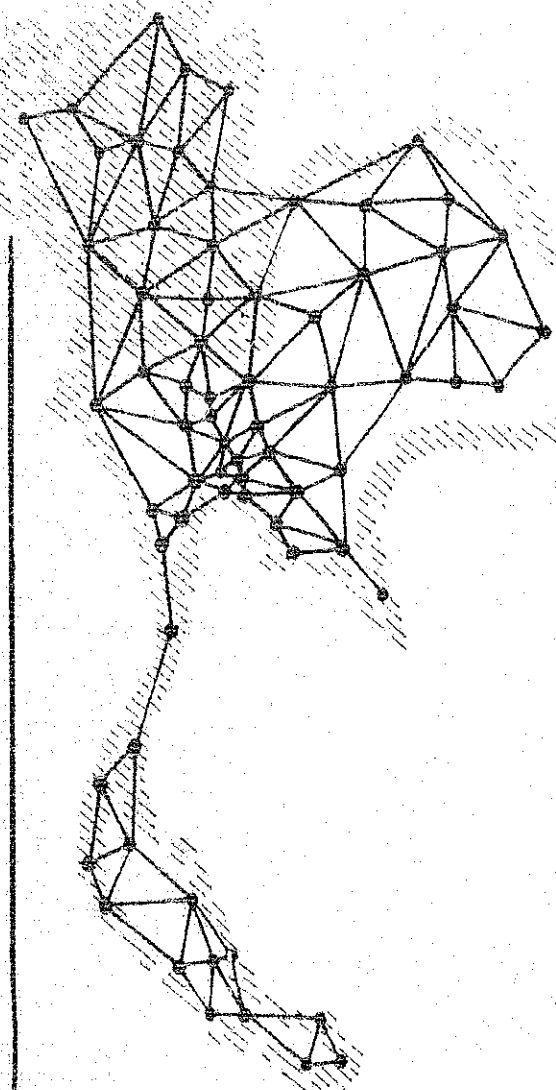


社会開発協力部報告書
MINISTRY OF THAILAND
OF COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

ROAD DEVELOPMENT STUDY IN THE NORTHERN REGION

PHASE 1: PLANNING



FINAL REPORT
VOLUME 3 DRAWINGS
JUNE 1981

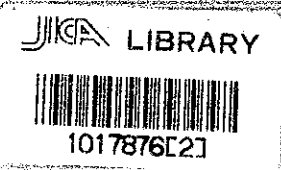
L122
61.4
SDF

JAPAN INTERNATIONAL
COOPERATION AGENCY

24

SDF
CR(3)
81-107

国際協力事業団	
受入 月日 84. 9. 25	L/22
登録No. 9043	61.4 SDF

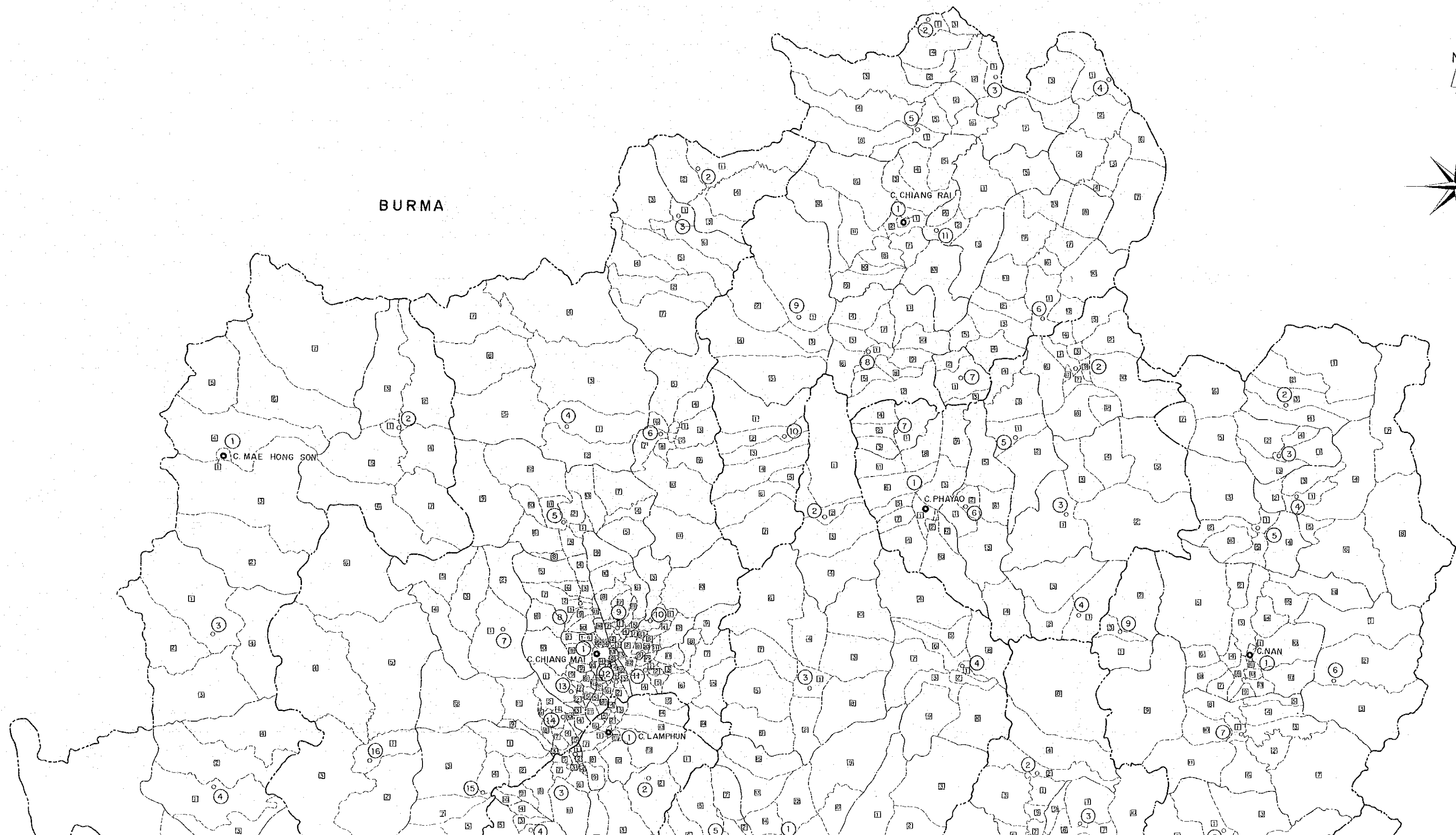


ROAD DEVELOPMENT STUDY IN THE NORTHERN REGION PHASE 1: PLANNING

VOLUME 3 DRAWINGS

SHEET NUMBER	CONTENTS OF DRAWINGS
DWG-1	AMPHOE (District) AND TAMBON (Sub-District) BOUNDARIES IN THE NORTHERN REGION
DWG-2	CROP PRODUCTION IN THE NORTHERN REGION
DWG-3	ROAD NETWORKS IN THE NORTHERN REGION
DWG-4	ACCESSIBILITY STUDY: INTER-ADJACENT AMPHOE LINKAGE
DWG-5	ACCESSIBILITY STUDY: INTER-CHANGWAT LINKAGE
DWG-6	ACCESSIBILITY STUDY: INTRA-CHANGWAT LINKAGE
DWG-7	ACCESSIBILITY STUDY: INTRA-MARKET ZONE LINKAGE
DWG-8	POTENTIALS ALONG UNPAVED ROADS (1) – POPULATION –
DWG-9	POTENTIALS ALONG UNPAVED ROADS (2) – LAND CAPABILITY –
DWG-10	ROAD REQUIREMENT INDEX
DWG-11	PROPOSED ROUTES

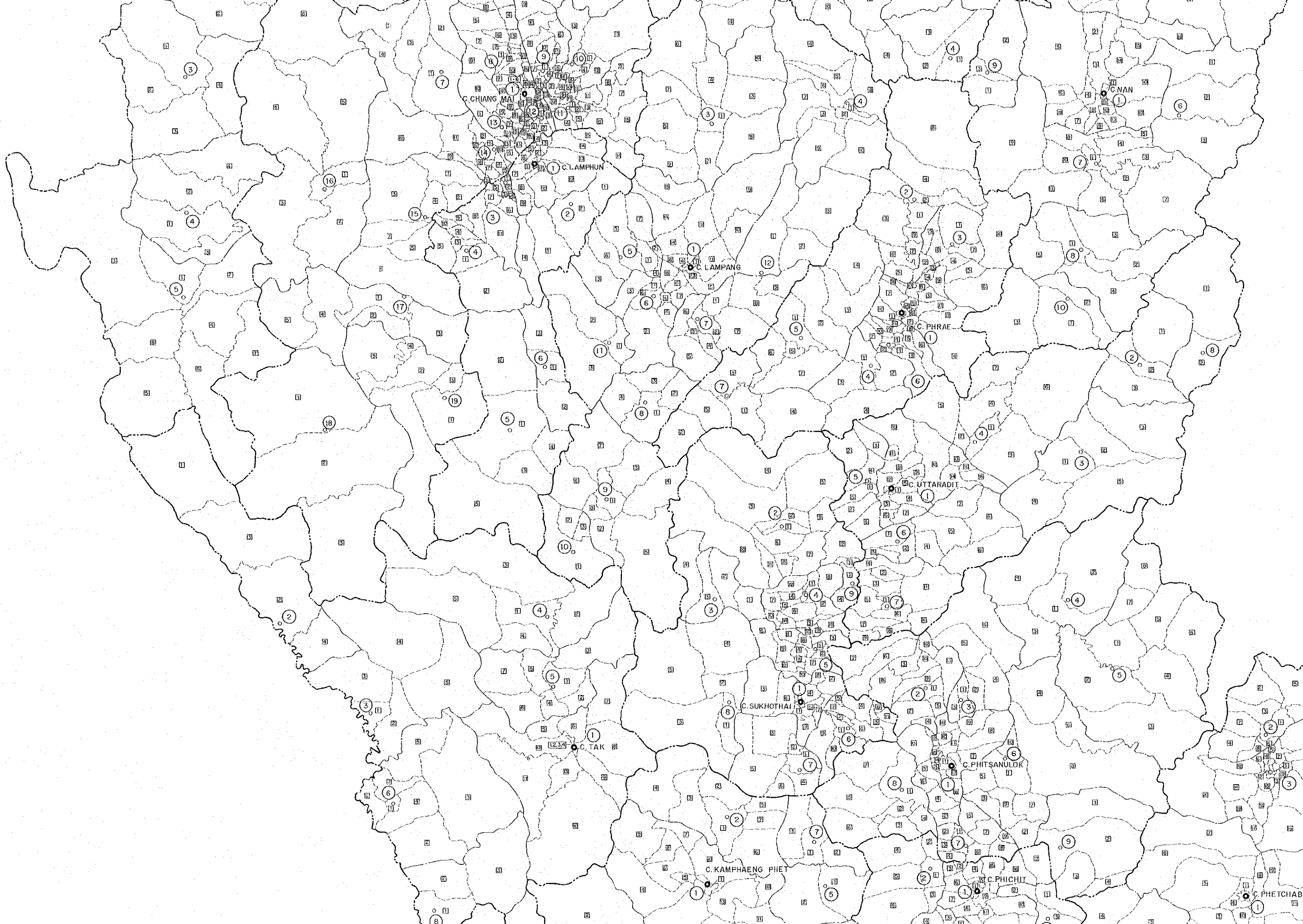
TAMBON INDEX

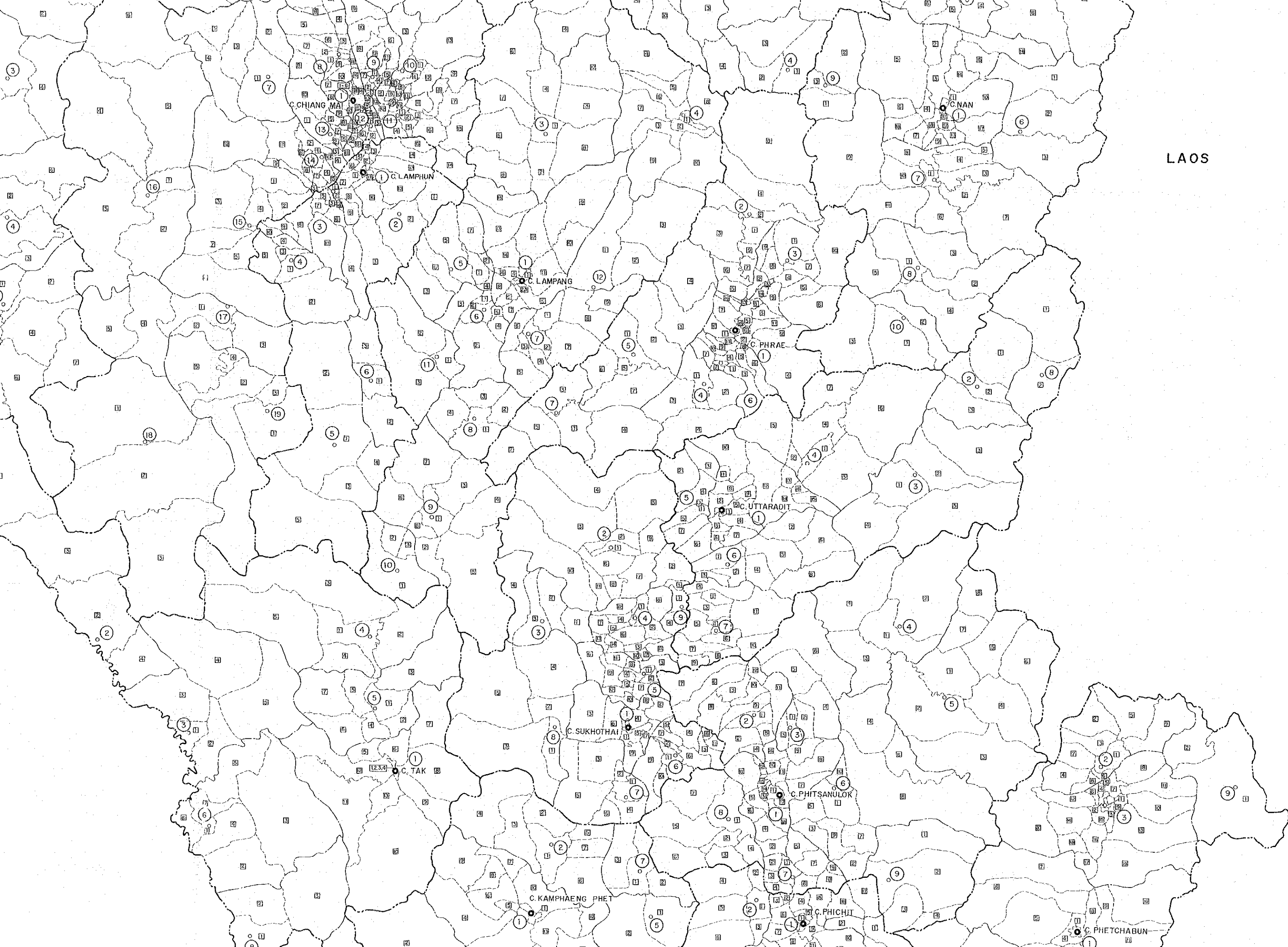


0 5 10 20 KM

TAMBON INDEX







LEGEND

CODE NO.



AMPHOE CODE NO.



TAMBON CODE NO.

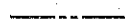


LOCATION OF CHANGWAT OFFICE

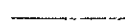


LOCATION OF AMPHOE OFFICE

BOUNDARY



CHANGWAT BOUNDARY



AMPHOE BOUNDARY

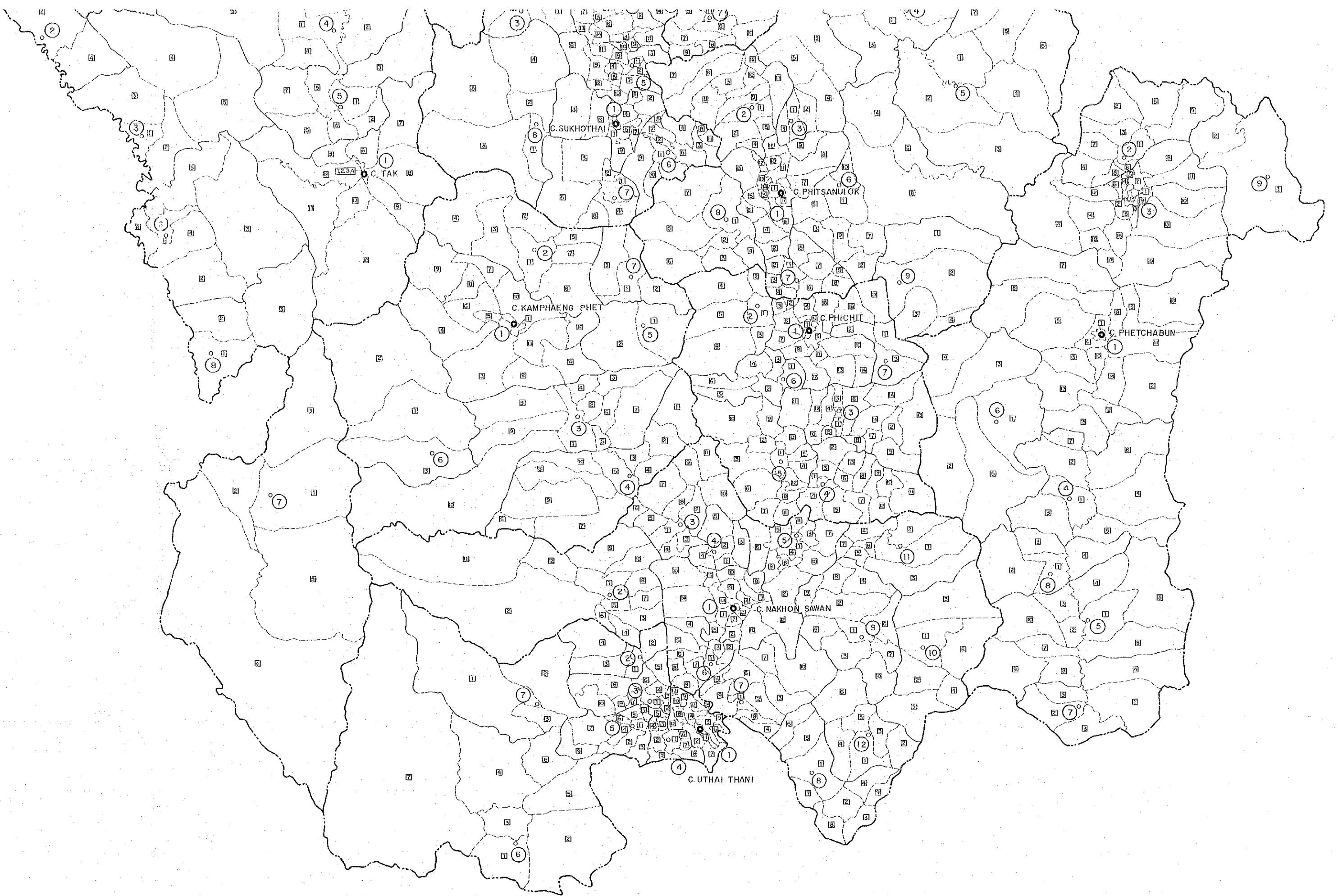


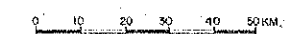
TAMBON BOUNDARY



NO.
NO.
NGWAT OFFICE
HOE OFFICE

DARY
RY
RY

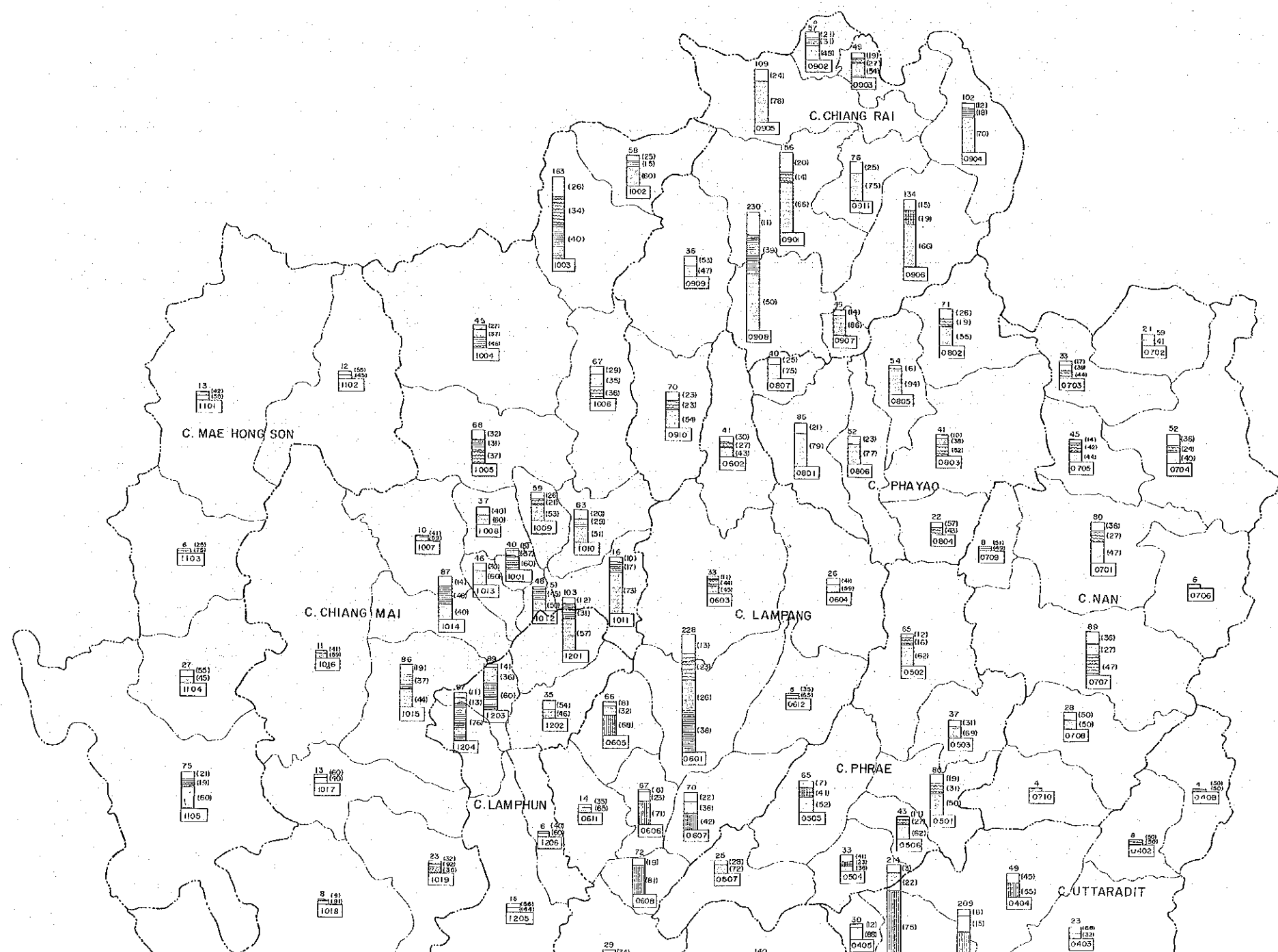


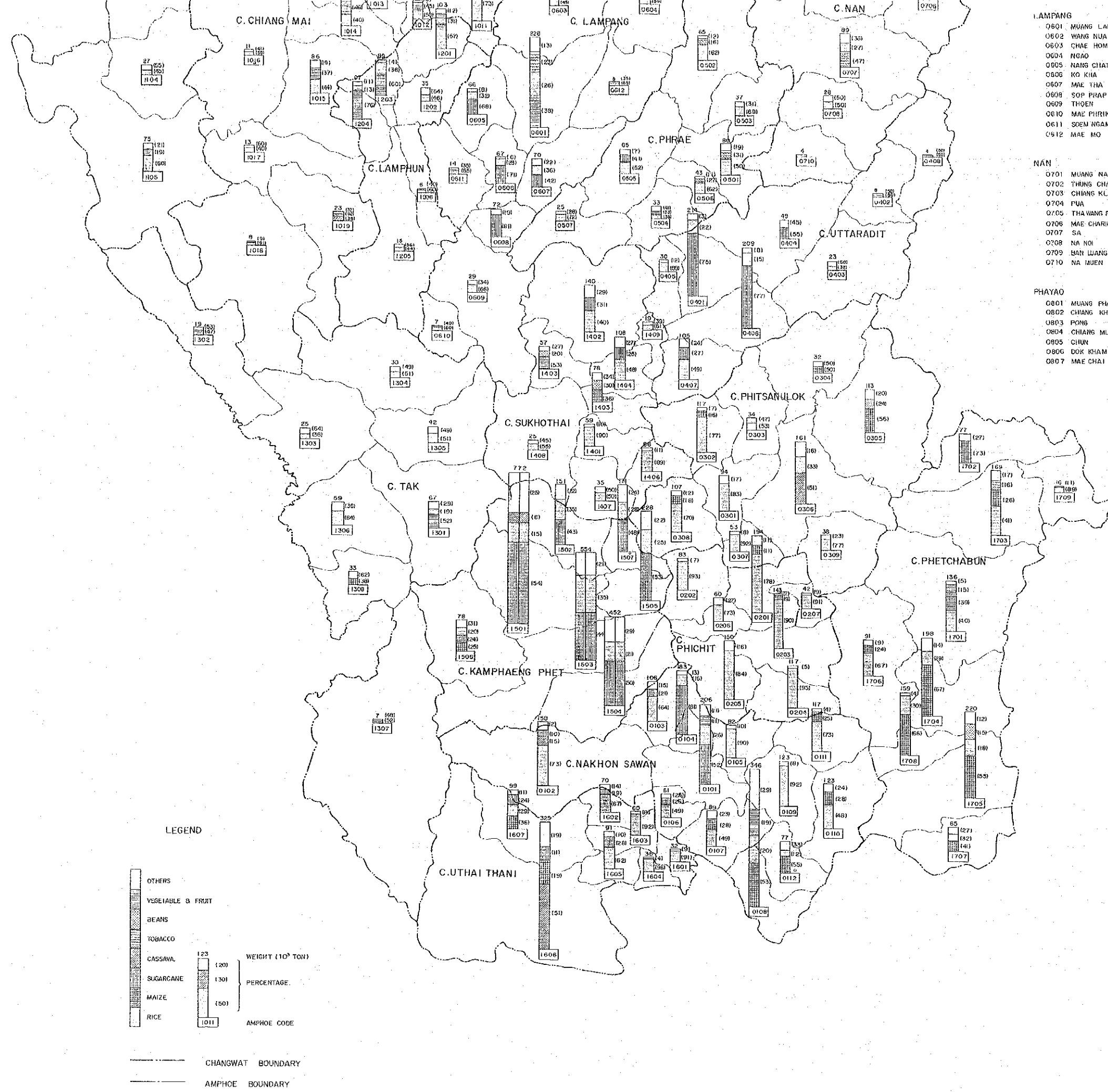


CROP PRODUCTION IN NORTHERN REGION (CROP YEAR 1978 - 1979)

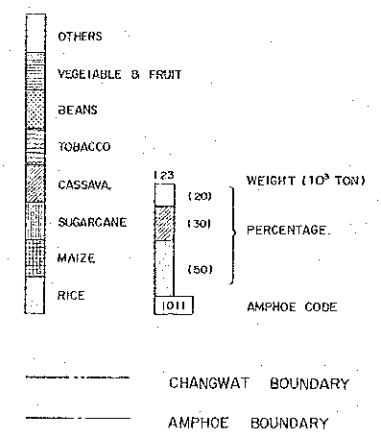
AMPHOE CODE AND NAME

NAKHON SAWAN	CHIANG RAI
0101 MUANG NAKHON SAWAN	0901 MUANG CHIANG RAI
0102 LAT YAO	0902 MAE SAI
0103 BANPHOT PHISAI	0903 CHIANG SAEN
0104 KAO LIEO	0904 CHIANG KHONG
0105 CHUMSAENG	0905 MAE CHIAN
0106 KROK PHRA	0906 THOENG
0107 PHAYUHA KHIRI	0907 PA DAET
0108 TAKILI	0908 PHAN
0109 THA TAKO	0909 MAE SUAI
0110 PHAISALI	0910 WIANG PA PAO
0111 NONG BUA	0911 WIANG CHAI
0112 TAK FA	
	CHIANG MAI
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	1002 MAE AI
	1003 FANG
	1004 CHIANG DAO
	1005 MAE TAENG
	1006 PHRAO
	1007 SAMOENG
	1008 MAE RIM
	1009 SAN SAI
	1010 DOI SAKET
	1011 SAN KAMPHAENG
	1012 SARAPHI
	1013 HUANG DONG
	1014 SAN PA TONG
	1015 CHOM THONG
	1016 MAE CHAEM
	1017 HOT
	1018 OMKHOI
	1019 DOI TAO
	MAE HONG SON
	1101 MUANG MAE HONG SON
	1102 PAI
	1103 KHUN YUAM
	1104 MAE LA NOI
	1105 MAE SARIANG
	LAMPHUN
	1201 MUANG LAMPHUN
	1202 MAE THA
	1203 PA SANG
	1204 BAN HONG
	1205 LI
	1206 THUNG HUA CHANG
	TAK
	1301 MUANG TAK
	1302 THA SONG YANG
	1303 MAE RAMAT
	1304 SAM NGAO
	1305 BAN TAK
	1306 MAE SOT
	1307 UMPHANG
	1308 PHOP PHRA
	SUKHOTHAI
	1401 MUANG SUKHOTHAI
	1402 SI SATCHANALAI
	1403 THUNG SALAM
	1404 SAWANHALOK
	1405 SI SAMRONG
	1406 KONG KRAILAT
	1407 KHIRI MAT
	1408 BAN DAM LAN HOI
	1409 SI NAKHON
	KAMPHAENG PHET
	1501 MUANG KAMPHAENG PHET
	1502 PHIRAN KRATAI
	1503 KHILONG KHILUNG
	1504 KHANU WOLAKSABURI
	1505 SAI NGAM
	1506 KLONG LAN
	1507 LAN KRABU
	UTARADIT
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	1603 NAM PAT
	1604 THA PLA
	1605 LAPLAE
	1606 TRON
	1607 PHICHAI
	1608 BAN KHOK
	PHRAE
	0501 MUANG PHRAE
	0502 SONG
	0503 RONG KWANG
	0504 DEN CHAI
	0505 LONG
	0506 SUNG MEN
	0507 WANG CHIN
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	0603 CHAE HOM
	0604 NSAO
	0605 HANG CHAT
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	0900 BAN PHAYAO





LEGEND



- LAMPANG**
0601 MUANG LAMPANG
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0603 CHAE HOM
0604 NGAO
0605 NANG CHAI
0606 KO KIA
0607 MAE THA
0608 SOP PRAP
0609 THOEN
0610 MAE PHRIK
0611 SOEN NGAM
0612 MAE MO
- NAN**
0701 MUANG NAN
0702 THUNG CHANG
0703 CHIANG KLANG
0704 PUA
0705 THA WANG PHA
0706 MAE CHARIM
0707 SA
0708 NA NOI
0709 BAN LUANG
0710 NA MUEN
- PHAYAO**
0801 MUANG PHAYAO
0802 CHIANG KHAM
0803 PONG
0804 CHIANG MUAN
0805 CHUN
0806 DOK KHAM LAI
0807 MAE CHAI

- SAM NGAO**
1304 SAM NGAO
1305 BAN TAK
1306 MAE SOT
1307 UMPIANG
1308 PHOP PHRA
- SUKHOTHAI**
1401 MUANG SUKHOTHAI
1402 SI SATCHANALAI
1403 THUNG SALAM
1404 SAWANKHALOK
1405 SI SAMRONG
1406 KONG KRAILAY
1407 KHURI MAT
1408 BAN DAN LAN HOI
1409 SI NAKHON
- KAMPHAENG PHET**
1501 MUANG KAMPHAENG PHET
1502 PHUAN KRATAI
1503 KHONG KHUANG
1504 KHANU WOLAKSABURI
1505 SAI NGAM
1506 KLONG LAN
1507 LAN KRABU
- UTHAI THANI**
1601 MUANG UTHAI THANI
1602 SAWANG AROM
1603 THAP THAN
1604 NONG KHAYANG
1605 NONG CHANG
1606 BAN RAI
1607 LAN SAK
- PHETCHABUN**
1701 MUANG PHETCHABUN
1702 LOM KAO
1703 LOM SAK
1704 NONG PHAI
1705 WICHIAN BURI
1706 CHON DAEN
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0 5 10 20 30 40 50 K.M
S : 1:750,000

ROAD NETWORK



BURMA

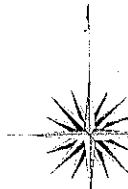
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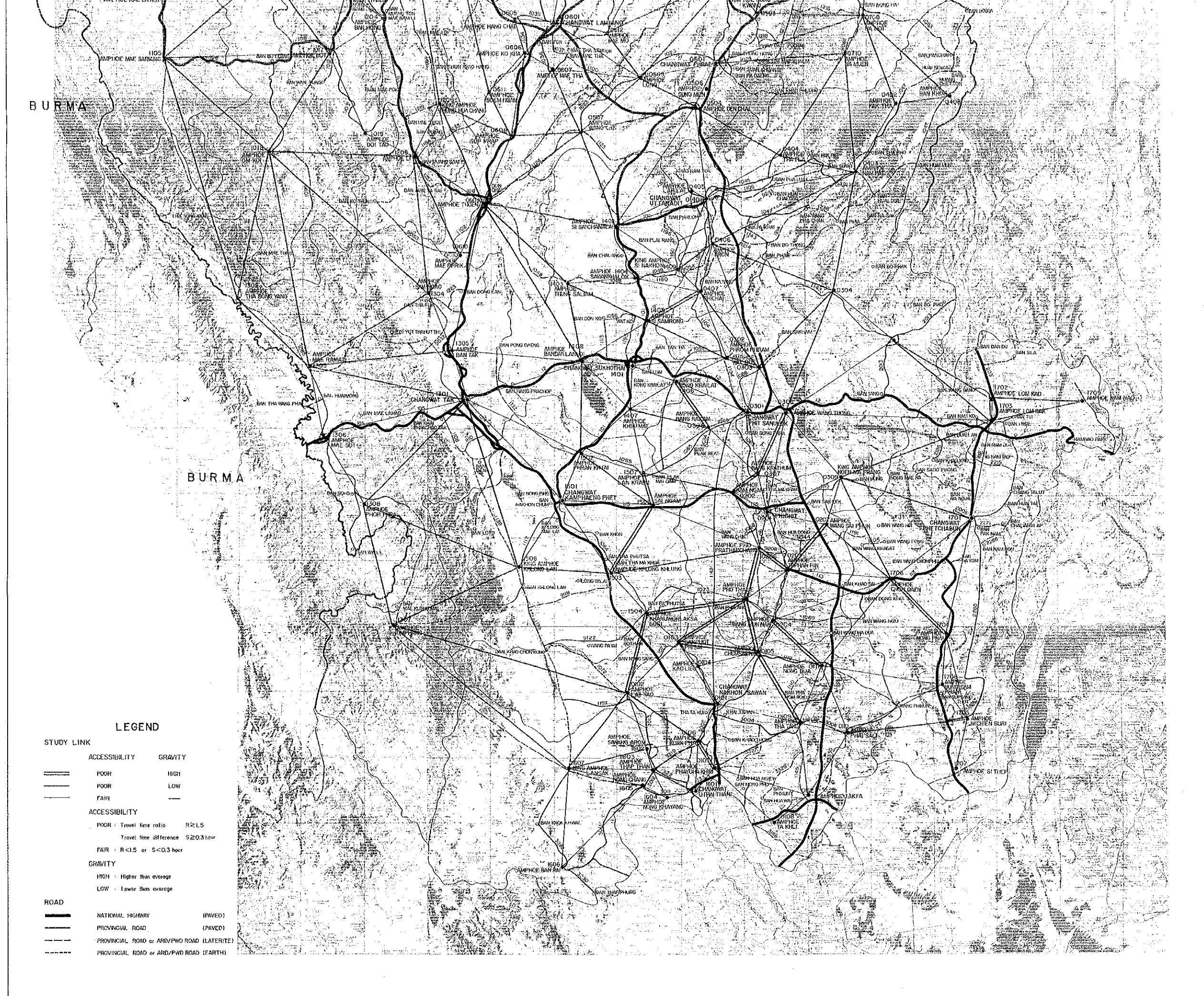
- | | | |
|--|--|---------|
| | NATIONAL HIGHWAY | (PAVED) |
| | PROVINCIAL ROAD | (PAVED) |
| | PROVINCIAL ROAD or ARD ROAD (LATERITE) | |
| | PROVINCIAL ROAD or ARD ROAD (EARTH) | |
| | OTHERS ROAD | |
| | NATIONAL BOUNDARY | |
| | CHANGWAT BOUNDARY | |
| | RIVER, STREAM or RESERVOIR | |

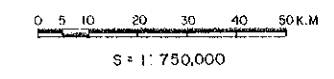


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S = 1:750,000

ACCESSIBILITY ; INTER-ADJACENT AMPHOE LINKAGE







ACCESSIBILITY ; INTER-CHANGWAT LINKAGE





LEGEND

STUDY LINK

ACCESSIBILITY	GRAVITY
POOR	HIGH
POOR	LOW
FAIR	

ACCESSIBILITY
POOR : Travel time ratio ≥ 1.5
Travel time difference ≥ 0.3 hour
FAIR : $R < 1.5$ or $S < 0.3$ hour

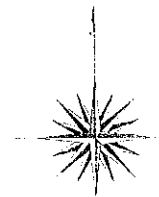
GRAVITY
HIGH : Higher than average
LOW : Lower than average

ROAD

NATIONAL HIGHWAY	(PAVED)
PROVINCIAL ROAD	(PAVED)
PROVINCIAL ROAD or ARD/PWD ROAD (LATERITE)	
PROVINCIAL ROAD or ARD/PWD ROAD (EARTH)	

0 5 10 20 30 40 50 K.M.
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ACCESSIBILITY ; INTRA - CHANGWAT LINKAGE



BURMA

BURMA

LEGEND

STUDY LINK

ACCESSIBILITY GRAVITY



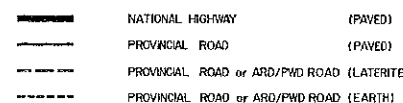
ACCESSIBILITY

POOR : Travel time ratio $R \geq 1.5$
Travel time difference $S \geq 0.3$ hour
FAIR : $R < 1.5$ or $S < 0.3$ hour

GRAVITY

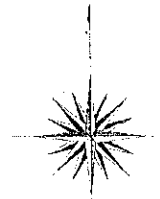
HIGH : Higher than average
LOW : Lower than average

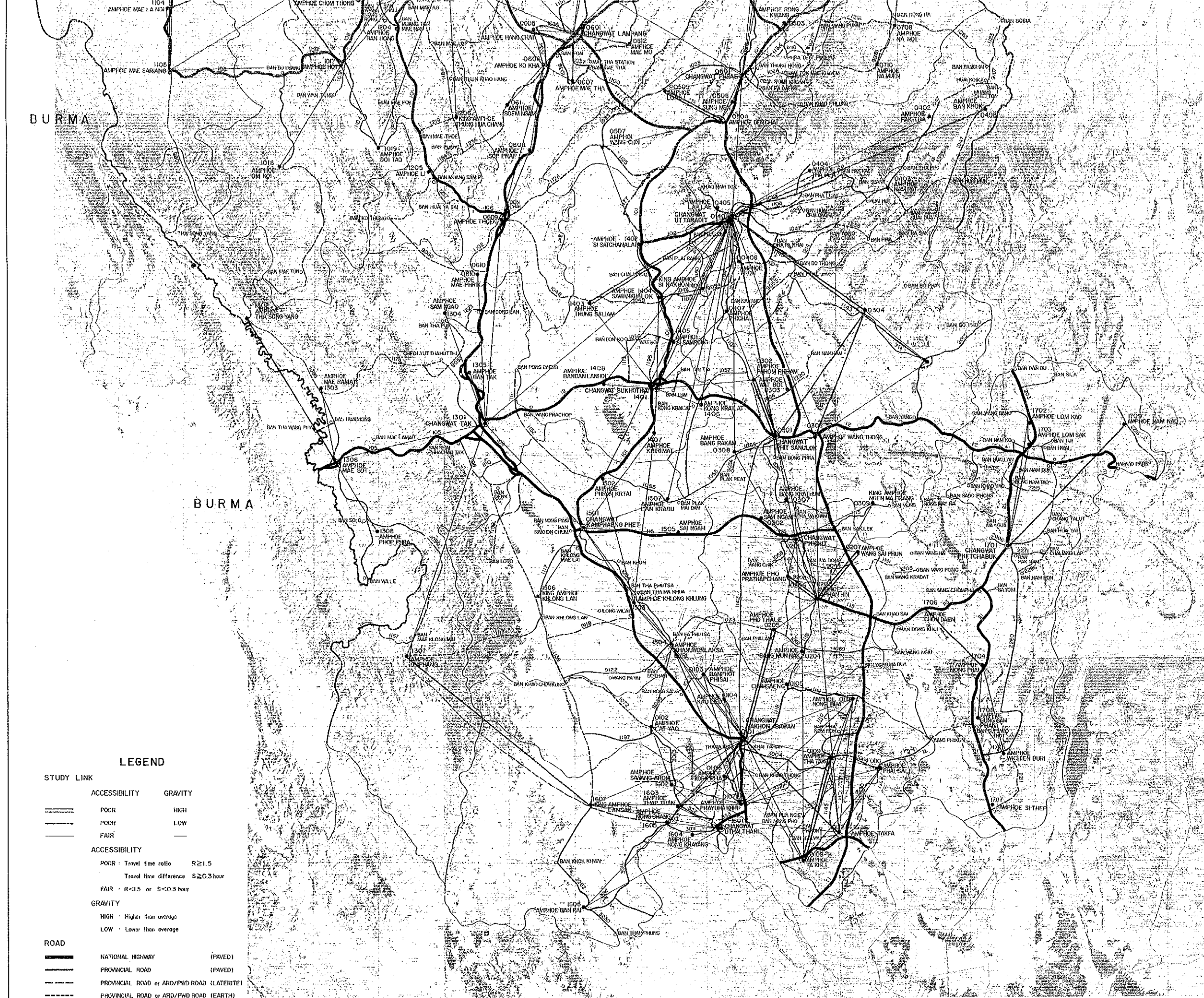
ROAD



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ACCESSIBILITY ; INTRA - MARKET ZONE LINKAGE

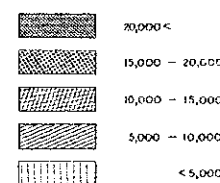




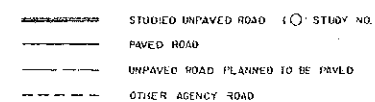
BURMA

LEGEND

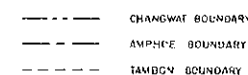
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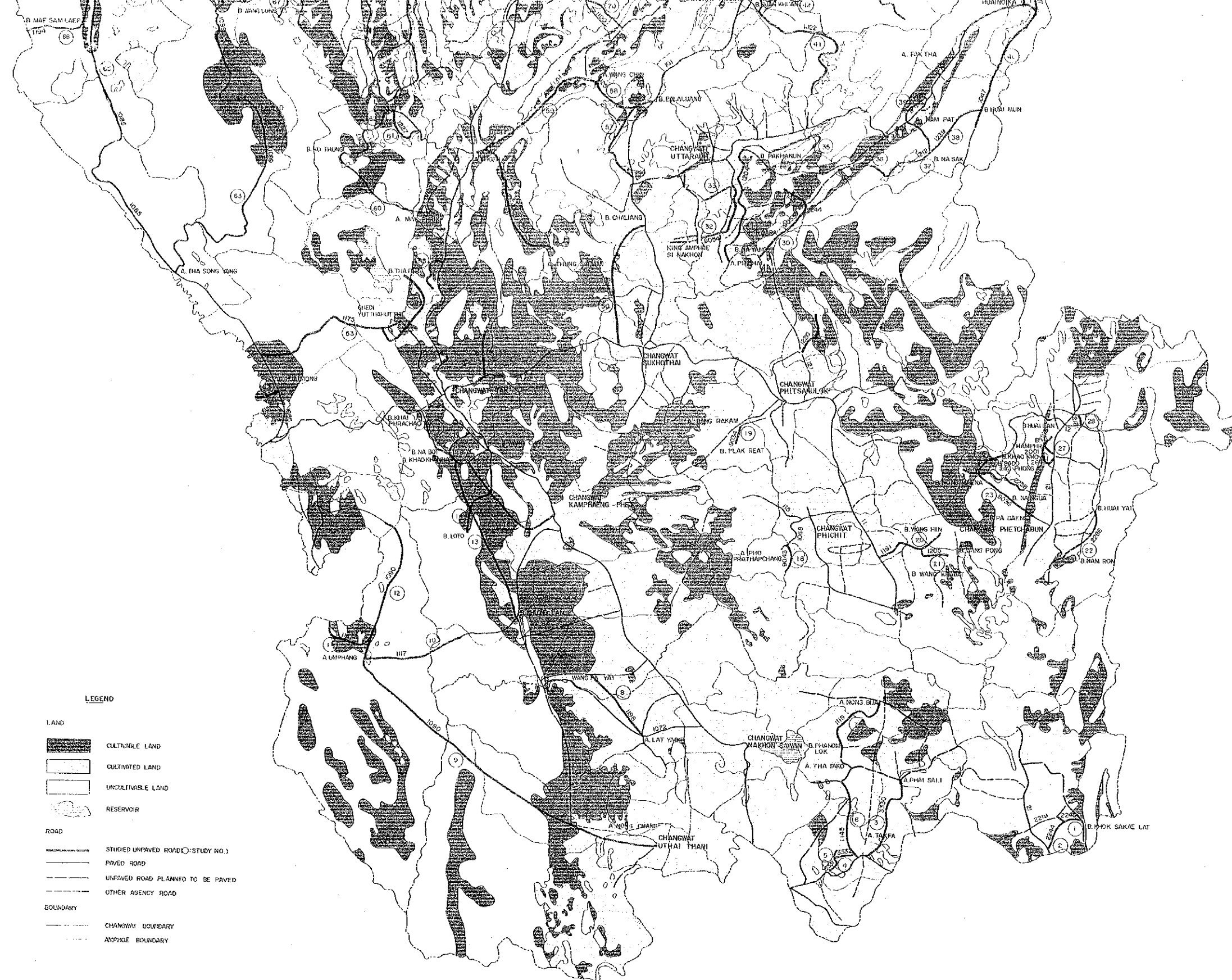
ROAD



BOUNDARY



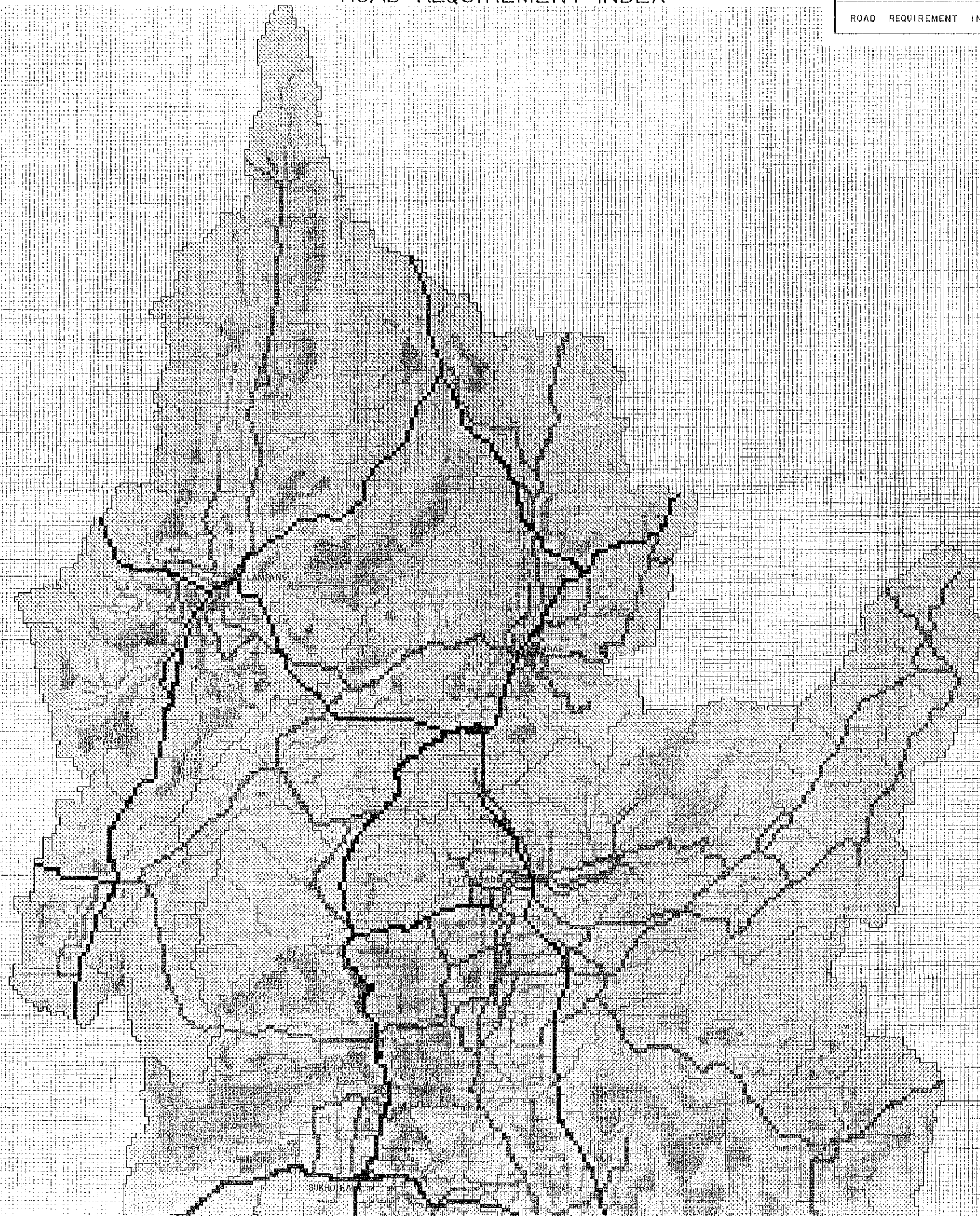


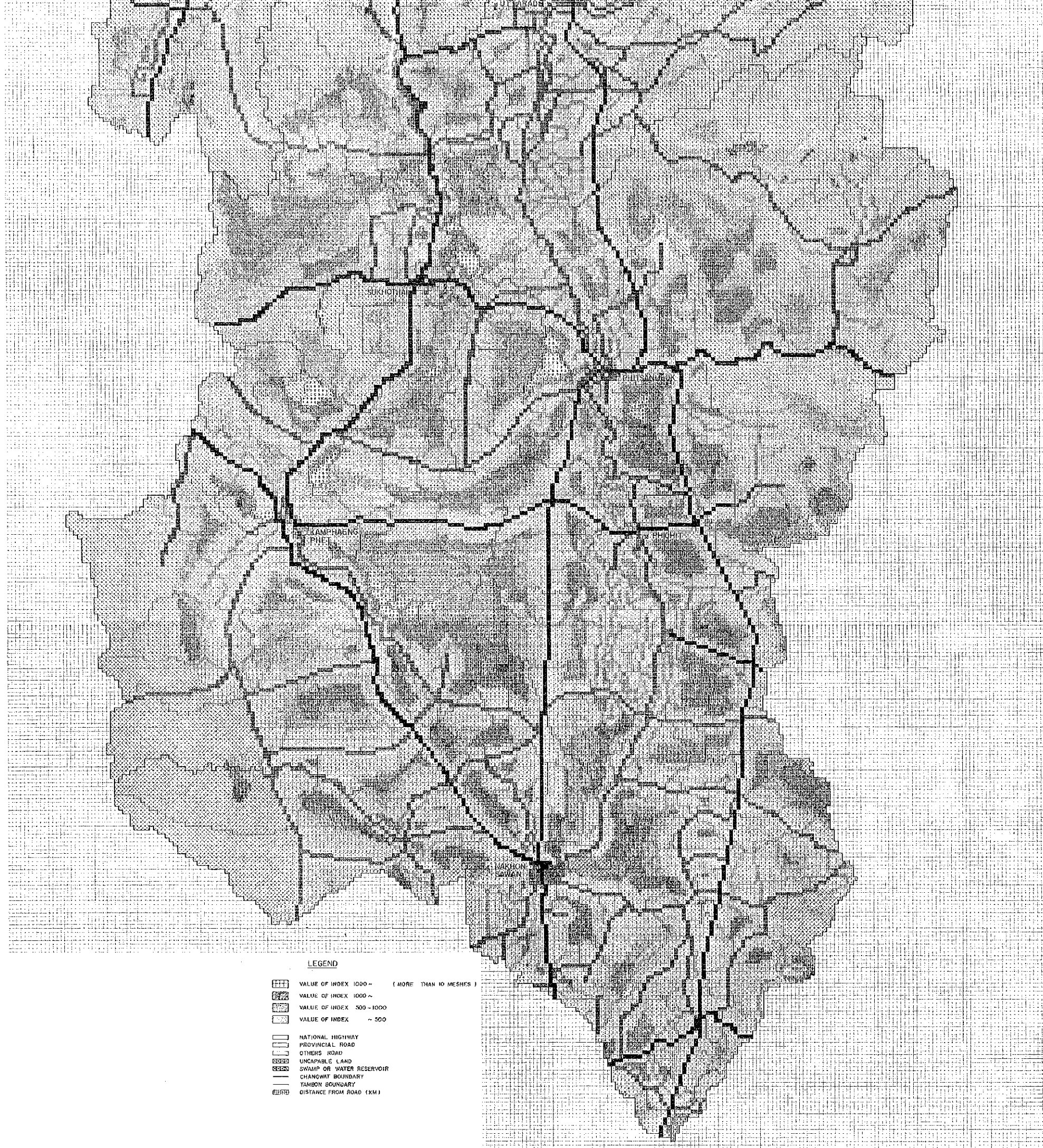


ROAD REQUIREMENT INDEX

ROAD DEVELOPMENT STUDY IN THE
NORTHERN REGION

ROAD REQUIREMENT INDEX DWG-10

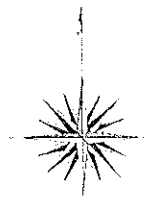




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S = 1:750,000

PROPOSED ROUTES



BURMA

LEGEND

- SHORT TERM PROJECTS
MEDIUM TERM PROJECTS
LONG TERM PROJECTS
- NATIONAL HIGHWAY (PAVED)
PROVINCIAL ROAD (PAVED)
PROVINCIAL ROAD or ARD ROAD (LATERITE)
PROVINCIAL ROAD or ARD ROAD (EARTH)
OTHERS ROAD
NATIONAL BOUNDARY
CHANGWAT BOUNDARY
RIVER, STREAM or RESERVOIR



JICA