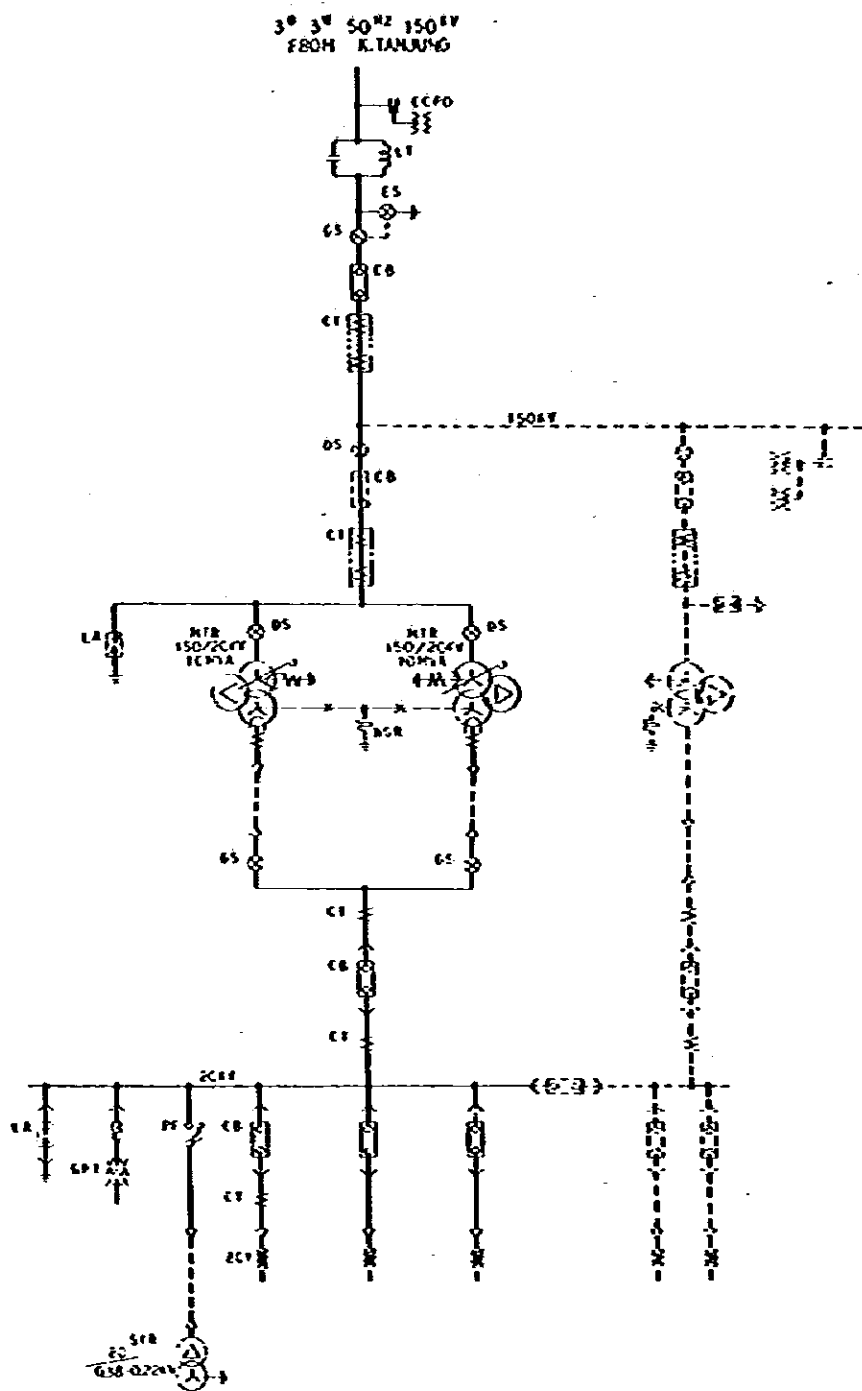
KISARAN



LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

REMARK:  
..... FUTURE EXTENSION

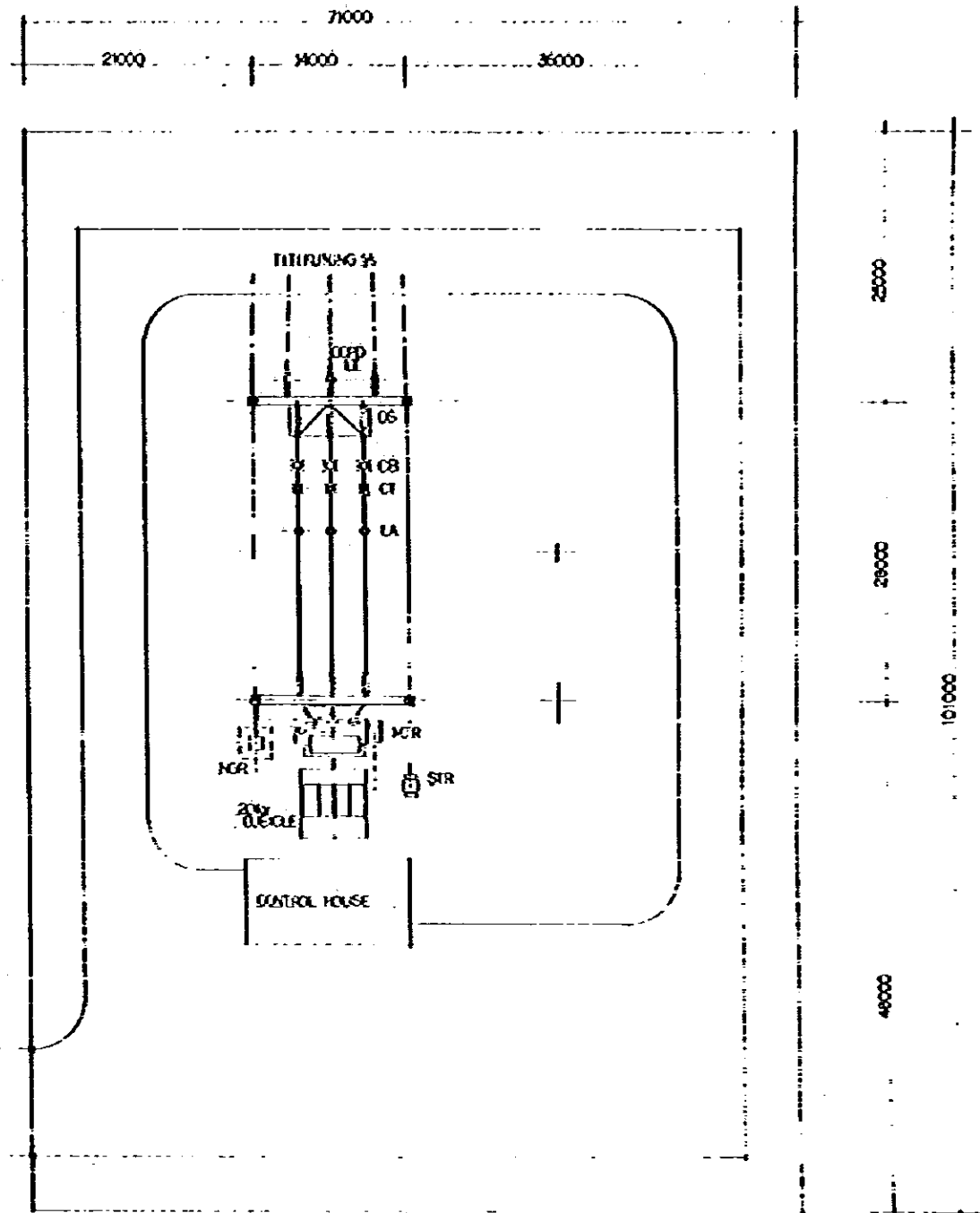
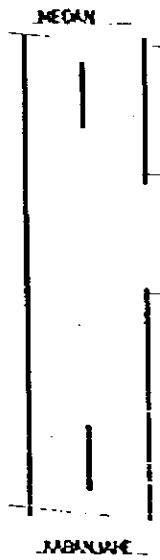
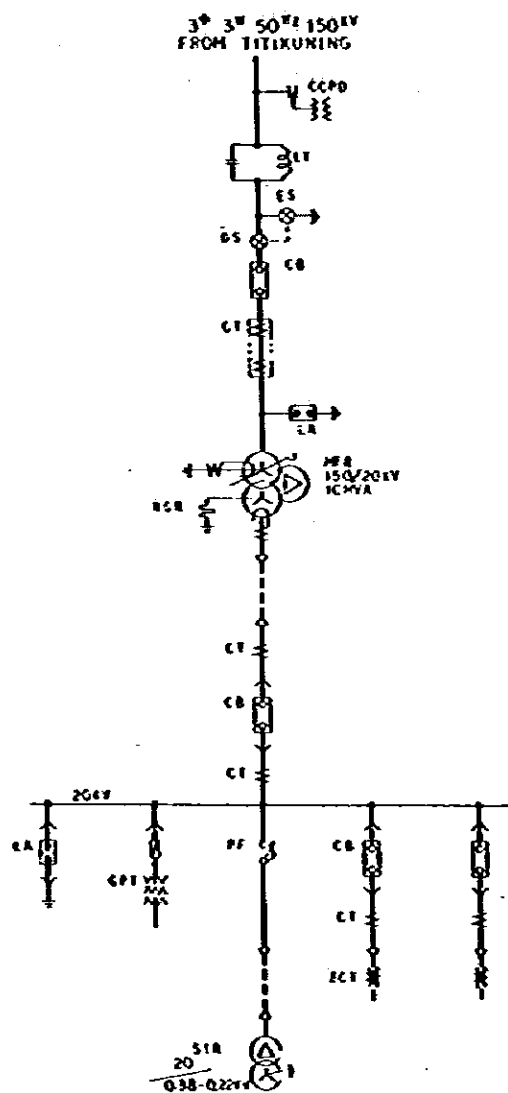
NORTH SUMATRA TRANSMISSION LINE PROJECT  
SINGLE LINE CONNECTION DIAGRAM AND  
ARRANGEMENT OF OUTDOOR EQUIPMENT  
PENATAH SIA. 2R 5/3  
ORG. NO. NSTL-609 | DATE: Feb. 1960



LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
L.A.	LIGHTNING ARRESTER
LT	LINE TRAP

REMARK:  
..... FUTURE EXTENSION

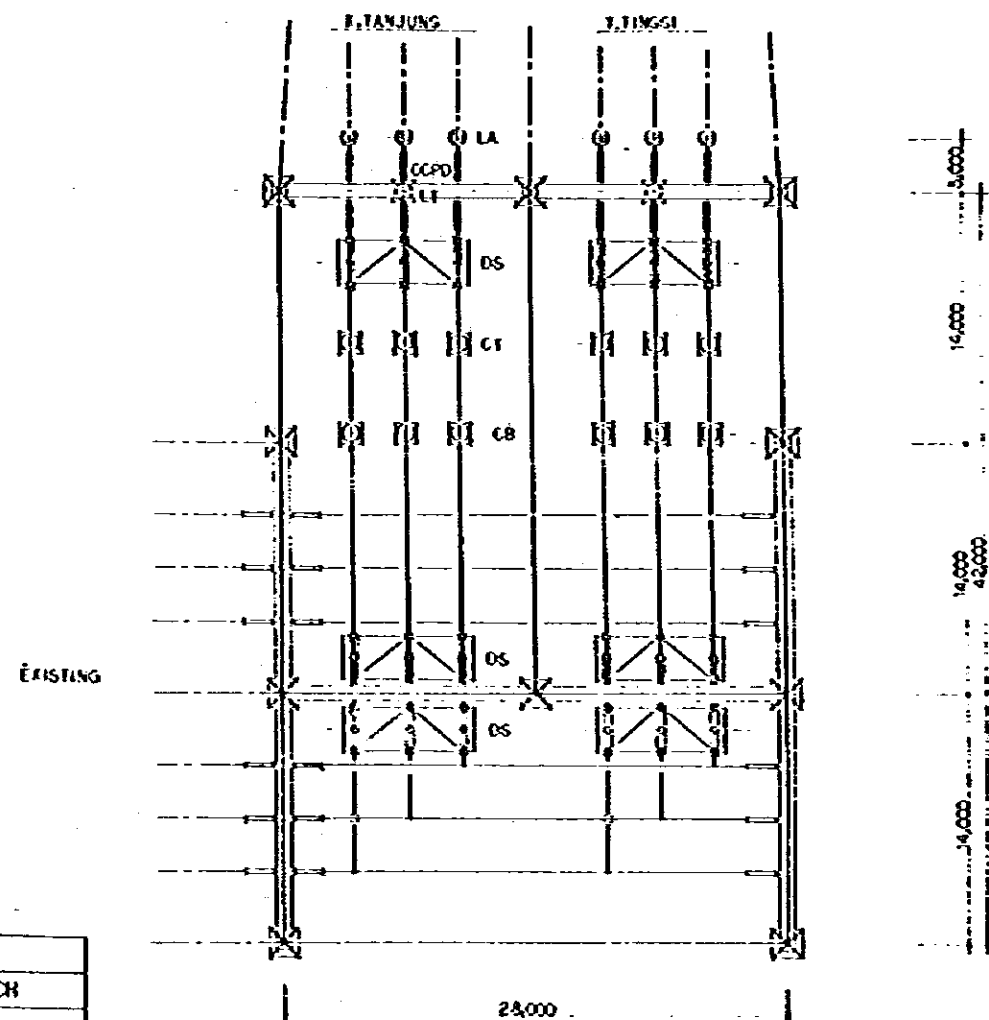
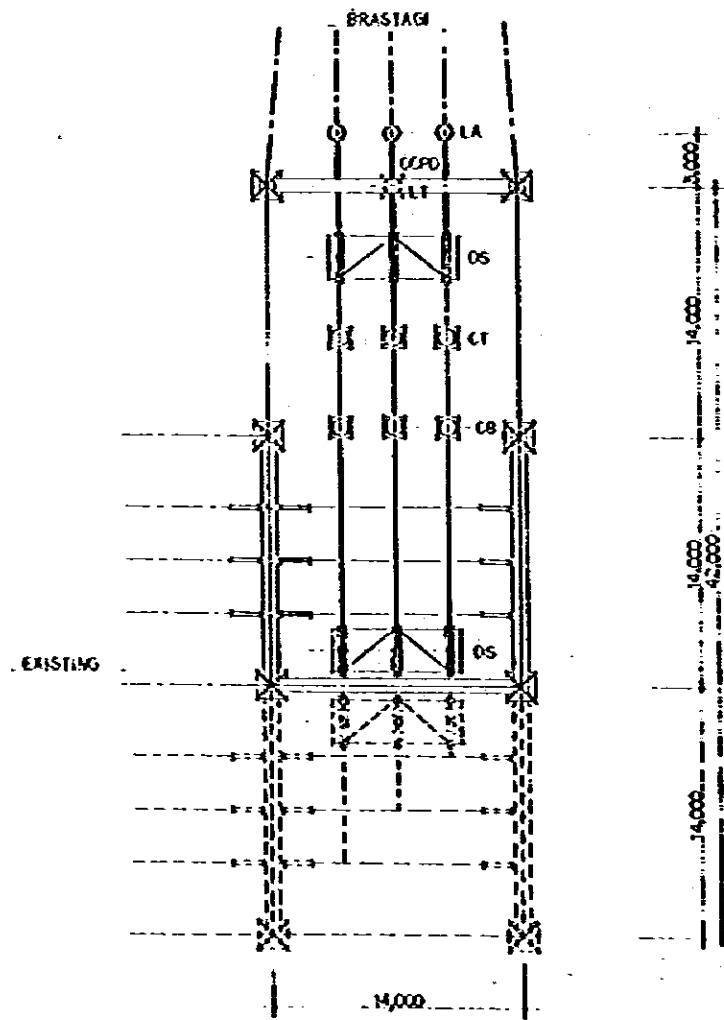
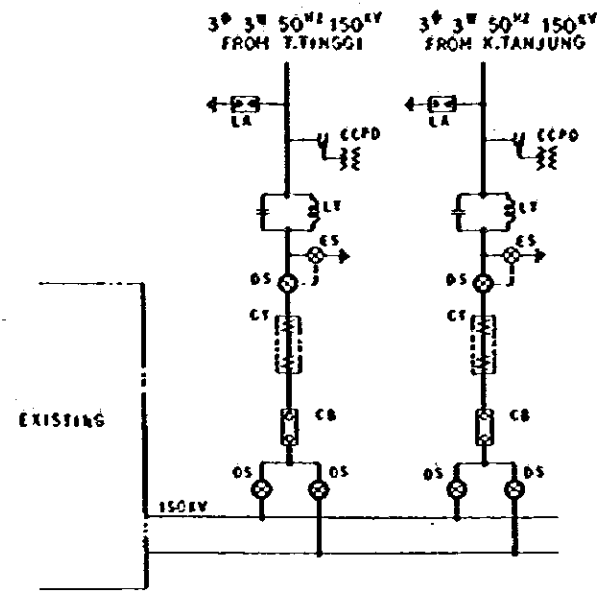
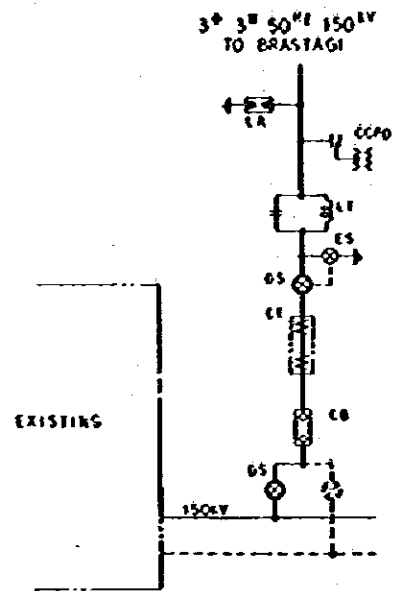
NORTH SUPATRA TRANSMISSION LINE PROJECT  
SINGLE LINE CONNECTION DIAGRAM  
AND ARRANGEMENT OF OUTDOOR EQUIPMENT  
KISARAN 5/5  
DWG. NO. NSTL-010 | DATE: Feb. 1980



LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTNING ARRESTER
LT	LINE TRAP

REMARK:  
 ..... FUTURE EXTENSION

NORTH SUMATRA TRANSMISSION LINE PROJECT  
 SINGLE LINE CONNECTION DIAGRAM AND  
 ARRANGEMENT OF OUTDOOR EQUIPMENT  
 BRASTAGI 5/5  
 DWG. NO. NSTL-011 | DATE: Feb. 1980

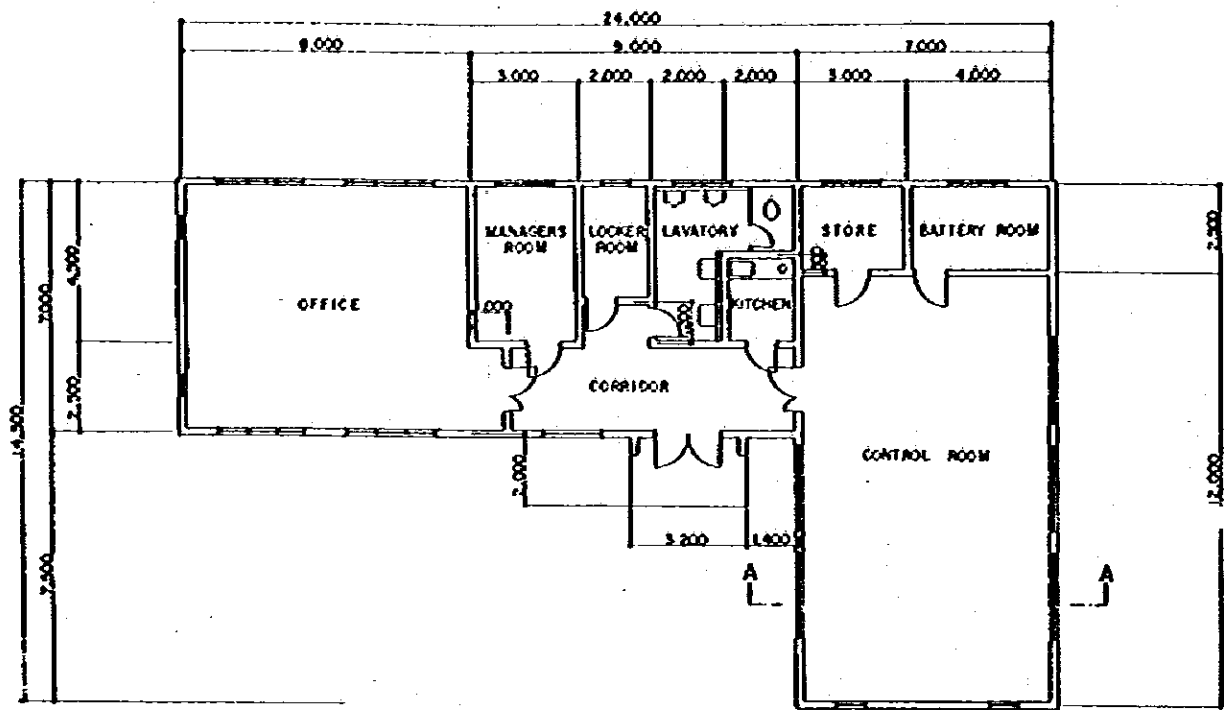


LEGEND	
DS	DISCONNECTING SWITCH
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
PD	POTENTIAL DEVICE
LA	LIGHTING ARRESTER
LT	LINE TRAP

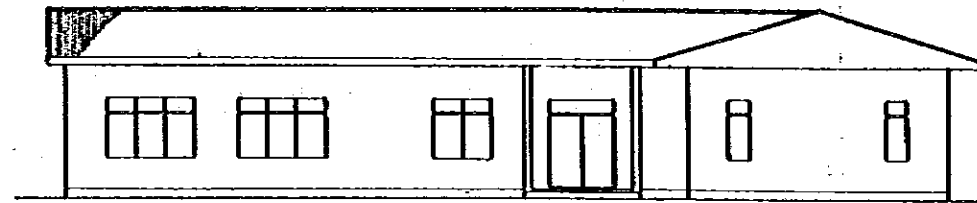
REMARK:  
 ..... FUTURE EXTENSION

NORTH SUMATRA TRANSMISSION LINE PROJECT  
 SINGLE LINE CONNECTION DIAGRAM AND  
 ARRANGEMENT OF OUTDOOR EQUIPMENT  
 MEDAN TIMUR & ITIK KANG  
 DWG. NO. NSIL-012 | DATE: Feb. 1980

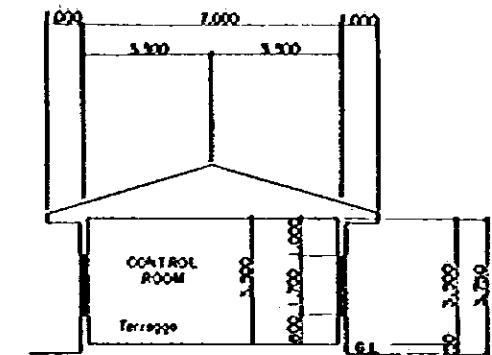




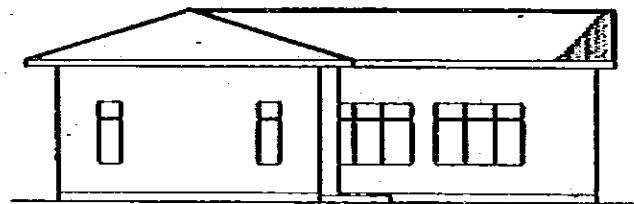
CONTROL BUILDING PLAN



FRONT ELEVATION

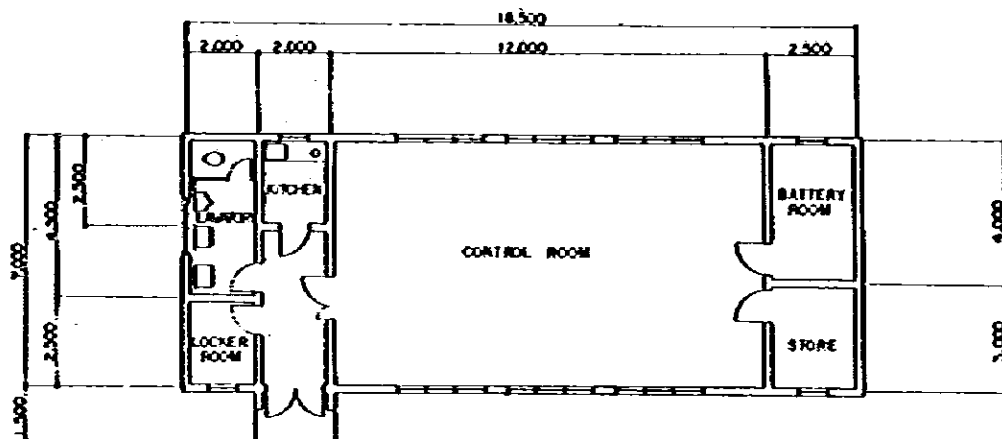


SECTION A - A

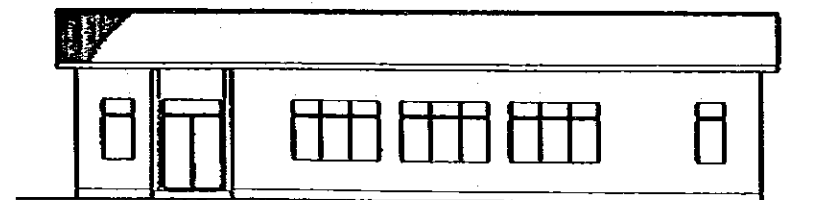


SIDE ELEVATION

- FINISH SCHEDULE**
- Roof : Wooden Truss
  - : Corrugated asbestos cement sheet
  - Floor : Terrace
  - Wall : Brick
  - : Exterior - Vinyl paint on cement mortar fat
  - : Exterior - Colored cement spray fat



CONTROL BUILDING PLAN

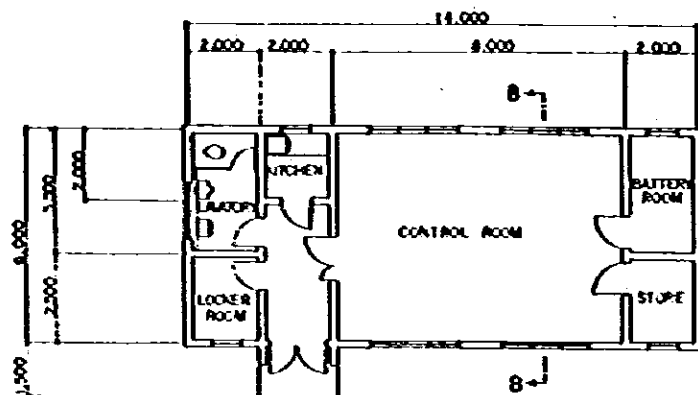


FRONT ELEVATION

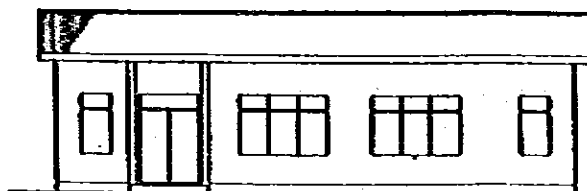


SIDE ELEVATION

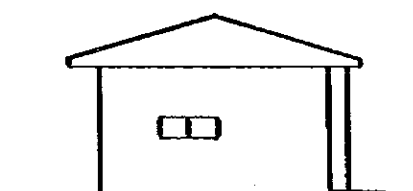
KUALA TANJUNG S/S



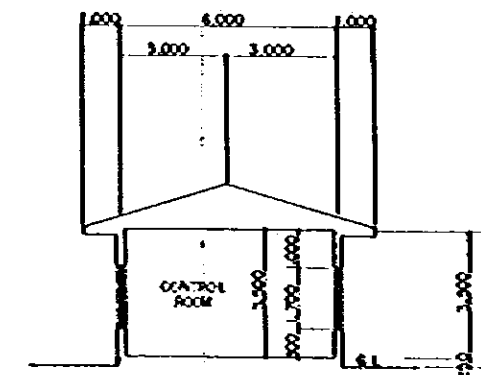
CONTROL BUILDING PLAN



FRONT ELEVATION



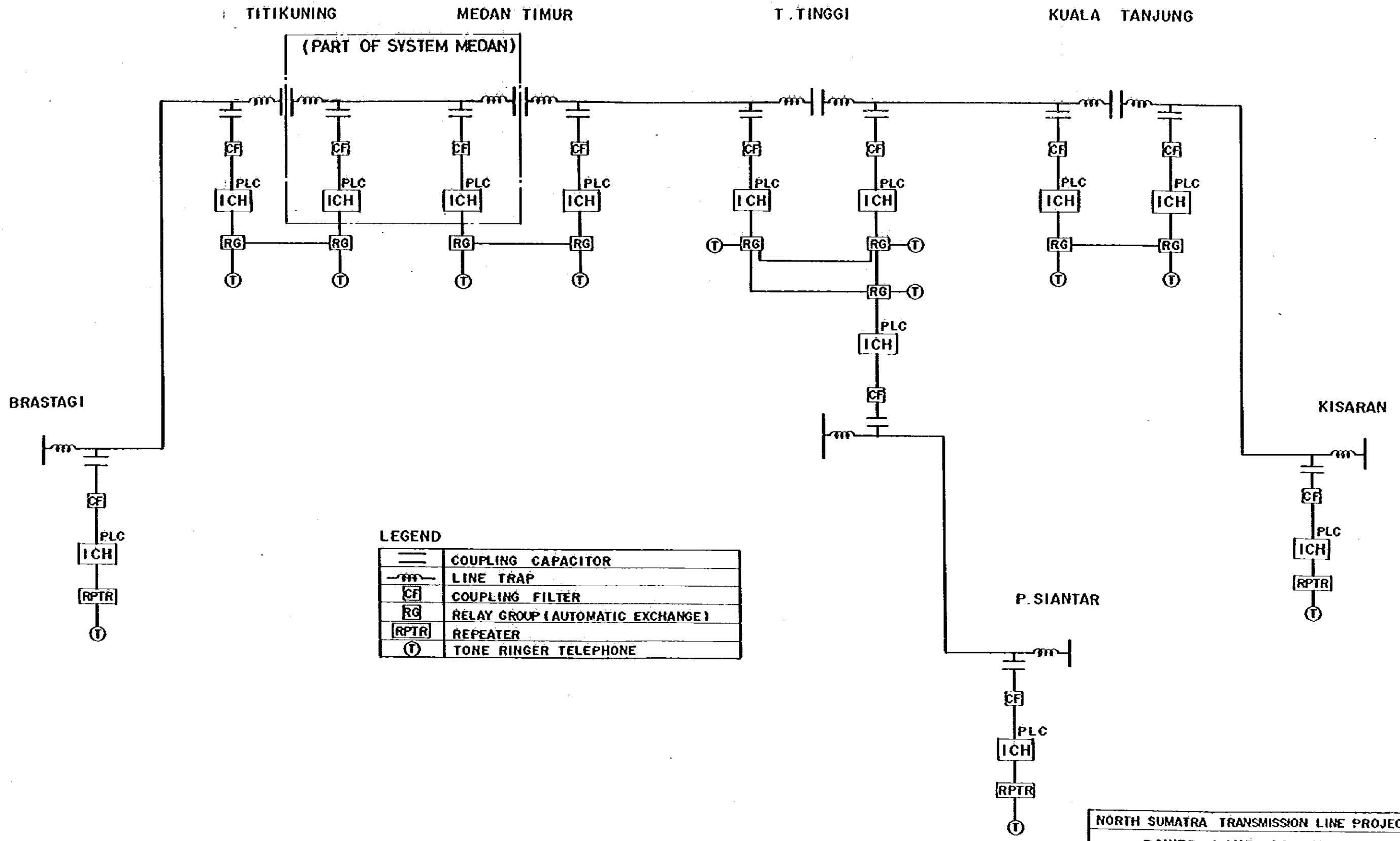
SIDE ELEVATION



SECTION B - B

P. SIANTAR S/S , KISARAN S/S & BRASTAGI S/S

NORTH SUMATRA TRANSMISSION LINE PROJECT	
CONTROL BUILDINGS OF SUBSTATIONS	
ORG. NO. NSTL-013	DATE: Feb. 1980



LEGEND

	COUPLING CAPACITOR
	LINE TRAP
	COUPLING FILTER
	RELAY GROUP (AUTOMATIC EXCHANGE)
	REPEATER
	TONE RINGER TELEPHONE

NORTH SUMATRA TRANSMISSION LINE PROJECT  
 POWER LINE CARRIER  
 TELEPHONE SYSTEM  
 DWG. NO. NSTL - 014 | DATE: Feb. 1980

JICA

3

