

# APPENDIX-VI

ROAD, BRIDGE AND JETTY

**APPENDIX VI: ROAD BRIDGE AND JETTY**

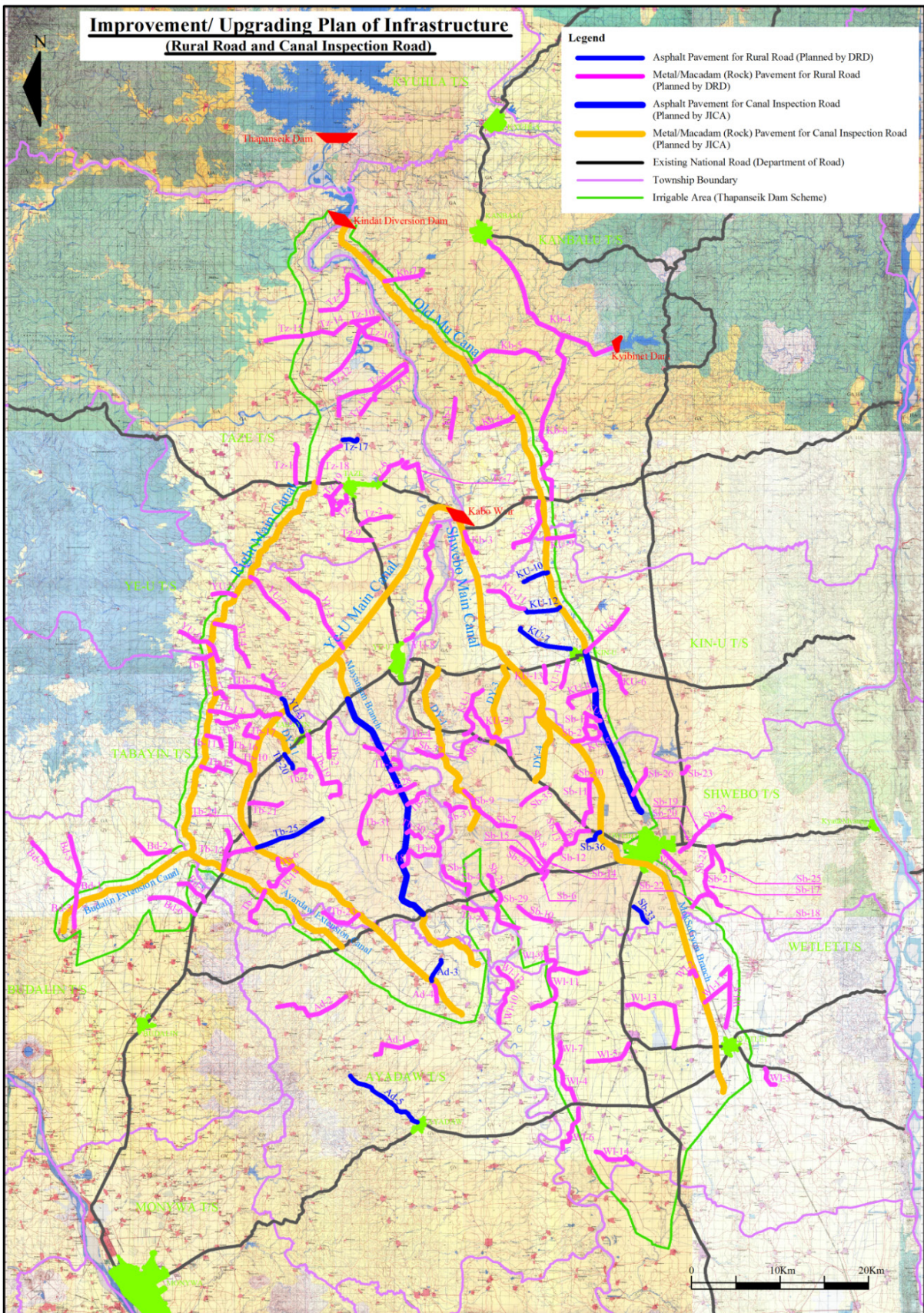
**TABLE OF CONTENTS**

- VI.1 Rural Road (DRD)..... VI.1
  - VI.1.1 Map of Rural Road and Canal Inspection Road..... VI-1
  - VI.1.2 Typical Cross Section of Rural Road ..... VI-2
  - VI.1.3 Rural Road List and Construction Cost (Plan A ~ C)..... VI-3
  - VI.1.4 Unit Construction Quantity of Rural Road (per mile)..... VI-8
  - VI.1.5 Unit Construction Cost of Rural Road (per mile) ..... VI-12
  - VI.1.6 Construction Plan of Rural Road (5 Years Plan)..... VI-23
  - VI.1.7 Rural Road Classification by DRD’s Strategy ..... VI-31
- VI.2 Rural Bridge (DRD) ..... VI.34
  - VI.2.1 Map of Rural Bridge ..... VI-34
  - VI.2.2 Typical Cross Section of Rural Bridge ..... VI-35
  - VI.2.3 Plan and Profile of Rural Bridge..... VI-35
  - VI.2.4 Rural Bridge List and Construction Coat ..... VI-37
  - VI.2.5 Outline Design of Rural Bridges..... VI-38
- VI.3 Canal Inspection Road (IWUMD)..... VI.43
  - VI.3.1 Map of Canal Inspection Road ..... VI-43
  - VI.3.2 Typical Cross Section of Canal Inspection Road ..... VI-44
  - VI.3.3 Canal Inspection Road List and Construction Cost (Plan A ~ C)..... VI-45
    - VI.3.3.1Unit Construction Quantity of Canal Inspection Road (per mile)..... VI-48
    - VI.3.3.2Unit Construction Cost of Canal Inspection Road (per mile)..... VI-53
- VI.4 Kyauk Myaung Jetty..... VI.61

# APPENDIX VI. ROAD, BRIDGE AND JETTY

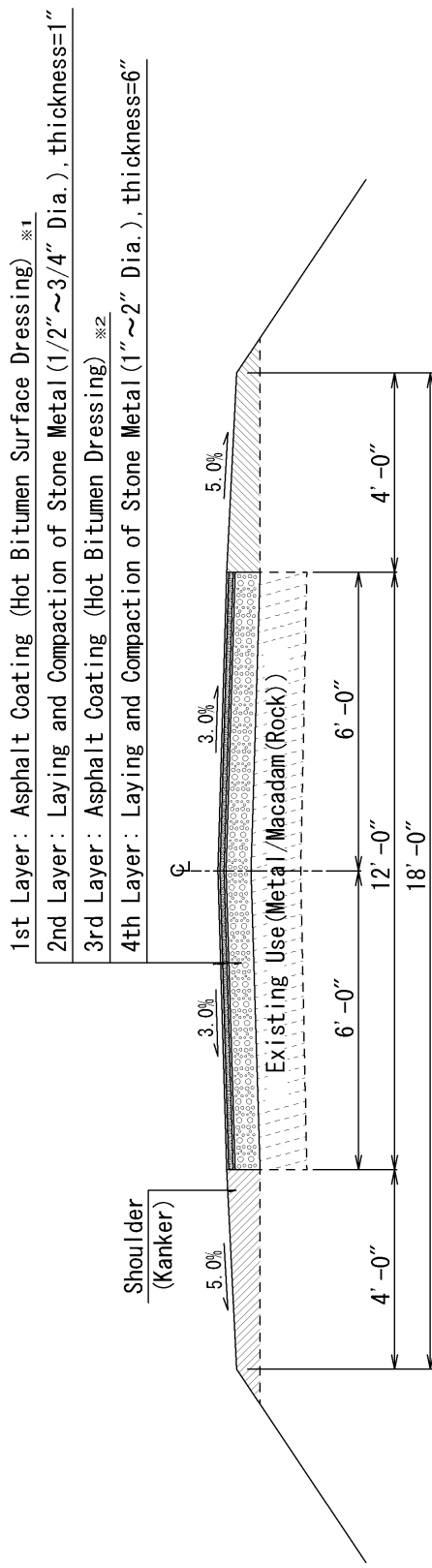
## VI.1 RURAL ROAD (DRD)

### VI.1.1 Map of Rural Road and Canal Inspection Road



### VI.1.2 Typical Cross Section of Rural Road

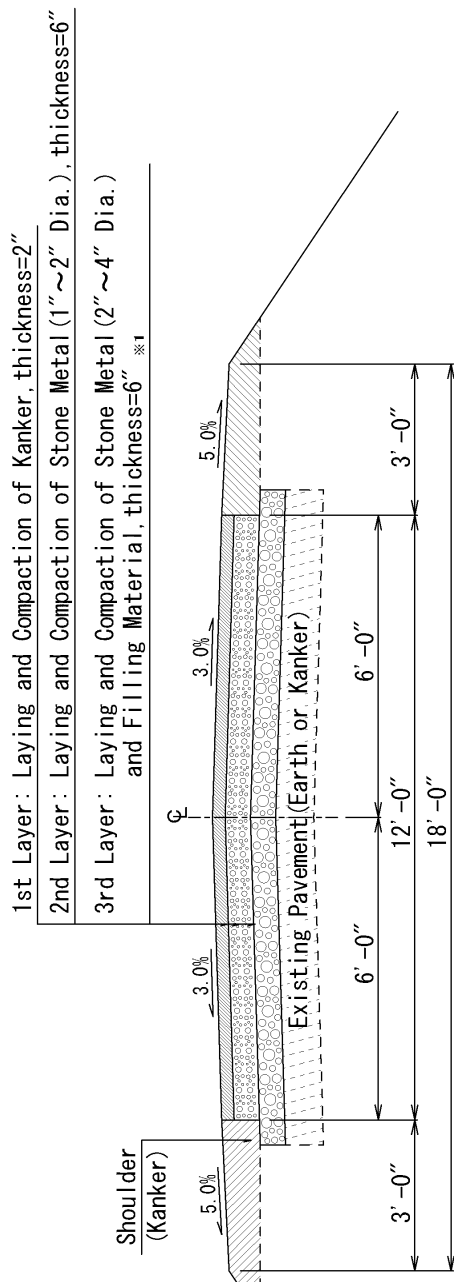
#### (1) Upgrade Metal/Macadam (Rock) Pavement to Asphalt Pavement



※1 Quantity of Bitumen: 8ton/mile at 12' pavement width, 12ton/mile at 18' pavement width.

※2 Quantity of Bitumen: 21ton/mile at 12' pavement width, 31.5ton/mile at 18' pavement width.

#### (2) Upgrade the Earth or Kanker Pavement to Metal/Macadam (Rock) Pavement



※1 Filling material consists of sand and chipping stone (1"~2", 3/4", 3/8" etc.).  
Mixing volume rate between Metal/Macadam and Filling Materials is 4:1.

# VI.1.3 Rural Road List and Construction Cost (Plan A ~ C)

## (1) Plan A

District / Township	No.	Description	Road Length		Pavement Type	Roadway and Shoulder Width	Unit Cost (mill/ton/ft)	Construction Cost (mill/ton/ft)
			(km)	(mi)				
Karbuh	1	Karbuh - Hant Gon - Kobo Road	2.6	4.23	Earth	12ft 3ft		
	2	Zee Gon-Yoo Thi-Baw Di Gon-Soe Sone Gyi-Lay Hoke Village to Village Road	5.0	8.06	Non Pavement	Earth		
	3	Kobo - Aung Cham Thar - 1 Pung Chang Road	1.25	2.01	Non Pavement	Earth		
	4	Karbuh - Nya Tee - Kyay Pha Act - Nya Pyaw Taw Road	12.6	20.33	Earth	12ft 3ft		
	5	Hant Gon-Zee Pin Thar-Ye Dwe-Hant-Taw-Knee Yee Village to Village Road	5.0	8.06	Non Pavement	Earth		
	6	Min Kwee Bank to Nyung Zan - Nyung Zhu Gyi - Tin Pung Kyin Road	3.0	4.83	Non Pavement	Earth		
	7	Karbuh - Pak Ka Shie - Hant Taw Road	2.49	4.07	Earth	12ft 3ft		
	8	Min Lay Gyi - Tin Taw - Kyay Pha Act - Nya Pyaw Taw Road	13.6	21.94	Earth	12ft 3ft		
	9	Hant Gon Village Entrance Road	1.0	1.61	Earth	12ft 3ft		
	10	Koak Se Kuan To Gyi (Gone To Gyi) - Lar Me Gon- Yoo Kyi (Sa Village to Village Road)	6.0	9.66	Non Pavement	Earth		
	11	Hant Ni Pin - Lar Pan Kyayng - Pabe Pewe - Pa Kar Village to Village Road	13.0	20.92	Non Pavement	Earth		
	12	Min Gon - Min Te - Kyan Pin Gon Road	4.0	6.44	Non Pavement	Earth		
			<b>Total Length of Asphalt Road (Karbuh T/S)</b>	<b>0.00</b>	<b>0.00</b>			
			<b>Total Length of Met/Al Macadam Road (Karbuh T/S)</b>	<b>70.04</b>	<b>112.74</b>			
Khu-U	1	Kan Oy-Kone-Shwe Yamn-Tham-Taw-Kyar Pa Aung Road	5.5	8.85	Earth	12ft 3ft		
	2	Shwe Yamn-Tham-Taw-Kyan Le-Kyar Pa Aung-Nyung Pin Thar Road	5.0	8.06	Non Pavement	Earth		
	3	OMC-Yoo Thar Road	2.75	4.43	Earth	12ft 3ft		
	4	OMC-Lung Shue-Lai-Pan Gyi-Pan Aung Road	1.0	1.61	Earth	12ft 3ft		
	5	OMC-Pauk Taw-Vin Gyi Road	2.50	4.02	Earth	12ft 3ft		
	6	Khu-U-Tham Pung Kar-Chung-Zone-Thar Bo Road	2.50	4.02	Earth	12ft 3ft		
	7	Khu-U-Kan Tin Yar - Ba Do Road	5.0	8.06	Met/Macadam	Asphalt		
	8	Khu-U-Kem-Tin-Nyung Kan Road	4.0	6.44	Earth	12ft 3ft		
	9	OMC - Palyaw Gon - Nyak Bin Gon	1.90	3.06	Earth	12ft 3ft		
	10	OMC - Mading gyi - Ma ching Ha - Shwe Kar	3.50	5.63	Met/Macadam	Asphalt		
	11	Nyar Yoo Gyi - Jaa Pooe - Pook Thar Ton	3.0	4.83	Earth	12ft 3ft		
	12	Pauk Chhin - Gyi Bin - Si Bok Sary - This yet Kan - OMC	2.50	4.02	Met/Macadam	Asphalt		
	13	Khu-U - Ye U Road - Hlang Gon	1.30	2.09	Earth	12ft 3ft		
	14	Khu-U - Ye U Road - Oh sa win	2.00	3.22	Earth	12ft 3ft		
		<b>Total Length of Asphalt Road (Khu-U T/S)</b>	<b>9.30</b>	<b>14.97</b>				
		<b>Total Length of Met/Al Macadam Road (Khu-U T/S)</b>	<b>29.95</b>	<b>48.21</b>				
		<b>Sub-total (Khu-U T/S)</b>	<b>39.25</b>	<b>63.18</b>				
Shwebo	1	Nyung Yin Gon - Pauk Ton Village to Village Road	0.57	0.91	Non Pavement	Earth		
	2	Chung Zone - Pauk Ton Village to Village Road	1.80	2.89	Non Pavement	Earth		
	3	Thi Tai - Zi Kon Lay Road	1.06	1.71	Earth	12ft 3ft		
	4	Ye Ky Wa - Kyung Shar Taw Road	1.75	2.82	Earth	12ft 3ft		
	5	Yon Taw - Kyung Shar Taw Road	1.14	1.83	Earth	12ft 3ft		
	6	Hant Zan - Serk Kuan Road	1.00	1.61	Earth	12ft 3ft		
	7	Hu Nung Kane - Ze Pya Kon Village to Village Road	1.35	2.13	Earth	12ft 3ft		
	8	Sek Kam - Ze Pya Kon Road	1.00	1.61	Earth	12ft 3ft		
	9	Ku To Serk - Hu Nung Kane Village to Village Road	2.46	3.96	Non Pavement	Earth		
	10	War Yone Kan - Pading Road	2.14	3.44	Earth	12ft 3ft		
	11	Nyung Kam - Zee Kone by Road	4.00	6.44	Earth	12ft 3ft		
	12	Tai-Sate Kham Road (Repeat)	2.00	3.22	Earth	12ft 3ft		
	13	Kyay Myan Shwe Bo-Nyung Pin Thar Road(Kyay Myan Branch X 08 S0)	1.29	2.07	Earth	12ft 3ft		
	14	Nat Thar Kone - Tin Tai Road	0.50	0.80	Earth	12ft 3ft		
15	Shue Shue Village (Inkay) (Tha Ka Road) Road	0.25	0.37	Earth	12ft 3ft			
16	Ta Kon In-Shue Bo Road	2.65	4.22	Earth	12ft 3ft			
17	From Kan Gyi to Thi Kai Tin Chang Road	0.50	0.80	Earth	12ft 3ft			
18	Kyung Pan Kan - Thi Ka Taw Road	1.13	1.81	Earth	12ft 3ft			
19	From Sin Kut(Ent) to Kook Myung Road	1.25	2.01	Earth	12ft 3ft			
20	From Shwebo - Kyay Myung Road to Hu Nung Kone Road	1.00	1.61	Earth	12ft 3ft			
21	Thi Phay Thi Cho - Kone Gyi Village to Village	0.76	1.22	Earth	12ft 3ft			
22	Thike Ka Taw - Thi Cho Pin Road	0.75	1.21	Earth	12ft 3ft			
23	Myi Kyi Star-The Kyi Village Entrance Road	1.00	1.61	Earth	12ft 3ft			
24	Thi Phay Thi Cho to Shwe Bo-Kat Myung Road	1.50	2.41	Earth	12ft 3ft			
		<b>Total Length of Asphalt Road (Shwebo T/S)</b>	<b>62.04</b>	<b>99.83</b>				
		<b>Total Length of Met/Al Macadam Road (Shwebo T/S)</b>	<b>66.29</b>	<b>106.07</b>				
Shwebo	1	Kye Pin Kan - Le Kne Road	1.00	1.61	Earth	12ft 3ft		
	2	Yon Tin - Kan Thar Village to Village Road	2.00	3.22	Earth	12ft 3ft		
	3	Wek Yoo - Nai Kone Village to Village Road	2.00	3.22	Earth	12ft 3ft		
	4	Shwe Pan Kone-Ton Kon Road	2.75	4.43	Earth	12ft 3ft		
	5	Thun Taw Gyi-Thar Kone-Hu Taw Village Road	3.00	4.83	Earth	12ft 3ft		
	6	Shwe Pan Kone-Shwe Oh Kyay-Kne Yoo-Nya Bue Hu Road	5.00	8.05	Earth	12ft 3ft		
	7	Shwe Pan Kone-Kone-Tha Min Thar Village to Village Road	3.00	4.83	Earth	12ft 3ft		
	8	Hant Lay-Oh Pauk-Shwebo Road	3.00	4.83	Earth	12ft 3ft		
	9	From Ta-Ga-Nya-Ma-Hu-to-Shwe Pan Road - Kan Serk (Shwebo) Road	2.00	3.22	Earth	12ft 3ft		
	10	Min Thar - Min Kan Lay Road	3.00	4.83	Earth	12ft 3ft		
	11	Main Thi-Mahe-Ba-Tan-Kone-Kwa-Sa Village Road	4.00	6.44	Earth	12ft 3ft		
	12	Min Thi - U Yin Thi (North) Village to Village Road	2.00	3.22	Earth	12ft 3ft		
	13	Main Kyay-Zin-Ba - Hant Bin - Ya-Gung-Min - Pin Xin Road	7.00	11.23	Earth	12ft 3ft		
	14	Ye Cwi Gon - Lay De - Thi Bynak Gon Road	2.00	3.22	Earth	12ft 3ft		
15	Pauk Kan-Fin-Pin Road	1.00	1.61	Earth	12ft 3ft			
		<b>Total Length of Asphalt Road (Shwebo T/S)</b>	<b>6.00</b>	<b>9.60</b>				
		<b>Total Length of Met/Al Macadam Road (Shwebo T/S)</b>	<b>44.25</b>	<b>71.24</b>				
Shwebo	1	Thun Taw-Chung U-Ye-U-Ka-Lay-Yoo Road	2.00	3.22	Earth	12ft 3ft		
	2	Kan Baw-Kang-Shwe-Ta-Kyar Road	4.00	6.44	Earth	12ft 3ft		
	3	Thar Gya-Mu Site Road	1.00	1.61	Earth	12ft 3ft		
	4	Mate Li-Kone-A-Gyi-Thar-Gah Road	6.00	9.66	Earth	12ft 3ft		
	5	Tone-In-Tae-Min-Yin Road	3.00	4.83	Earth	12ft 3ft		
	6	Tone-Tak-Thak-Nan-Namp-Sa Road	6.00	9.66	Earth	12ft 3ft		
	7	Tak-Thak-Nya-Ton Road	4.00	6.44	Non Pavement	Earth		
	8	Nat-Ber-Gyi-Kyun-Le Road	6.00	9.66	Earth	12ft 3ft		
	9	Sar-Sar-Kone-Yee Road	4.00	6.44	Earth	12ft 3ft		
	10	Hant Pin-Site-Mu-Kone Road	2.00	3.22	Earth	12ft 3ft		
	11	Ye U Kone-Myak-In Road	3.30	5.31	Earth	12ft 3ft		
	12	Tae-Sar-Bay-Pin-Mu-Gwa Road	9.50	15.29	Earth	12ft 3ft		
	13	Nya Nyung Nya - Kyan Le Road	3.00	4.83	Earth	12ft 3ft		
	14	Yon Shue-Kone-Ang-Han-Pin-Site Road	5.00	8.05	Non Pavement	Earth		
15	Yon Shue-Ka-Bung-Kya Road	4.00	6.44	Non Pavement	Earth			
16	Hant Bin-Gah-Hpet-Thar-Gon - Bay-Yin-Yon-Thar - Mu-Gyn (Road)	2.80	4.51	Earth	12ft 3ft			
17	In-Ka-Ka - Chung-Zon (Road)	2.50	4.02	Met/Macadam	Asphalt			
18	Min Ya-Nya - Ka-Nya-Ze - Kyan Daw Gon - In-Ka-Ka (Road)	3.60	5.79	Earth	12ft 3ft			
19	Tone-In-Thar (Road)	3.00	4.83	Earth	12ft 3ft			
20	Lake-Chan-Yon-Thar-Kone-In-Ye-Oh Road	5.00	8.05	Non Pavement	Earth			
21	Lai-Sar-Pin-Kin-Gyi Road	1.00	1.61	Earth	12ft 3ft			
		<b>Total Length of Asphalt Road (Total T/S)</b>	<b>2.50</b>	<b>4.02</b>				
		<b>Total Length of Met/Al Macadam Road (Total T/S)</b>	<b>78.20</b>	<b>125.89</b>				
		<b>Sub-total (Total T/S)</b>	<b>80.70</b>	<b>129.91</b>				

District	Township	No.	Description	Road Length		Pavement Type	Roadway and Shoulder Width	Unit Cost (million Kyat/mile)	Construction Cost (million Kyat)
				(mbs)	(km)				
Monywa	Ayadaw	1	Ayadaw-Nuang Gy-Aet-MuKy KyauKone Thar-Wat Pyi Access Road	4.00	6.44	Earth	12ft 3ft		
		2	Thar-G-Nuang Gy-Aet - Nuang Gy-Aet-ChinPu Access Road	1.50	2.41	Earth	12ft 3ft		
		3	Hokkone-Oak-Sit-Gy-Kuang Thar Access Road	2.00	3.22	Met/Macadam	12ft 4ft		
		4	Hokkone-Kyauat-Law Access Road	2.00	3.22	Earth	12ft 3ft		
		5	Ayadaw-Warawanna Access Road	5.00	8.05	Met/Macadam	12ft 4ft		
Total Length of Asphalt Road (Ayadaw T/S)				7.00	11.27				
Sub-total (Ayadaw T/S)				14.50	23.34				
Total Length of Metal/Macadam Road				32.20	51.98				
Total Length of Metal/Macadam Road				414.63	667.36				
Total				446.93	719.36				

District	Township	No.	Description	Road Length		Pavement Type	Roadway and Shoulder Width	Unit Cost (million Kyat/mile)	Construction Cost (million Kyat)		
				(mbs)	(km)						
Swebo	Ye-U	1	Kyar Pan Nya-lay Yar-Mone Thang Pin-In-Pin Road	7.00	11.27	Met/Macadam	12ft 3ft				
		2	Me O - Sit Thar Myae - Boka Village Road	3.00	4.83	Earth	12ft 3ft				
		3	Thabyon-Tin-Tan-Yan Road	3.25	5.23	Met/Macadam	12ft 4ft				
		4	Oh Pho - Daunk Doe - Mek-Hti-Lar - Ny Nuang Road	4.25	6.84	Non Pavement					
		5	From Kiri Tin R.M.C to Nyang Lae-Nay-Pu Kone entrance Road	1.50	2.41	Earth	12ft 3ft				
		6	Zoya Wot-Far The-In-Gy Road	7.00	11.27	Earth	12ft 3ft				
		7	Si-Gy-Pi-Daung-Let-Pan-Gwet	3.80	6.12	Earth	12ft 3ft				
		8	Chang-U-Zoe Kan-Si-Kham Thar	1.50	2.41	Earth	12ft 3ft				
		9	Mopwa-Ye-U Road-Htan-Taw	1.00	1.61	Earth	12ft 3ft				
		Total Length of Asphalt Road (Ye-U T/S)				32.25	52.23				
		Total Length of Metal/Macadam Road (Ye-U T/S)				29.05	46.76				
		Sub-total (Ye-U T/S)				32.30	51.99				
		Tabayin	Tabayin	1	Aung Thar-Yar-Nagar-Twin Road	0.47	0.76	Earth	12ft 3ft		
				2	Pyaw-Baw-Pin-Si Road	3.00	4.83	Earth	12ft 3ft		
				3	Thar-Yat-Kyau-RMC Road	1.63	2.62	Earth	12ft 3ft		
				4	Mae-Oke-Let-Yan-Kone Road	1.00	1.61	Earth	12ft 3ft		
				5	Woe-Kh-Nuang-Hu-Thu-Yin-Taw Road	2.00	3.22	Earth	12ft 3ft		
				6	Kyam-Yin-YMC Road	0.38	0.61	Earth	12ft 3ft		
				7	Nagar-Twin-Tin-Tan-Yan Road	3.00	4.83	Earth	12ft 3ft		
				8	Thang-Thung-Kar-Tu-Ti (Gaso)-Thi-Ti (West) Road	3.00	4.83	Earth	12ft 3ft		
				9	Mh-Ya-Kan-Dai-Net Road	1.63	2.62	Earth	12ft 3ft		
				10	Kyi-Huang-Yin-Village-to-Village Road	1.00	1.61	Earth	12ft 3ft		
				11	Imn-Boe-Kone-Yee-Village-to-Village Road	1.25	2.01	Earth	12ft 3ft		
				12	Sit-Pyae-Gaw-Pin-Kone Road	2.00	3.22	Earth	12ft 3ft		
				13	Thang-Thung-Kar-Lae-Pyih-Kyot-RMC Road	3.00	4.83	Earth	12ft 3ft		
				14	Ja-Ga-Dy-U Road	2.00	3.22	Earth	12ft 3ft		
				15	Sit-Pyae-Kyau-Im-Pin-Gy-Chang-Oh-Road	2.00	3.22	Earth	12ft 3ft		
				16	Huang-Thang-Chang-Yee-Thar-Yar-Ayee-Owne-Char Road	3.00	4.83	Earth	12ft 3ft		
				17	Imn-Tai-Lay-Nge-War-Taw Road	1.50	2.41	Earth	12ft 3ft		
				18	Taw-MBC Road	0.63	1.01	Earth	12ft 3ft		
				19	Tabayin-Khau-Tamng-Ta-Nee-Pant-Taw Road	6.00	9.66	Earth	12ft 3ft		
				20	(Tabayin - Mopwa Road) - Yinboe - Let ti	1.30	2.11	Met/Macadam	12ft 4ft		
				21	(Tabayin - Mopwa Road) - Pyan-gya - Na-be-ah	2.70	4.35	Earth	12ft 3ft		
22	RMC-Kyau-Mat-Taw			2.80	4.02	Earth	12ft 3ft				
23	YMC-A-Boye-Zee-Pyay-Kone-Taw-Tin-Mya-Yake			3.00	4.83	Earth	12ft 3ft				
24	YMC-Thu-Yei-Kuang-Sang-Pyin			2.00	3.22	Earth	12ft 3ft				
25	YMC-Mh-Swe-Hat-Oh-Tu-Pin			4.50	7.24	Met/Macadam	12ft 4ft				
26	Bramah-Canal-Let-Ti			1.20	1.93	Earth	12ft 3ft				
27	Kywe-Taw-Chon-Chang-Mae-Taw-Oke-Se			2.40	3.86	Earth	12ft 3ft				
28	MBC-Hu-Boe-Mh-Ya-Kan			4.00	6.44	Earth	12ft 3ft				
29	MBC-Yin-Kyayoma-Ya-Kan-Branch-Canal			2.20	3.54	Earth	12ft 3ft				
30	MBC-Shar-Wat-Kone			1.20	1.93	Earth	12ft 3ft				
31	DY-Mohn-Tu-Kyay			1.40	2.25	Earth	12ft 3ft				
32	Mh-Kan-Let-Lok-Road			3.63	5.84	Earth	12ft 3ft				
33	Tha-Fate-Lae-Kyunt-Mat-Taw Road			2.63	4.23	Earth	12ft 3ft				
Total Length of Asphalt Road (Tabayin T/S)				6.00	9.65						
Total Length of Metal/Macadam Road (Tabayin T/S)				67.45	108.39						
Sub-total (Tabayin T/S)				73.45	118.04						
Monywa	Buddin	1	Muang-Huang - Ku-Taw - Ywa-Mon	4.50	7.24	Earth	12ft 3ft				
		2	Mh-Daung-Kyau - Chang-Mi-Taw - Hnaw-Pin-Gyi	4.00	6.44	Non Pavement					
		3	Muang-Huang - Ku-Kaw-Road	4.50	7.24	Earth	12ft 3ft				
		4	Ye-Hnaw - Lat-Pin-Road	1.25	2.01	Earth	12ft 3ft				
		5	Ywa-Mon - Muak-Tar-Road	4.00	6.44	Earth	12ft 3ft				
		6	Bramah - Sin-Yam - Kan-Sun-Road	4.00	6.44	Earth	12ft 3ft				
		7	Ku-Taw-Wan-Ye-Road	4.00	6.44	Earth	12ft 3ft				
Total Length of Asphalt Road (Buddin T/S)				0.00	0.00						
Total Length of Metal/Macadam Road (Buddin T/S)				26.25	42.25						
Sub-total (Buddin T/S)				26.25	42.25						

(2) Plan B

District	Township No.	Description	Road Length		Road Length (km)	Pavement Type		Roadway and Shoulder Width	Unit Cost (million Kyat/mile)	Construction Cost (million Kyat)	
			(m)	(ft)		Present Condition	Upgrade Plan				
Kambah	1	Kambah - Han Gae - Kambah Road	2.63	4.23	2.63	Earth	Met/Macadam	12h	3h		
	2	Zee Gon Yee - The Daw Di Gae - Se Some Oyi - Lay Hake Village to Village Road	5.00	8.06	5.00	Non Pavement	Earth	12h	3h		
	3	Kabo - Aung Chan - 1 Paung Chang Road	1.25	2.01	1.25	Non Pavement	Earth	12h	3h		
	4	Kambah - Nga Yee - Kyin Pin Act - Nga Pyaw Taw Road	12.63	20.33	12.63	Non Pavement	Earth	12h	3h		
	5	Han Gae - Zee Pin - The Yee Dae - Han Taw Kine Yee Village to Village Road	5.00	8.06	5.00	Non Pavement	Earth	12h	3h		
	6	Min River Bank to Nyauung Zin - Nyauung Zin Oyi - Tin Paung Kyin Road	3.00	4.83	3.00	Non Pavement	Earth	12h	3h		
	7	Kambah - Tark Kai Shan - Hnaw Taw Road	2.80	4.67	2.80	Earth	Met/Macadam	12h	3h		
	8	Han Gae - Zee Pin - The Yee Dae - Han Taw Kine Yee Village to Village Road	15.63	25.94	15.63	Earth	Met/Macadam	12h	3h		
	<b>Total Length of Asphalt Road (Kambah T/S)</b>			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>					
	<b>Total Length of Met/Macadam Road (Kambah T/S)</b>			<b>46.94</b>	<b>74.11</b>	<b>46.94</b>					
	Kia-U	1	Kan Oyi Kone - Shwe Yamin - Thein Taw Kyar Pin Aung Road	5.50	8.85	5.50	Earth	Met/Macadam	12h	3h	
		2	Shwe Yamin - Thein Taw Kyar Pin Aung - Nyauung Pin - Thein Taw Road	5.00	8.06	5.00	Non Pavement	Earth	12h	3h	
		3	OMC Yu Wa Than Road	1.00	1.61	1.00	Earth	Met/Macadam	12h	3h	
		4	OMC Liang Shyi - Let Pan Gyi - Pan Gyi - Pan Gyi Road	2.75	4.43	2.75	Earth	Met/Macadam	12h	3h	
5		OMC Panng Taw - Win Gyi Road	1.00	1.61	1.00	Earth	Met/Macadam	12h	3h		
6		Khan U - Thein Paung Kar - Chang - Zee - Than Bo Road	2.50	4.02	2.50	Earth	Met/Macadam	12h	3h		
7		Khan U - Kan Jar Yee - Ba Oo Road	5.00	8.06	5.00	Met/Macadam	Asphalt	12h	4h		
8		Kia-U - Kan - Thein - Nang - Kan Road	4.00	6.44	4.00	Earth	Met/Macadam	12h	3h		
9		OMC - Thein - Nang - Kan Road	1.90	3.06	1.90	Earth	Met/Macadam	12h	3h		
10		OMC - Ma - dang - gyi - Ma - dang - gyi - Shwe Kar	1.50	2.41	1.50	Met/Macadam	Asphalt	12h	4h		
11		Njar - Yon Gyi - Jya - Poo - Poo - Thint Ton	3.00	4.83	3.00	Earth	Met/Macadam	12h	3h		
12		Prak bin dai - Gya - Poo - Bok - Bok - yee - The - yan - kan - OMC	2.80	4.51	2.80	Met/Macadam	Asphalt	12h	4h		
13		Khan U - Ye U Road - Hnaw gon	1.30	2.09	1.30	Earth	Met/Macadam	12h	3h		
14		Khan U - Ye U Road - Ok - sa - wan	2.00	3.22	2.00	Earth	Met/Macadam	12h	3h		
<b>Total Length of Asphalt Road (Kia-U T/S)</b>			<b>9.90</b>	<b>14.97</b>	<b>9.90</b>						
<b>Total Length of Met/Macadam Road (Kia-U T/S)</b>			<b>39.25</b>	<b>63.18</b>	<b>39.25</b>						
Shwebo	1	Nyauung Yin Kan - Paik Ton Village to Village Road	0.57	0.91	0.57	Non Pavement	Earth	12h	3h		
	2	Chang Zone - Paik Ton Village to Village Road	1.80	2.90	1.80	Non Pavement	Earth	12h	3h		
	3	Thit Tin - Zi Kan Lay Road	1.05	1.71	1.05	Earth	Met/Macadam	12h	3h		
	4	Ye Kyi Wa - Kyaung Shwe - Than Road	1.75	2.82	1.75	Earth	Met/Macadam	12h	3h		
	5	Yon Taw - Kyaung Shwe - Than Road	1.14	1.83	1.14	Earth	Met/Macadam	12h	3h		
	6	Hnan Zan - Sak Kan Road	1.00	1.61	1.00	Earth	Met/Macadam	12h	3h		
	7	Hnan Nang Kine - Ze Pya Kan Village to Village Road	1.33	2.13	1.33	Earth	Met/Macadam	12h	3h		
	8	Sak Kan - Ze Pya Kan Road	1.00	1.61	1.00	Earth	Met/Macadam	12h	3h		
	9	Kia-U - Sak - Han Nang Kine Village to Village Road	2.46	3.96	2.46	Non Pavement	Earth	12h	3h		
	10	Wan Yone Kan - Phalang Road	2.14	3.44	2.14	Earth	Met/Macadam	12h	3h		
	11	Nyauung Kan - Ze Kone Bo Road	4.00	6.44	4.00	Earth	Met/Macadam	12h	3h		
	12	The Tin - Sak Kan Road (Repeat)	2.00	3.22	2.00	Earth	Met/Macadam	12h	3h		
	13	Kyau Mye - Shwe - Han - Nang - Pin - Thein - Nang - Kan - Road (No. 8)	1.29	2.07	1.29	Earth	Met/Macadam	12h	3h		
	14	Shin Kan Kone - Tin Tin Road	0.50	0.80	0.50	Earth	Met/Macadam	12h	3h		
<b>Total Length of Asphalt Road (Shwebo T/S)</b>			<b>4.25</b>	<b>6.84</b>	<b>4.25</b>						
<b>Total Length of Met/Macadam Road (Shwebo T/S)</b>			<b>62.04</b>	<b>106.67</b>	<b>62.04</b>						
Ye-U	1	Kyar Pan Nyo - Bay Yaw - Aone - Tang - Pin - Pin Road	3.00	4.83	3.00	Earth	Met/Macadam	12h	3h		
	2	Me O - Si - Thein - Mone - Baka - Tang - Pin - Pin Road	7.00	11.27	7.00	Earth	Met/Macadam	12h	3h		
	3	Thayaw - Pin - Tin - Yan Road	3.25	5.23	3.25	Met/Macadam	Asphalt	12h	4h		
	4	Oh - Pho - Dangk - Doe - Mek - Hn - Lar - Ny - Nung Road	4.25	6.84	4.25	Non Pavement	Earth	12h	3h		
	5	Hnan Kan Tin - Ba - M - C - Nyung - Lay - Noy - Pa - Kone - entrance Road	1.90	2.41	1.90	Non Pavement	Earth	12h	3h		
	6	Zyan - Wan - Tar - Tin - H - Oyi Road	7.00	11.27	7.00	Non Pavement	Earth	12h	3h		
	7	Si - Gyi - Pa - Dangk - Let - Pan - Gae	3.80	6.12	3.80	Earth	Met/Macadam	12h	3h		
	8	Chang - U - Ze - Kan - Sa - Khan - Thein	1.50	2.41	1.50	Earth	Met/Macadam	12h	3h		
	9	Phayaw - Ye - U Road - Hnan Tin	1.00	1.61	1.00	Earth	Met/Macadam	12h	3h		
	<b>Total Length of Asphalt Road (Ye-U T/S)</b>			<b>29.05</b>	<b>46.76</b>	<b>29.05</b>					
	<b>Total Length of Met/Macadam Road (Ye-U T/S)</b>			<b>32.30</b>	<b>51.99</b>	<b>32.30</b>					





District	Township	No.	Description	Road Length		Pavement Type	Roadway and Shoulder Width	Unit Cost (million Kyats/mile)	Construction Cost (million Kyats)		
				(mbs)	(km)						
Shwebo	Thapyin	19	Thapyin-Robot Tung-Tu-Nar-Pan-Taw Road	6.00	9.66	Earth	12h 3h	3h			
		20	(Thapyin - Mopyaw Road) - Yin Awe - Let U	1.50	2.41	Met/Macadam	12h 3h	4h			
		21	(Thapyin - Mopyaw Road) - Pyn-gya - Su-ka-ah	2.70	4.56	Earth	12h 3h	3h			
		22	RMC Kyant Mile Taw	2.50	4.02	Earth	12h 3h	3h			
		23	YMC-A Dya-Ze-Pya Kone-Taw-Taw-Mya Yake	3.00	4.83	Earth	12h 3h	3h			
		24	YMC-Tha Yre Kung-Shing Tyn	2.00	3.22	Earth	12h 3h	3h			
		25	YMC-Ma Swe Hin-Oin Ta Pyn	4.50	7.24	Met/Macadam	12h 3h	4h			
		26	Branch Canal Let Ti	1.20	1.93	Earth	12h 3h	3h			
		27	Kywe-Tse-Chan-Chang-Ace-Tse-Oke-Se	2.40	3.86	Earth	12h 3h	3h			
		28	MBC-Ba-Bowe-Ma-Ya-Kan	4.00	6.44	Earth	12h 3h	3h			
		29	MBC-Yin-Kyoyam-ye-Kan-Bomsh-Canal	2.30	3.54	Earth	12h 3h	3h			
		30	MBC-Sa-Wa-Kone	1.20	1.92	Earth	12h 3h	3h			
		31	JY-Ya-Ma-Ta-Kyay	1.40	2.23	Earth	12h 3h	3h			
		<b>Total Length of Asphalt Road (Thapyin T/S)</b>				<b>6.00</b>	<b>9.65</b>				
		<b>Total Length of Met/Macadam Road (Thapyin T/S)</b>				<b>61.09</b>	<b>98.32</b>				
		<b>Total Length of Asphalt Road (Buddhin T/S)</b>				<b>0.00</b>	<b>0.00</b>				
		<b>Total Length of Met/Macadam Road (Buddhin T/S)</b>				<b>67.09</b>	<b>107.97</b>				
		Monywa		1	Maung Huang - Ku Taw - Ywa Mon	4.50	7.24	Earth	12h 3h	3h	
				2	Ma Daaung Kyin - Chung Mi Tse - Hlaw Pin Gy	4.00	6.44	Non Pavement	12h 3h	3h	
				3	Maung Huang - Ku Kaw Road	4.50	7.28	Earth	12h 3h	3h	
				4	Yi Hwai - Jar Pan Road	1.25	2.01	Earth	12h 3h	3h	
				5	Ywa Mon - Munk Tai Road	4.00	6.44	Earth	12h 3h	3h	
				6	Bunah - Sa Yin - Kan Sam Road	4.00	6.44	Earth	12h 3h	3h	
				7	Ku Taw - Wah Ye Road	4.00	6.44	Earth	12h 3h	3h	
		<b>Total Length of Asphalt Road (Buddhin T/S)</b>				<b>0.00</b>	<b>0.00</b>				
		<b>Total Length of Met/Macadam Road (Buddhin T/S)</b>				<b>26.25</b>	<b>42.25</b>				
		Ayedaw		1	Ayadaw-Nyang-Gy-Bei-Ma-Kyil-Kone-Taw-Ma-Pya Access Road	4.00	6.44	Earth	12h 3h	3h	
				2	Thar-G-Naing-Gra-At- Nung Gy-Bei-Chat-Pin Access Road	1.50	2.41	Earth	12h 3h	3h	
				3	Fok-Kone-Ok-Su-Ga-Kuang-Thu Access Road	2.00	3.22	Met/Macadam	12h 3h	4h	
				4	Fok-Kone-Kyant-Taw Access Road	2.00	3.22	Earth	12h 3h	3h	
		<b>Total Length of Asphalt Road (Ayadaw T/S)</b>				<b>2.00</b>	<b>3.22</b>				
		<b>Total Length of Met/Macadam Road (Ayadaw T/S)</b>				<b>7.50</b>	<b>12.07</b>				
		<b>Total Length of Asphalt Road</b>				<b>9.50</b>	<b>15.29</b>				
<b>Total Length of Met/Macadam Road</b>				<b>37.30</b>	<b>43.93</b>						
<b>Total Length of Met/Macadam Road</b>				<b>328.95</b>	<b>529.48</b>						
				<b>Total</b>	<b>386.25</b>				<b>573.41</b>		

District	Township	No.	Description	Road Length		Pavement Type	Roadway and Shoulder Width	Unit Cost (million Kyats/mile)	Construction Cost (million Kyats)		
				(mbs)	(km)						
Taze		8	Hpa-Lin-Op-Pan-Shwebo Road	3.00	4.83	Earth	12h 3h	3h			
		9	Pan-Tu-Ga-Nu-De-Ha-Shwe-Pan-The-Road - Kan-Sik-Shwe-Bo Road	2.00	3.22	Earth	12h 3h	3h			
		10	Mai-Thi-Ma-Kan-Lay Road	3.00	4.83	Earth	12h 3h	3h			
		11	Mai-Thi-Ma-Kan-Lay Road	4.00	6.44	Earth	12h 3h	3h			
		12	Maik-Kye-Zab-Bu - Hma-Bu - Tu-Gang-Ma - Phe-Xie Road	7.60	12.23	Earth	12h 3h	3h			
		13	Yi-Chin-Gon - Lay-Da - The-Bayat-Gon Road	2.50	4.02	Earth	12h 3h	3h			
		<b>Total Length of Asphalt Road (Taze T/S)</b>				<b>0.00</b>	<b>0.00</b>				
		<b>Total Length of Met/Macadam Road (Taze T/S)</b>				<b>41.25</b>	<b>66.41</b>				
		Shwebo	Thapyin	1	Tamar-Taw-Chang-U-Ye-U-Ka-Lay-Wa Road	2.00	3.22	Earth	12h 3h	3h	
				2	Kha-Buang-Kaung-Shaw-Ta-Kyay Road	4.00	6.44	Earth	12h 3h	3h	
				3	Thar-Gya-Ma Site Road	1.00	1.61	Non Pavement	12h 3h	3h	
				4	Mahle-Li-Kone-At-Gy-Thar-Gala Road	6.00	9.66	Earth	12h 3h	3h	
				5	Taze-In-The-Ma-Yin Road	3.00	4.83	Earth	12h 3h	3h	
				6	Taze-Tok-Taba-Nar-Nang-Ka Road	6.00	9.66	Earth	12h 3h	3h	
				7	Tok-Tabk-Nga-Tin Road	4.00	6.44	Earth	12h 3h	3h	
				8	Sa-Bel-Gyu-Kan-Le Road	6.00	9.66	Earth	12h 3h	3h	
				9	Sau-Sa-Kone-Yay Road	4.00	6.44	Earth	12h 3h	3h	
				10	Hpa-Pan-Sa-Ma-Ka-Lay Road	2.00	3.22	Earth	12h 3h	3h	
11	Yi-U-Kone-Myink-In Road			3.30	5.31	Earth	12h 3h	3h			
12	Tse-Sa-Bay-Yin-Mu-Gwa Road			9.50	15.29	Earth	12h 3h	3h			
13	Nga-Nyang-Kya - Kyan-Le Road			3.00	4.83	Earth	12h 3h	3h			
14	Ywa-Shwe-Kone-Amp-Han-Pin Site Road			5.00	8.05	Non Pavement	12h 3h	3h			
15	Ywa-Shwe-Ka-Buang-Kyay Road			4.00	6.44	Non Pavement	12h 3h	3h			
16	Hpa-Bin-Gak - Hper-Than-Gon - Bay-Yin-Ya-Tha - Ma-Gyn Road			2.80	4.51	Earth	12h 3h	3h			
17	In-Ka-Ka - Chung-Zon Road			2.50	4.02	Met/Macadam	12h 3h	4h			
18	Wa-Ya-Nga - Ka-Nu-Ze - Kyan-Daw-Gr - In-Ka-Ka Road			3.60	5.79	Earth	12h 3h	3h			
19	Taze - Jin-The Road	3.00	4.83	Earth	12h 3h	3h					
<b>Total Length of Asphalt Road (Taze T/S)</b>				<b>2.50</b>	<b>4.02</b>						
<b>Total Length of Met/Macadam Road (Taze T/S)</b>				<b>72.20</b>	<b>116.23</b>						
Ye-U		1	Kyan-Pan-Nya-Bye-Year-Mong-Tung-Pin-In Pin Road	7.00	11.27	Earth	12h 3h	3h			
		2	Me-O-Si-Thar-Maw - Baka Village Road	3.00	4.83	Earth	12h 3h	3h			
		3	Thayin-Thi-Tan-Yan Road	3.25	5.23	Met/Macadam	12h 3h	4h			
		4	Oh-Pho - Danuk Doe - Mak-Hi-Lar - Nyi-Nung Road	4.25	6.84	Non Pavement	12h 3h	3h			
		5	From Kin Tat R.M.C to Nyung-Jae-Nay Ph Kone entrance Road	1.50	2.41	Non Pavement	12h 3h	3h			
		6	Zyau-Wai-Tar-Tin-In-Gyi Road	7.00	11.27	Non Pavement	12h 3h	3h			
		7	Si-Gyi-Py-Dang-Let-Pan-Gwet	3.80	6.12	Earth	12h 3h	3h			
		8	Chuang-U-Zee-Kan-Sa-Khan-Thar	1.50	2.41	Earth	12h 3h	3h			
		9	Chuang-U-Zee-U Road-Han-Taw	1.00	1.61	Earth	12h 3h	3h			
		10	Monywa-Ye-U Road-Han-Taw	1.00	1.61	Earth	12h 3h	3h			
		<b>Total Length of Asphalt Road (Ye-U T/S)</b>				<b>3.25</b>	<b>5.23</b>				
<b>Total Length of Met/Macadam Road (Ye-U T/S)</b>				<b>20.95</b>	<b>46.76</b>						
Thapyin		1	Aung-Tha-Ye-Negar-Tan Road	0.47	0.76	Earth	12h 3h	3h			
		2	Paya-Baw-Pin-Si Road	3.00	4.83	Earth	12h 3h	3h			
		3	Tha-Yit-Kyay-RMC Road	1.65	2.62	Earth	12h 3h	3h			
		4	Mae-Ole-Let-Yat-Kone Road	1.00	1.61	Earth	12h 3h	3h			
		5	Wae-Kyay-Nyang-Hle-Tha-Yat-Taw Road	2.00	3.22	Earth	12h 3h	3h			
		6	Kan-Yin-VMC Road	0.38	0.61	Earth	12h 3h	3h			
		7	Nagar-Taw-Tan-Yan Road	3.00	4.83	Earth	12h 3h	3h			
		8	Pang-Tung-Ka-Ti-Ti (East-Ti-Ti) Road	3.00	4.83	Earth	12h 3h	3h			
		9	Pha-Yi-Kan-Dan-Road	1.65	2.62	Earth	12h 3h	3h			
		10	Kya-Huang-Tan-Village-to-Village Road	1.00	1.61	Earth	12h 3h	3h			
		11	Jin-Bone-Kone-Ye-Village-to-Village Road	1.25	2.01	Earth	12h 3h	3h			
		12	Sai-Pyin-Gwe-Pin-Kone Road	2.00	3.22	Earth	12h 3h	3h			
		13	Pang-Tung-Ka-Lay-Pan-Kyay-RMC Road	3.00	4.83	Earth	12h 3h	3h			
		14	Pha-Ga-Da-(11) Road	2.00	3.22	Earth	12h 3h	3h			
		15	Sat-Pyan-Kyay-Tan-Pin-Gy-Chang-Ok Road	2.00	3.22	Earth	12h 3h	3h			
		16	Huang-Tin-Chang-Ye-Tha-Ye-Aye-Dwe-Chan Road	3.00	4.83	Earth	12h 3h	3h			
		17	Hin-Thi-Lay-Nga-Wa-Taw Road	1.50	2.41	Earth	12h 3h	3h			
		18	The-Taw-MBC Road	0.65	1.01	Earth	12h 3h	3h			

**VI.1.4 Unit Construction Quantity of Rural Road (per mile)**

(1) Non Pavement to Earth Pavement

**Unit Quantity of Earth Pavement (per mile)**

**1. Conditions**

(1) Pavement : Kanker	(2) Ground Condition : Hard or Normal
(3) Roadway Width : 12 ft (3.66 m)	(4) Shoulder Width : 3.0 ft (0.91 m)

**2. Quantity**

Particulars	Measurement	Unit	Quantity	Remarks
<b>1. Road Work</b>				
<b>Kanker Pavement</b>				
	Pavement Material & Thickness : 1st Layer ; 12" (Earth)			
<b>1-1. Pavement of 1st Layer</b>				
<b>(1) Volume Quantity of Soil</b>				
	Rate of material loss (during transportation and keeping in stock yard etc.) = 5 % of volume			
	Rate for shrinkage of soil compaction = 0.90			
(Section Area)	$12' - 0" \times 12' =$	sq-ft	12.00	
(Section Area)	$3.66m \times 0.305m =$	m <sup>2</sup>	1.115	
Unit Quantity (Volume)	$( 12.00 \times 5,280' / 0.90 ) \times 1.05 / 100 =$	sud	739	1mlk=5,280ft
Unit Quantity (Volume)	$( 1.115 \times 1,609.34m / 0.90 ) \times 1.05 =$	m <sup>3</sup>	2,093	
<b>(2) Spreading of Soil (by Manual)</b>				
	$12.00 \times 5,280' / 0.90 / 100 =$	sud	704	1mlk=5,280ft
	$1.115 \times 1,609.34m / 0.90 =$	m <sup>3</sup>	1,994	
<b>(3) Compaction of Soil (by Road Roller)</b>				
	$12.00 \times 5,280' / 0.90 / 100 =$	sud	704	1mlk=5,280ft
	$1.115 \times 1,609.34m / 0.90 =$	m <sup>3</sup>	1,994	

(2) Earth Pavement to Metal/Macadam (Rock) Pavement

**Unit Quantity of Metal/Macadam (Rock) Pavement (per mile)**

**1. Conditions**

(1) Pavement : Metal/Macadam (Rock)	(2) Ground Condition : Hard or Normal
(3) Roadway Width : 12 ft (3.66 m)	(4) Shoulder Width : 3.0 ft (0.91 m)

**2. Quantity (1/ 3)**

Particulars	Measurement	Unit	Quantity	Remarks
<b>1. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
	Pavement Material & Thickness : 1st Layer ; 2" (Kanker)			
	2nd Layer ; 6" (1" to 2" Chipping)			
	3rd Layer ; 6" (2" to 4" Chipping)			
<b>1-1-1. Pavement of 3rd Layer</b>				
	* 3rd Layer consist of 2" to 4" chipping and filling material (sand and chipping stone(1" to 2",3/4" and 3/8"etc.)).			
	Mixing volume rate between 2" to 4" chipping and filling Material is 4 (80%):1 (20%).			
	2" to 4" chipping should be made by crushing 6" to 9" chipping at construction site by manual.			
<b>(1) Volume Quantity of Material</b>				
	Rate of material loss (during transportation and keeping in stock yard etc.) = 5 % of volume			
	Rate for shrinkage of soil compaction = 0.95			
<b>a) Volume Quantity of 2" to 4" Chipping</b>				
(Section Area)	$13' - 0" \times 6' \times 0.80 =$	sq-ft	5.20	80% of volume
(Section Area)	$3.96m \times 0.152m \times 0.80 =$	m <sup>2</sup>	0.483	80% of volume
Unit Quantity (Volume)	$( 5.20 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	sud	303	1mlk=5,280ft
Unit Quantity (Volume)	$( 0.483 \times 1,609.34m / 0.95 ) \times 1.05 =$	m <sup>3</sup>	859	
<b>b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)</b>				
	Rate for swell of soil compaction = 1.20			
	$303 \times 1.20 =$	sud	364	
	$859 \times 1.20 =$	m <sup>3</sup>	1,031	
<b>c) Volume Quantity of Filling Material</b>				
(Section Area)	$13' - 0" \times 6' \times 0.20 =$	sq-ft	1.30	20% of volume
(Section Area)	$3.96m \times 0.152m \times 0.20 =$	m <sup>2</sup>	0.121	20% of volume
Unit Quantity (Volume)	$( 1.30 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	sud	76	1mlk=5,280ft
Unit Quantity (Volume)	$( 0.121 \times 1,609.34m / 0.95 ) \times 1.05 =$	m <sup>3</sup>	215	
<b>(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)</b>				
	Same as volume quantity of 6" to 9" chipping	sud	364	
	Same as volume quantity of 6" to 9" chipping	m <sup>3</sup>	1,031	
<b>(3) Spreading and Mixing of 2" to 4" Chipping &amp; Filling Material (by Manual)</b>				
	$( 303 + 76 ) / 1.05 =$	sud	361	
	$( 859 + 215 ) / 1.05 =$	m <sup>3</sup>	1,023	
<b>(4) Compaction of 2" to 4" Chipping &amp; Filling Material (by Road Roller)</b>				
	$( 303 + 76 ) / 1.05 =$	sud	361	
	$( 859 + 215 ) / 1.05 =$	m <sup>3</sup>	1,023	

<b>2. Quantity (2/3)</b>			<b>2. Quantity (3/3)</b>		
Particulars	Measurement	Unit	Quantity	Remarks	Measurement
<b>1-1-2. Pavement of 2nd Layer</b>					
<b>(1) Volume Quantity of 1" to 2" Chipping</b>					
Rate of material loss (during transportation and keeping in stock yard etc.) = 5% of volume					
Rate for shrinkage of soil compaction = 0.95					
(Section Area) 12' - 0" × 6" =		sq-ft	6.00		
(Section Area) 3.66m × 0.152m =		m <sup>2</sup>	0.557		
Unit Quantity (Volume) ( 6.00 × 5,280' / 0.95 ) × 1.05 / 100 =		sud	350		1mile=5,280ft
Unit Quantity (Volume) ( 0.557 × 1,609.34m / 0.95 ) × 1.05 =		m <sup>3</sup>	991		
<b>(2) Spreading of 1" to 2" Chipping (by Manual)</b>					
6.00 × 5,280' / 0.95 / 100 =		sud	333		1mile=5,280ft
0.557 × 1,609.34m / 0.95 =		m <sup>3</sup>	944		
<b>(3) Compaction of 1" to 2" Chipping (by Road Roller)</b>					
6.00 × 5,280' / 0.95 / 100 =		sud	333		1mile=5,280ft
0.557 × 1,609.34m / 0.95 =		m <sup>3</sup>	944		
<b>1-1-3. Pavement of 1st Layer</b>					
<b>(1) Volume Quantity of Kankeer</b>					
Rate of material loss (during transportation and keeping in stock yard etc.) = 5% of volume					
Rate for shrinkage of soil compaction = 0.90					
(Section Area) 12' - 0" × 2" =		sq-ft	2.00		
(Section Area) 3.66m × 0.051m =		m <sup>2</sup>	0.186		
Unit Quantity (Volume) ( 2.00 × 5,280' / 0.90 ) × 1.05 / 100 =		sud	123		1mile=5,280ft
Unit Quantity (Volume) ( 0.186 × 1,609.34m / 0.90 ) × 1.05 =		m <sup>3</sup>	349		
<b>(2) Spreading of Kankeer (by Manual)</b>					
2.00 × 5,280' / 0.90 / 100 =		sud	117		1mile=5,280ft
0.186 × 1,609.34m / 0.90 =		m <sup>3</sup>	333		
<b>(3) Compaction of Kankeer (by Road Roller)</b>					
2.00 × 5,280' / 0.90 / 100 =		sud	117		1mile=5,280ft
0.186 × 1,609.34m / 0.90 =		m <sup>3</sup>	333		
<b>1-2. Shoulder</b>					
<b>(1) Volume Quantity of Kankeer</b>					
Rate of material loss (during transportation and keeping in stock yard etc.) = 5% of volume					
Rate for shrinkage of soil compaction = 0.90					
(Section Area) ( 3' - 0" × 8" ) × 2 =		sq-ft	4,000		
(Section Area) ( 0.914m × 0.203m ) × 2 =		m <sup>2</sup>	0.372		
Unit Quantity (Volume) ( 4,000 × 5,280' / 0.90 ) × 1.05 / 100 =		sud	246		1mile=5,280ft
Unit Quantity (Volume) ( 0.372 × 1,609.34m / 0.90 ) × 1.05 =		m <sup>3</sup>	698		
<b>(2) Laying and Compaction of Shoulder</b>					
4.00 × 5,280' / 0.90 / 100 =		sud	235		1mile=5,280ft
0.372 × 1,609.34m / 0.90 =		m <sup>3</sup>	665		

Particulars	Measurement	Unit	Quantity	Remarks
<b>2. Quantity (3/3)</b>				
<b>2. Other Related Works</b>				
(1) Survey and Profile Work				
(2) Site Clearing Work (by Manual)				
(3) Transporting and Shifting of Heavy Machinery				
(4) Labor Transporting Work		set	1	
(5) Loading and Unloading of Materials				
(6) Repairing of Machinery				
(7) Welfare Charges for Worker (Temporary Rest Station, Temporary Latrine etc.)				
(8) Miscellaneous				

(3) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Quantity of Asphalt Pavement (per mile)**

**1. Conditions**

(1) Pavement : Asphalt	(2) Ground Condition : Hard or Normal
(3) Roadway Width : 12 ft (3.66 m)	(4) Shoulder Width : 4.0 ft (1.22 m)

**2. Quantity (1/3)**

Particulars	Measurement	Unit	Quantity	Remarks
<b>1. Road Work</b>				
<b>1-1. Asphalt Pavement</b>				
	Pavement Material & Thickness :	1st Layer ;	-	(Asphalt Coating)
		2nd Layer ;	1"	(1/2" to 3/4" Chipping)
		3rd Layer ;	-	(Asphalt Coating)
		4th Layer ;	6"	(1" to 2" Chipping)
		5th Layer ;	2"	(2" to 4" Chipping)
<b>1-1-1. Pavement of 5th Layer</b>				
※ 5th Layer consist of 2" to 4" chipping and filling material (sand and chipping stone(1" to 2", 3/4" and 3/8" etc.)). Mixing volume rate between 2" to 4" chipping and filling Material is 4 (80%):1 (20%). 2" to 4" chipping should be made by crushing 6" to 9" chipping at construction site by manual.				
<b>(1) Volume Quantity of Material</b>				
	Rate of material loss (during transportation and keeping in stock yard etc.) =		5 % of volume	
	Rate for shrinkage of soil compaction =		0.95	
<b>a) Volume Quantity of 2" to 4" Chipping</b>				
(Section Area)	$13' - 0" \times 2' \times 0.80 =$	sq-ft	1.73	80% of volume
(Section Area)	$3.96m \times 0.051m \times 0.80 =$	m2	0.161	80% of volume
Unit Quantity (Volume)	$( 1.73 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	std	101	1mile=5,280ft
Unit Quantity (Volume)	$( 0.161 \times 1,609.34m / 0.95 ) \times 1.05 =$	m3	286	
<b>b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)</b>				
	Rate for swell of soil compaction =		1.20	
	$101 \times 1.20 =$	std	121	
	$286 \times 1.20 =$	m3	343	
<b>c) Volume Quantity of Filling Material</b>				
(Section Area)	$13' - 0" \times 2' \times 0.20 =$	sq-ft	0.43	20% of volume
(Section Area)	$3.96m \times 0.051m \times 0.20 =$	m2	0.040	20% of volume
Unit Quantity (Volume)	$( 0.43 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	std	25	1mile=5,280ft
Unit Quantity (Volume)	$( 0.040 \times 1,609.34m / 0.95 ) \times 1.05 =$	m3	71	
<b>(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)</b>				
	Same as volume quantity of 6" to 9" chipping	std	121	
	Same as volume quantity of 6" to 9" chipping	m3	343	
<b>(3) Spreading and Mixing of 2" to 4" Chipping &amp; Filling Material (by Manual)</b>				
	$( 101 + 25 ) / 1.05 =$	std	120	
	$( 286 + 71 ) / 1.05 =$	m3	340	

**2. Quantity (2/3)**

Particulars	Measurement	Unit	Quantity	Remarks
<b>(4) Compaction of 2" to 4" Chipping &amp; Filling Material (by Road Roller)</b>				
	$( 101 + 25 ) / 1.05 =$	std	120	
	$( 286 + 71 ) / 1.05 =$	m3	340	
<b>1-1-2. Pavement of 4th Layer</b>				
<b>(1) Volume Quantity of 1" to 2" Chipping</b>				
	Rate of material loss (during transportation and keeping in stock yard etc.) =		5 % of volume	
	Rate for shrinkage of soil compaction =		0.95	
(Section Area)	$12' - 0" \times 6' =$	sq-ft	6.00	
(Section Area)	$3.66m \times 0.152m =$	m2	0.557	
Unit Quantity (Volume)	$( 6.00 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	std	350	1mile=5,280ft
Unit Quantity (Volume)	$( 0.557 \times 1,609.34m / 0.95 ) \times 1.05 =$	m3	991	
<b>(2) Spreading of 1" to 2" Chipping (by Manual)</b>				
	$6.00 \times 5,280' / 0.95 / 100 =$	std	333	1mile=5,280ft
	$0.557 \times 1,609.34m / 0.95 =$	m3	944	
<b>(3) Compaction of 1" to 2" Chipping (by Road Roller)</b>				
	$6.00 \times 5,280' / 0.95 / 100 =$	std	333	1mile=5,280ft
	$0.557 \times 1,609.34m / 0.95 =$	m3	944	
<b>1-1-3. Asphalt Coating of 3rd Layer</b>				
<b>(1) Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)</b>				
		mile	1.0	W = 12 ft
		km	1.609	W = 3.66 m
<b>(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)</b>				
		mile	1.0	W = 12 ft
		km	1.609	W = 3.66 m
<b>1-1-4. Pavement of 2nd Layer</b>				
<b>(1) Volume Quantity of 1/2" to 3/4" Chipping</b>				
	Rate of material loss (during transportation and keeping in stock yard etc.) =		5 % of volume	
	Rate for shrinkage of soil compaction =		0.95	
(Section Area)	$12' - 0" \times 1" =$	sq-ft	1.00	
(Section Area)	$3.66m \times 0.025m =$	m2	0.093	
Unit Quantity (Volume)	$( 1.00 \times 5,280' / 0.95 ) \times 1.05 / 100 =$	std	58	1mile=5,280ft
Unit Quantity (Volume)	$( 0.093 \times 1,609.34m / 0.95 ) \times 1.05 =$	m3	165	
<b>(2) Spreading of 1/2" to 3/4" Chipping (by Manual)</b>				
	$1.00 \times 5,280' / 0.95 / 100 =$	std	56	1mile=5,280ft
	$0.093 \times 1,609.34m / 0.95 =$	m3	158	
<b>(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)</b>				
	$1.00 \times 5,280' / 0.95 / 100 =$	std	56	1mile=5,280ft
	$0.093 \times 1,609.34m / 0.95 =$	m3	158	

**2. Quantity (3/ 3)**

Particulars	Measurement	Unit	Quantity	Remarks
<b>1-1-5. Asphalt Coating of 1st Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 30Lb per %s q-ft)		mile	1.0	W = 12 ft
		km	1.609	W = 3.66 m
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kancker				
Rate of material loss (during transportation and keeping in stock yard etc.) =				5 % of volume
				0.90
(Section Area) $( 4' - 0'' \times 7' + 1' \times 3' ) \times 2 =$		sq-ft	10.656	
(Section Area) $( 0.217m + 0.279m ) \times 2 =$		m <sup>2</sup>	0.991	
Unit Quantity (Volume) $( 10.66 \times 5.280' / 0.90 ) \times 1.05 / 100 =$		sud	656	1 mile = 5,280ft
Unit Quantity (Volume) $( 0.991 \times 1,609.34m / 0.90 ) \times 1.05 =$		m <sup>3</sup>	1,861	
<b>(2) Laying and Compaction of Shoulder</b>				
$10.66 \times 5.280' / 0.90 / 100 =$		sud	625	1 mile = 5,280ft
$0.991 \times 1,609.34m / 0.90 =$		m <sup>3</sup>	1,772	
<b>2. Other Related Works</b>				
(1) Survey and Profile Work				
(2) Site Clearing Work (by Manual)				
(3) Transporting and Shifting of Heavy Machinery				
(4) Labor Transporting Work				
(5) Loading and Unloading of Materials		set	1	
(6) Repairing of Machinery				
(7) Welfare Charges for Worker				
(Temporary Rest Station, Temporary Latrine etc.)				
(8) Miscellaneous				

**VI.1.5 Unit Construction Cost of Rural Road (per mile)**  
**1. Kanbalu Township**

(1) Non Pavement to Earth Pavement

**Unit Construction Cost of Earth Road (per mile)**

**【Rural Road in Kanbalu Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
			<b>Total</b>	
<b>Unit Construction Cost =</b>				<b>(million kyat/mile)</b>

(2) Earth Pavement to Metal/Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Kanbalu Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal /Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
			<b>Total</b>	
<b>Unit Construction Cost =</b>				<b>(million kyat/mile)</b>

**2. Kin-U Township**

(1) Non Pavement to Earth Pavement

**Unit Construction Cost of Earth Road (per mile)**

**【Rural Road in Kin-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>I-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
			<b>Total</b>	
<b>Unit Construction Cost =</b>		<b>(million kyat/mile)</b>		

(2) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Kin-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>I-1. Metal / Macadam (Rock) Pavement</b>				
<b>I-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>I-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>I-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>I-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
			<b>Total</b>	
<b>Unit Construction Cost =</b>		<b>(million kyat/mile)</b>		

### 3. Shwebo Township

#### (1) Non Pavement to Earth Pavement

#### Unit Construction Cost of Earth Road (per mile)

**【Rural Road in Shwebo Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>1-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
<b>Unit Construction Cost =</b>			<b>Total</b>	
			<b>(million kyat/mile)</b>	

#### (3) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

#### Unit Construction Cost of Asphalt Road (per mile)

**【Rural Road in Kin-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>1-1. Asphalt Pavement</b>				
<b>1-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>1-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Asphalt Coating of 3rd Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)	1.0	mile		
(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>1-1-5. Asphalt Coating of 1st Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
			<b>(million kyat/mile)</b>	



(2) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Shwebo Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal /Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

(3) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Construction Cost of Asphalt Road (per mile)**

**【Rural Road in Shwebo Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Asphalt Pavement</b>				
<b>1-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>1-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Asphalt Coating of 3rd Layer</b>				
Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)	1.0	mile		
Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>1-1-5. Asphalt Coating of 1st Layer</b>				
Hot Bitumen Surface Dressing (1st Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

#### 4. Wetlet Township

(1) Earth Pavement to Metal/ Macadam (Rock) Pavement

#### Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)

**[Rural Road in Wetlet Township]**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

#### 5. Taze Township

(1) Non Pavement to Earth Pavement

#### Unit Construction Cost of Earth Road (per mile)

**[Rural Road in Taze Township]**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>1-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

(2) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Taze Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

(3) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Construction Cost of Asphalt Road (per mile)**

**【Rural Road in Taze Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Asphalt Pavement</b>				
<b>1-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>1-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Asphalt Coating of 3rd Layer</b>				
Hot Bitumen Surface Dressing (1st Coat: 40Lb per % sq-ft)	1.0	mile		
(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per % sq-ft)	1.0	mile		
<b>1-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>1-1-5. Asphalt Coating of 1st Layer</b>				
Hot Bitumen Surface Dressing (1st Coat: 30Lb per % sq-ft)	1.0	mile		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

**6. Ye-U Township**

(1) Non Pavement to Earth Pavement

**Unit Construction Cost of Earth Road (per mile)**

**【Rural Road in Ye-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
			<b>Total</b>	
<b>Unit Construction Cost =</b>		<b>(million kyat/mile)</b>		

(2) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Ye-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
			<b>Total</b>	
<b>Unit Construction Cost =</b>		<b>(million kyat/mile)</b>		

**7. Tabayin Township**

(1) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Tabayin Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal /Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

(3) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Construction Cost of Asphalt Road (per mile)**

**【Rural Road in Ye-U Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Asphalt Pavement</b>				
<b>1-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>1-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Asphalt Coating of 3rd Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)	1.0	mile		
(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>1-1-5. Asphalt Coating of 1st Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 30Lb per %sq-ft)	1.0	mile		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>			<b>Total</b>	
				<b>(million kyat/mile)</b>

**8. Budalin Township**

(1) Non Pavement to Earth Pavement

**Unit Construction Cost of Earth Road (per mile)**

**【Rural Road in Budalin Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>I-1. Pavement of 1st Layer</b>				
(1) Volume Quantity of Soil	739	sud		
(2) Spreading of Soil (by Manual)	704	sud		
(3) Compaction of Soil (by Road Roller)	704	sud		
			<b>Total</b>	
			<b>(million kyat/mile)</b>	
<b>Unit Construction Cost =</b>				

(2) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Construction Cost of Asphalt Road (per mile)**

**【Rural Road in Tabayin Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>I-1. Asphalt Pavement</b>				
<b>I-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>I-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>I-1-3. Asphalt Coating of 3rd Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)	1.0	mile		
(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)	1.0	mile		
<b>I-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>I-1-5. Asphalt Coating of 1st Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 30Lb per %sq-ft)	1.0	mile		
<b>I-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
			<b>Total</b>	
			<b>(million kyat/mile)</b>	
<b>Unit Construction Cost =</b>				

**9. Ayadaw Township**

(1) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Ayadaw Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>				<b>Total</b>
				<b>(million kyat/mile)</b>

(2) Earth Pavement to Metal/ Macadam (Rock) Pavement

**Unit Construction Cost of Metal/Macadam (Rock) Road (per mile)**

**【Rural Road in Budalin Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>1. Road Work</b>				
<b>1-1. Metal / Macadam (Rock) Pavement</b>				
<b>1-1-1. Pavement of 3rd Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	303	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	364	sud		
c) Volume Quantity of Filling Material	76	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	364	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	361	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	361	sud		
<b>1-1-2. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>1-1-3. Pavement of 1st Layer</b>				
(1) Volume Quantity of Kanker	123	sud		
(2) Spreading of Kanker (by Manual)	117	sud		
(3) Compaction of Kanker (by Road Roller)	117	sud		
<b>1-2. Shoulder</b>				
(1) Volume Quantity of Kanker	246	sud		
(2) Laying and Compaction of Shoulder	235	sud		
<b>2. Other Related Works</b>				
	1	set		
<b>Unit Construction Cost =</b>				<b>Total</b>
				<b>(million kyat/mile)</b>

(2) Metal/ Macadam (Rock) Pavement to Asphalt Pavement

**Unit Construction Cost of Asphalt Road (per mile)**

**【Rural Road in Ayadaw Township】**

Work Item	Quantity	Unit	Unit Price (kyat)	Cost (kyat)
<b>I. Road Work</b>				
<b>I-1. Asphalt Pavement</b>				
<b>I-1-1. Pavement of 5th Layer</b>				
(1) Volume Quantity of Material				
a) Volume Quantity of 2" to 4" Chipping	101	sud		
b) Volume Quantity of 6" to 9" Chipping (before breaking into 2" to 4" chipping)	121	sud		
c) Volume Quantity of Filling Material	25	sud		
(2) Breaking 2" to 4" Chipping from 6" to 9" Chipping at Construction Site (by Manual)	121	sud		
(3) Spreading and Mixing of 2" to 4" Chipping & Filling Material (by Manual)	120	sud		
(4) Compaction of 2" to 4" Chipping & Filling Material (by Road Roller)	120	sud		
<b>I-1-2. Pavement of 4th Layer</b>				
(1) Volume Quantity of 1" to 2" Chipping	350	sud		
(2) Spreading of 1" to 2" Chipping (by Manual)	333	sud		
(3) Compaction of 1" to 2" Chipping (by Road Roller)	333	sud		
<b>I-1-3. Asphalt Coating of 3rd Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 40Lb per %sq-ft)	1.0	mile		
(2) Hot Bitumen Surface Dressing (2nd Coat: 30Lb per %sq-ft)	1.0	mile		
<b>I-1-4. Pavement of 2nd Layer</b>				
(1) Volume Quantity of 1/2" to 3/4" Chipping	58	sud		
(2) Spreading of 1/2" to 3/4" Chipping (by Manual)	56	sud		
(3) Compaction of 1/2" to 3/4" Chipping (by Road Roller)	56	sud		
<b>I-1-5. Asphalt Coating of 1st Layer</b>				
(1) Hot Bitumen Surface Dressing (1st Coat: 30Lb per %sq-ft)	1.0	mile		
<b>I-2. Shoulder</b>				
(1) Volume Quantity of Kanker	656	sud		
(2) Laying and Compaction of Shoulder	625	sud		
<b>2. Other Related Works</b>				
	1	set		
			<b>Total</b>	
<b>Unit Construction Cost =</b>			<b>(million kyat/mile)</b>	





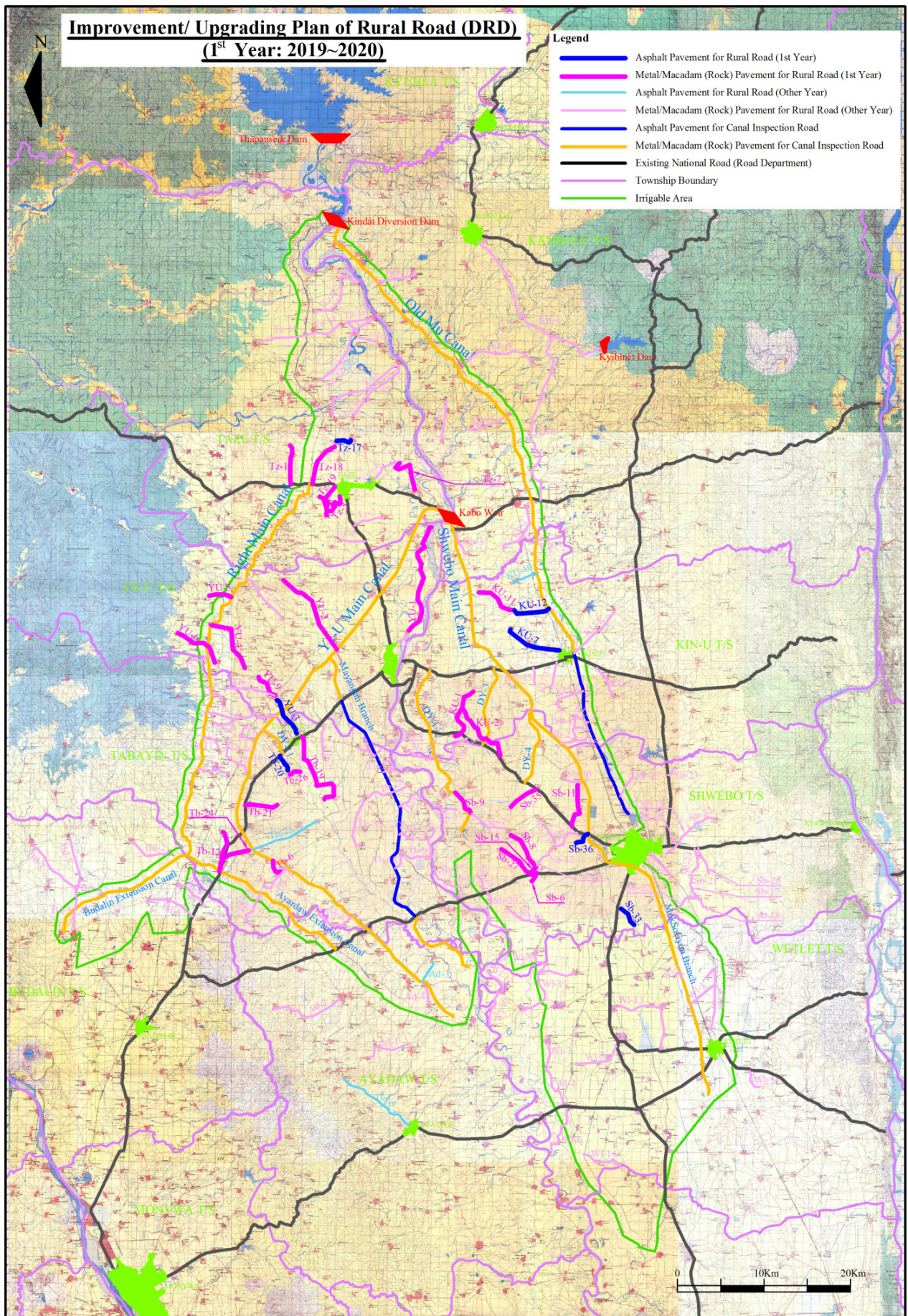


(5) Construction Plan of 5<sup>th</sup> Year (2023 ~ 2024)

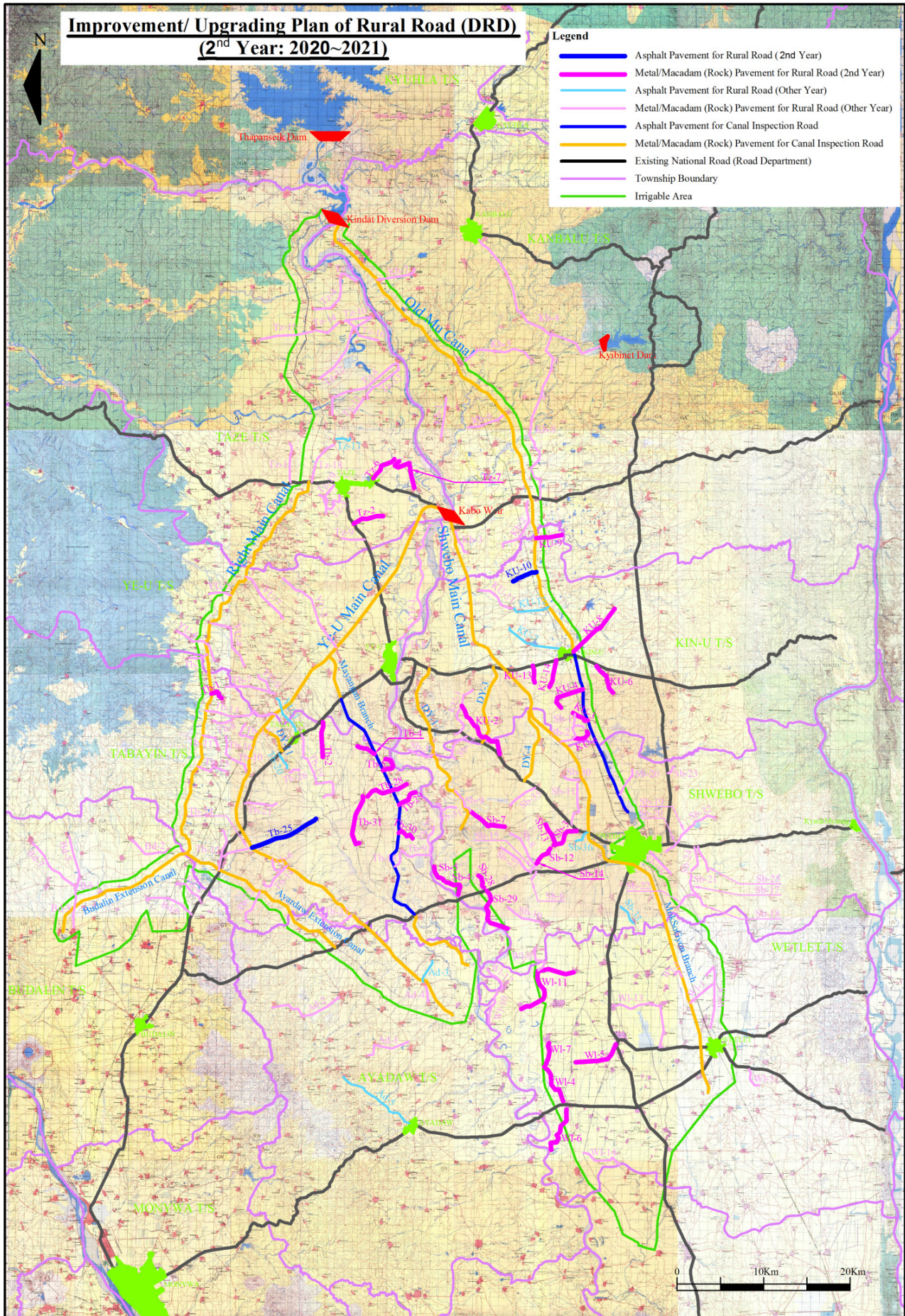
Annual Year	District	Township	No.	Description	Road Length		Pavement Type		Roadway and Shoulder		Unit Cost (million kyat/mile)	Construction Cost (million kyat)	Effective		
					(mile)	(km)	Present Condition	Upgrade Plan	12ft	3ft			Village	House hold	Population
5th Year	Kanbahu	Kanbahu	Kb-4	Kanbulu - Nga Toe - Kyay Pin Act- Nga Pyaw Tine Road	12.63	20.33	Earth	Metal/Macadam	12ft	3ft			6	1,923	8,022
			Kb-5	Htan Gone-Zee Pin Thar-Ye Dwe-Htain Taw-Kine Yoe Village to Village Road	5.00	8.05	Earth	Metal/Macadam	12ft	3ft				6	1,992
	Shwebo	Taze	Tz-3	Thar Gaya-Mu Sate Road	1.00	1.61	Earth	Metal/Macadam	12ft	3ft			7	1,179	5,927
			Tz-4	Malze Li Kone-At Gyi-Thar Gala Road	6.00	9.66	Earth	Metal/Macadam	12ft	3ft			5	734	3,300
			Tz-14	Ywa Shae-Kone Aing-Htan Pin Sate Road	5.00	8.05	Earth	Metal/Macadam	12ft	3ft			4	1,136	4,551
			Tz-16	Htan Bin Zeik - Hpet Than Gon - Bay Yin Ywa Thit - Mu Gyin (Road)	2.80	4.51	Earth	Metal/Macadam	12ft	3ft			6	876	4,329
			Tb-3	That Yat Kyin RMC Road	1.63	2.62	Earth	Metal/Macadam	12ft	3ft			1	290	1,460
		Tb-8	Paung Taung Ku-Tat Ti (East)-Tat Ti (West) Road	3.00	4.83	Earth	Metal/Macadam	12ft	3ft			3	241	1,252	
		Tb-11	Inn Bote-Kone Yoe Village to Village Road	1.25	2.01	Earth	Metal/Macadam	12ft	3ft			3	435	2,206	
		Tb-13	Paung Taung Ku-Lae Pyin Kyet RMC Road	3.00	4.83	Earth	Metal/Macadam	12ft	3ft			2	209	1,130	
		Tb-14	Pa Ga (Dy-11) Road	2.00	3.22	Earth	Metal/Macadam	12ft	3ft			1	284	1,225	
		Tb-15	Sat Pyar Kyin-Inn Pin Gyi-Chaung Oo Road	2.00	3.22	Earth	Metal/Macadam	12ft	3ft			3	313	2,016	
	Tabayin	Tb-17	Inn Tai Lay-Nge Wae Taw Road	1.50	2.41	Earth	Metal/Macadam	12ft	3ft			2	123	627	
		Tb-22	RMC-Kyaut Mae Taw	2.50	4.02	Earth	Metal/Macadam	12ft	3ft			2	150	816	
		Tb-23	YMC-A Baya-Zee Phyu Kone-Taw Tan-Mya Yake	3.00	4.83	Earth	Metal/Macadam	12ft	3ft			4	396	1,937	
		BudaIn	Bd-2	Ma Daing Kyin - Chaung Mi Toe - Hnaw Pin Gyi	4.00	6.44	Earth	Metal/Macadam	12ft	3ft			3	579	3,755
			Bd-4	Ye Htwat - Lat Pan Road	1.25	2.01	Earth	Metal/Macadam	12ft	3ft			2	362	2,246
			Bd-6	Butalin - Sin Yan - Kin San Road	4.00	6.44	Earth	Metal/Macadam	12ft	3ft			3	565	3,286
		Monywa	Ayadaw	Ad-1	Ayadaw-Naung Gyi Aei-MaKyii KanKone Thar-Wat Pyit Access Road	4.00	6.44	Earth	Metal/Macadam	12ft	3ft			3	1,495
	Ad-2			Thar Ci-Naung Gyi Aei - Naung Gyi Aei-ChinPin Access Road	1.50	2.41	Earth	Metal/Macadam	12ft	3ft			2	750	3,704
	Ad-3			FokeKone-Oak Shi Gyi-Kaung That Access Road	2.00	3.22	Metal/Macadam	Asphalt	12ft	4ft			4	1,225	4,357
	Ad-4			Fokekone-KywanTaw Access Road	2.00	3.22	Earth	Metal/Macadam	12ft	3ft			1	200	2,129
	Ad-5			Ayadaw-Wartawma Access Road	5.00	8.05	Metal/Macadam	Asphalt	12ft	4ft			4	631	2,866
	<b>5th Year (2023 ~ 2024) Total</b>												<b>million kyat</b>		
	<b>Grand Total</b>												<b>million kyat</b>		

## 2. Rural Road Map of Construction Plan

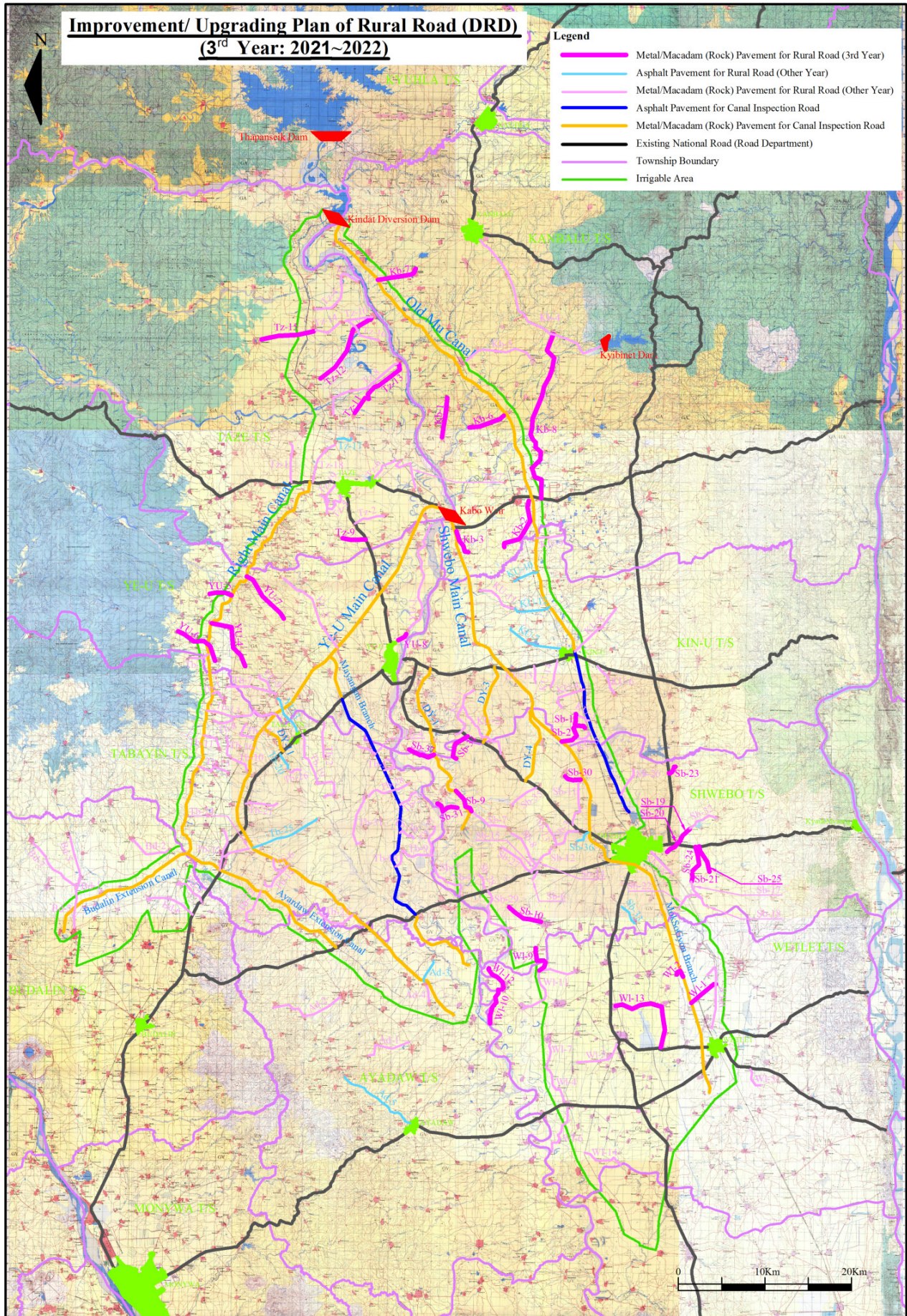
### (1) Rural Road Map of 1<sup>st</sup> Year's Construction



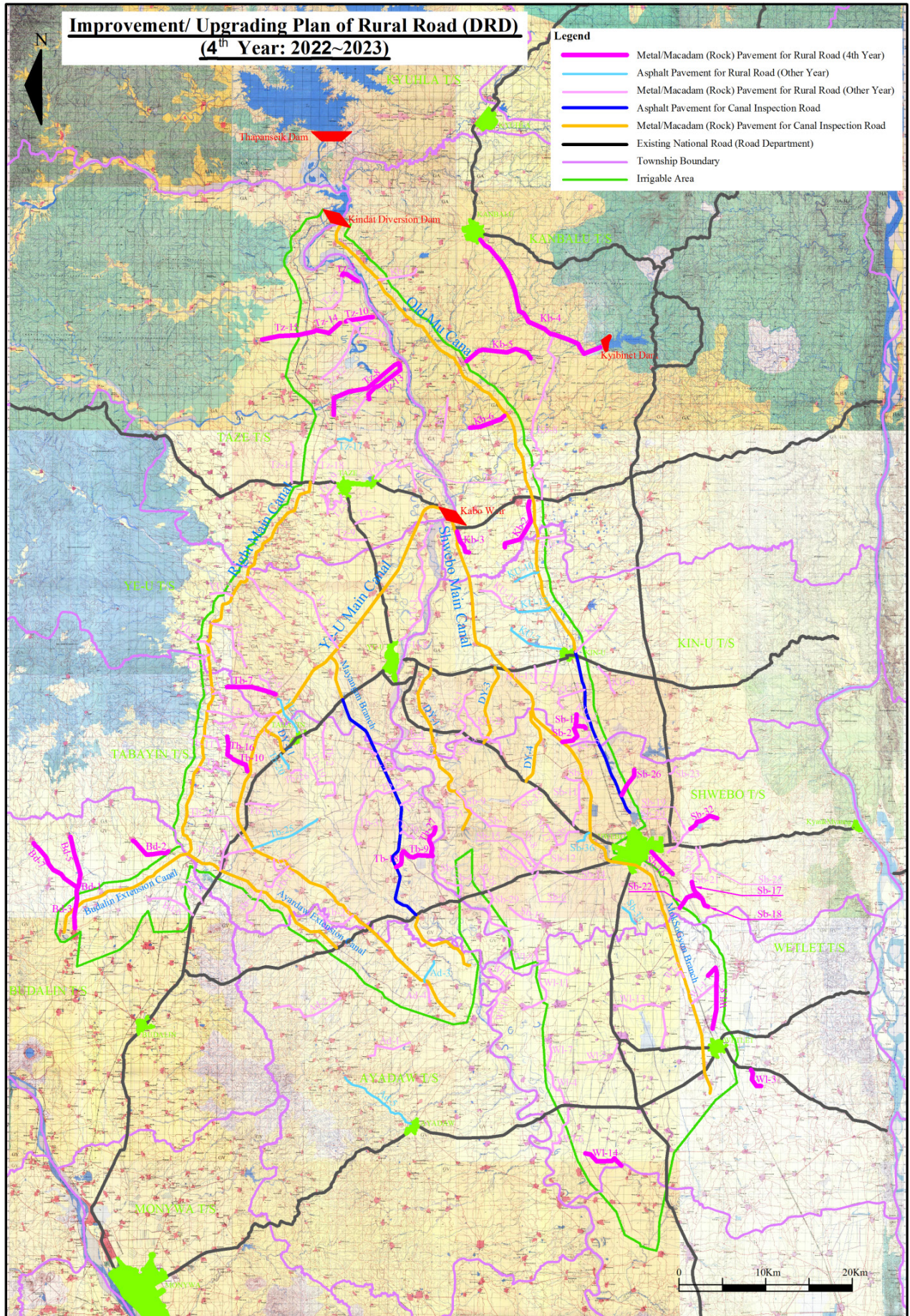
(2) Rural Road Map of 2<sup>nd</sup> Year's Construction



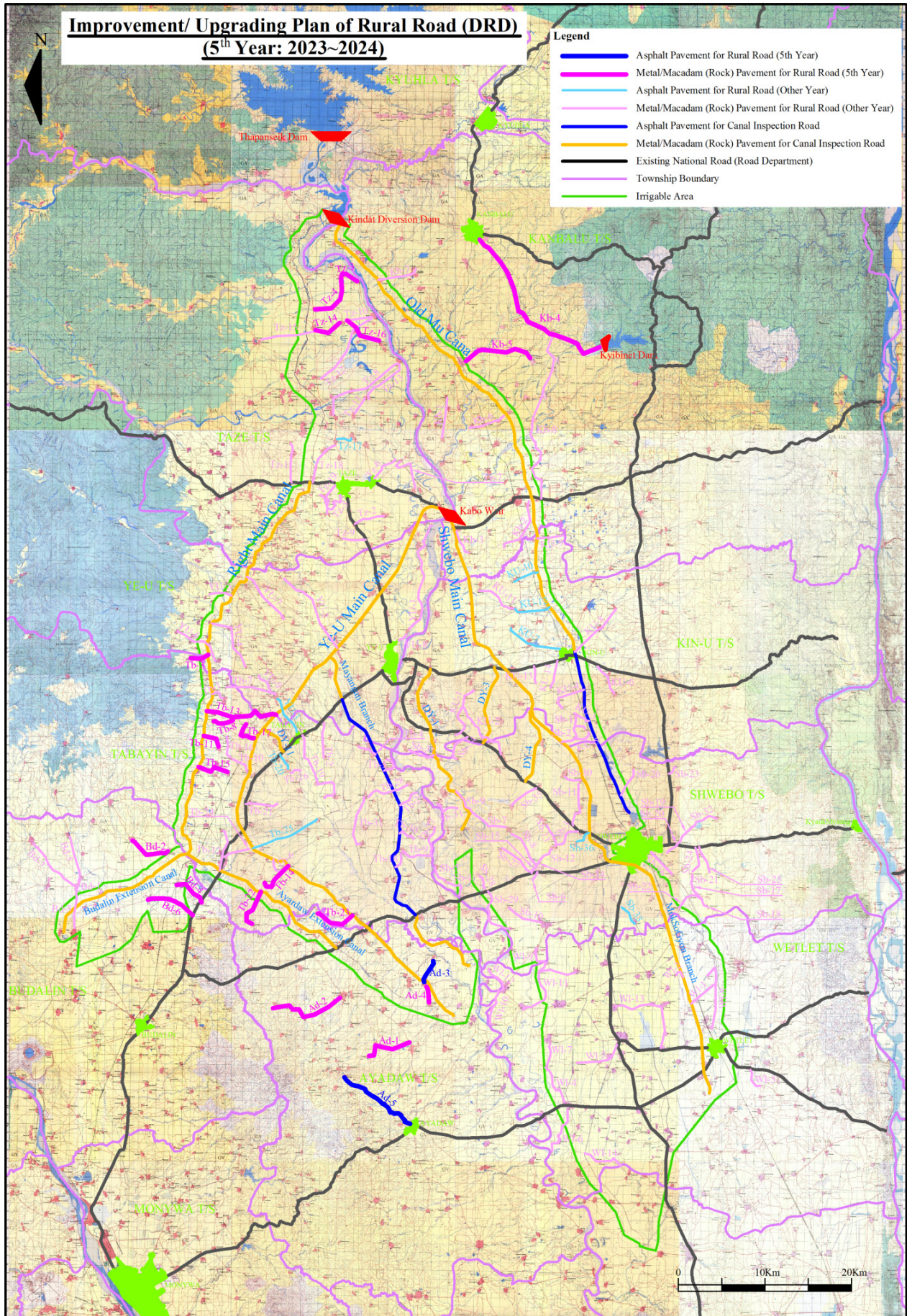
(3) Rural Road Map of 3<sup>rd</sup> Year's Construction



(4) Rural Road Map of 4<sup>th</sup> Year's Construction



(5) Rural Road Map of 5<sup>th</sup> Year's Construction

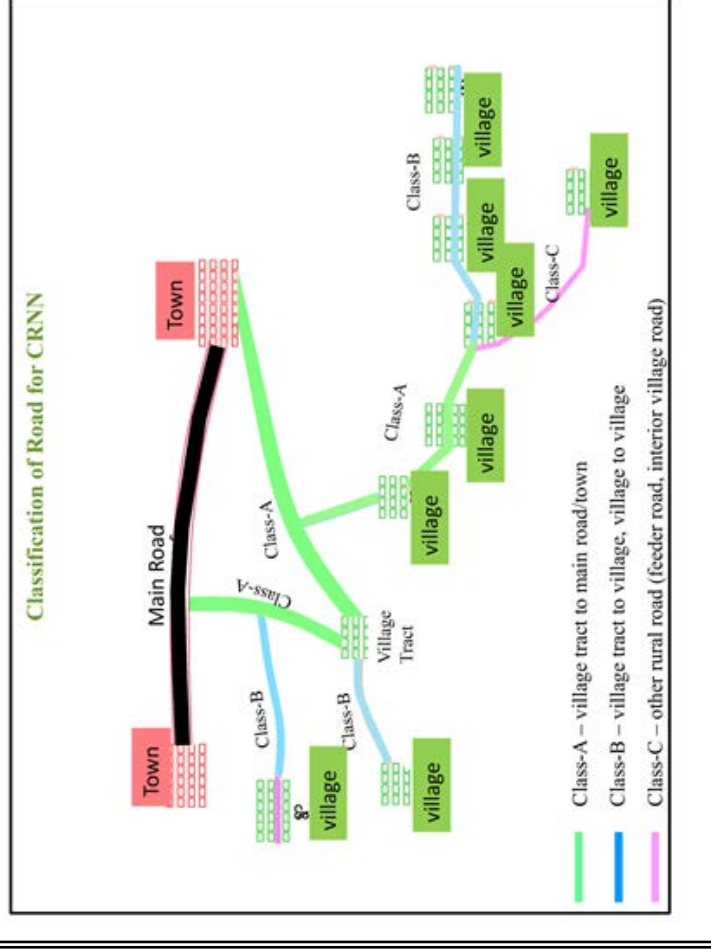




## VI.1.7 Rural Road Classification by DRD's Strategy

### 【DRD's Strategy of Rural Road Classification】

- Class-A:** Road connecting village tracts or population > 1000 people (village tract/ village to town / highway road and/or Canal Inspection Road)
- Class-B:** Road connecting smaller populations (village to village, village tract to village)
- Class-C:** Other rural road not include in (Class-A and Class-B) (Feeder road / small village which not include in Core Rural Road Network (CCRN))



### (1) Rural Road Classification of 1<sup>st</sup> Year's Construction (2019 ~ 2020)

Annual Year	District	Township	No.	Description	Pavement Type (Upgrade Plan)	Effective		Classification of Road	
						Village	House hold Population		
2019	Shwebo	Kin-U	KU-1	Kan Gyi Kone-Shwe Yamin-Thien-Taw-Ky ar Pin Aung Road	Metal/Macadam	4	585	3,139	A
			KU-2	Shwe Yamin-Thien-Taw-Ky ar Pin Aung-Nyang Pin Thar Road	Earth	4	702	3,597	A
			KU-7	Khin U - Kan Tar Yar - Ba Oo Road	Asphalt	3	810	4,094	A
			KU-11	Ngar Yon Gyi- Jya Post- Poyk Thian Ton	Metal/Macadam	3	357	1,754	B
			KU-12	Paak thin dan - Gya Bo - Si Bok tuya - Tha yet kan - OMC	Asphalt	4	490	2,643	A
			Sb-6	Htan Zin - Seik Kum Road	Metal/Macadam	2	1,290	6,749	A
			Sb-8	Seik Kun - Ze Pyu Kum Road	Metal/Macadam	7	2,747	15,288	A
			Sb-9	Ku To Seik - Hta Nung Kine Village to Village Road	Earth	3	393	1,918	A
			Sb-11	Nyang Kum - Zee Kone lay Road	Metal/Macadam	3	303	1,371	A
			Sb-15	Sane Khon Village (inside) (Thu Ka Road) Road	Metal/Macadam	1	1,092	5,696	A
			Sb-27	Seik Kon - Ywa Zo (Road)	Metal/Macadam	4	1,611	9,093	A
			2020	Shwebo	Taze	Tz-1	Yin Mar Ywar Ah Win (Road)	Asphalt	1
Sb-35	Zee Hpya Kone - Hta Ma Sar Yi - Leth Chin (Road)	Metal/Macadam				3	1,601	7,824	A
Sb-36	Zee Kone Lay - Myin Chin (Road)	Asphalt				2	854	4,070	A
Tz-1	Tamar Taw-Chuang U-Ye U-Ka Lay Wa Road	Metal/Macadam				2	602	3,438	A
Tz-5	Taze-In Tine-Man Yin Road	Metal/Macadam				9	446	2,169	A
Tz-7	Tok Tabok-Nga Tan Road	Earth				8	1,180	6,253	A
Tz-17	In Kok Ka - Chuang Zon (Road)	Asphalt				3	1,276	5,806	B
Tz-18	We Yin Ng - Kan Nu Ze - Kyun Daw Gon - In Kok Ka (Road)	Metal/Macadam				4	1,094	5,445	A
Tz-19	Taze - Inn Tile (Road)	Metal/Macadam				9	446	2,169	A
YU-1	Kyar Pan Nyo-lay Ywar-Mone Tang Pin-In Pin Road	Metal/Macadam				5	743	3,509	A
YU-2	Me O - Si Thar Myae - Boke Village Road	Metal/Macadam				9	511	2,738	A
YU-3	Tabayin-Tin Tam Yan Road	Asphalt				14	498	4,850	A
Ye-U	Tabayin	YU-4	Oh Pho - Daunk Doe - Meik Hti Lar - Nyi Naung Road entrance Road	Earth	9	900	6,170	A	
		YU-5	From Kin Tar RM C to Nyung Lae-Nay Pu Kone	Earth	6	475	2,675	A	
		YU-6	Zaya Wai-Tar Tine-In Gyi Road	Earth	19	2,148	11,980	A	
		YU-9	Monywa-Ye U Road -Htan Taw	Metal/Macadam	1	275	1,850	B	
		Tb-6	Kyun Yin OMC Road	Metal/Macadam	2	161	806	B	
		Tb-12	Sai Pyin-Gaw Pin Kone Road	Metal/Macadam	4	2,025	8,140	A	
Tabayin	Tabayin	Tb-19	Tabayin-Khon Taung-Ta Nae-Pan Ton Road	Metal/Macadam	6	1,403	7,353	A	
		Tb-20	(Tabayin - Monywa Road) - Yin dwe - Lat ti	Asphalt	3	688	2,992	A	
		Tb-21	(Tabayin - Monywa Road) - Pyan ga - Nu he hla	Metal/Macadam	4	441	1,942	A	
		Tb-24	YMC-Tha Yet Kung-Sing Pyin	Metal/Macadam	7	1,172	5,052	A	
Tb-26	Branch Canal-Lat Ti	Metal/Macadam	1	304	1,506	B			

(2) Rural Road Classification of 2<sup>nd</sup> Year's Construction (2020 ~ 2021)

Annual Year	District	Township	No.	Description	Pavement Type (Upgrade Plan)	Effective		Classification of Road	
						House hold	Population		
2020 Year	Shwebo	Kin-U	KU-2	Shwe Yamun-Then Taw-Kyun Le-Kyar Pin Aing-Nyang Pin Thar Road	Metal/Macadam	4	702	3,597	A
			KU-3	OMC- Ywa Than Road	Metal/Macadam	2	297	1,416	A
			KU-4	OMC-Laung Shay-Let Pan Gyi-Pan twin Road	Metal/Macadam	4	692	3,407	A
			KU-5	OMC-Pauk Tone-Win Gyi Road	Metal/Macadam	2	195	861	B
			KU-6	Khin U-Thin Paung Kar-Chuang Zone-Than Bo Road	Metal/Macadam	2	495	2,967	A
			KU-8	Kin U-Kun Time-Nyang Kan Road	Metal/Macadam	2	470	2,149	A
			KU-9	OMC - Pi daw gon - Yauk thin gon	Metal/Macadam	2	326	1,528	A
			KU-10	OMC- Ma dang gi - Ma dang hla - Shwe Kar	Asphalt	3	417	2,104	A
			KU-13	Khin U - Ye U Road - Hnaw gon	Metal/Macadam	1	76	372	B
			KU-14	Khin U - Ye U Road - Ok sa twin	Metal/Macadam	1	98	502	B
			Sb-3	Thin Tal - Zi Kon Lay Road	Metal/Macadam	3	468	1,638	A
			Sb-4	Ye Kyi Wa - Kyaung Shar Taw Road	Metal/Macadam	3	670	3,291	A
			Sb-5	Yon Taw - Kyaung Shar Taw Road	Metal/Macadam	2	380	1,930	B
			Sb-7	Hta Nang Kine - Ze Pyn Kon Village to Village Road	Metal/Macadam	2	393	1,918	A
			Sb-12	Thin Tal-Sate Khon Road (Repair)	Metal/Macadam	2	468	1,638	A
			Sb-13	Kyauk Myin Shwe-Bo-Nyang Pin Thar Road (Kyauk Myin Banah- Ye Oh Sin)	Metal/Macadam	2	468	1,638	B
			Sb-14	Nar Thar Kone-Tin Tal Road	Metal/Macadam	1	267	1,560	A
Sb-28	Ta Bin - Tha Bye Gon (Road)	Metal/Macadam	3	690	3,952	A			
Sb-29	Tu Gyi - Than Ba Ya Gyan - Ye Daw Mu (Road)	Metal/Macadam	4	879	3,831	A			
2021 Year	Shwebo	Welet	W1-4	Shwe Pan Kon-Taw Kon Road	Metal/Macadam	4	1,373	6,277	A
			W1-5	Thin Taw Gyi-Thin Poke Kan-Hla Taw Village to Village Road	Metal/Macadam	3	335	1,746	A
			W1-6	Shwe Pan Kone-Shwe Oh Kya-Kine Ywa-Nga Bae Hla Road	Metal/Macadam	4	1,399	6,928	A
			W1-7	Shwe Pan Kone-Taw Kone-Tha Man Thar Village to Village Road	Metal/Macadam	4	1,748	7,699	B
			W1-11	Myin Thin-Mahar Bo-Tagnan-Kwe Sin Village Road	Metal/Macadam	3	1,221	6,039	B
			Tz-2	Kha Baung Kyaung Shwe Ta Kyate Road	Metal/Macadam	2	690	3,427	A
			Tz-7	Tok Tabok-Nga Tan Road	Metal/Macadam	8	1,180	6,253	A
			Tz-6	Taze Tok Tabok-Nar-Naung Kya Road	Metal/Macadam	6	682	3,825	A
			Tb-1	Aung Thar Yar-Nagar Twin Road	Metal/Macadam	11	1,997	9,263	A
			Tb-2	Pyaw Baue-Pin Si Road	Metal/Macadam	2	428	1,983	A
			Tb-4	Ma Ode-Let Yat Kone Road	Metal/Macadam	2	445	2,012	A
Tb-5	Wae Kyi-Nyang Hla-Tha Yat Taw Road	Metal/Macadam	6	869	4,521	A			
Tb-25	YMC-Min Swe Hnit-Ohn Ta Pin	Asphalt	6	844	3,960	A			
Tb-28	MBC-Ba-Bwe-Ma Ye Kan	Metal/Macadam	2	491	2,648	A			
Tb-29	MBC-Yin Kyay-na Ya Kan Branch Canal	Metal/Macadam	3	740	3,520	A			
Tb-30	MBC-Sin Wu Kone	Metal/Macadam	1	119	595	B			
Tb-31	DY7-M Yin Ta Kyay	Metal/Macadam	1	518	2,358	B			

(3) Rural Road Classification of 3<sup>rd</sup> Year's Construction (2021 ~ 2022)

Annual Year	District	Township	No.	Description	Pavement Type (Upgrade Plan)	Effective		Classification of Road	
						House hold	Population		
3rd Year	Shwebo	Kambala	Kb-1	Kambala - Hta Gone - Kabo Road	Metal/Macadam	22	4,108	21,204	B
			Kb-2	Ze Gone-Ywa Thin-Baw Di Gone-Se Sone Gyi-Lay Hloke Village to Village Road	Earth	5	1,895	9,861	A
			Kb-3	Kabo - Aung Chan Thar - 1 Paung Chuang Road	Earth	3	911	4,696	A
			Kb-6	Man River Bank to Nyaung Zin - Nyaung Zin Gyi - Tin Paung Kyin Road	Earth	3	559	2,523	A
			Kb-7	Kambala Tak Ka Shar - Hnaw Taw Road	Metal/Macadam	7	1,708	8,484	A
			Kb-8	Im Lae Gyi-Tha Yaw-Kyun Pin Kone-Shin Thar-Nyang Kine-Py In Taw-Popi Road	Metal/Macadam	8	1,964	9,768	A
			Sb-1	Nyang Yin Kon - Pauk Ton Village to Village Road	Earth	2	59	243	B
			Sb-2	Chuang Zone - Pauk Ton Village to Village Road	Earth	2	298	1,699	A
			Sb-9	Ku To Seik - Hta Nang Kine Village to Village Road	Metal/Macadam	3	393	1,918	A
			Sb-10	Waw Yone Kan - Palang Road	Metal/Macadam	2	146	710	B
			Sb-19	From Sin Kut(Eaw) to Kyauk Myung Road	Metal/Macadam	1	219	1,056	A
			Sb-20	From Shwebo - Kyauk Myung Road to Hta Nang Kone Road	Metal/Macadam	1	40	184	B
			Sb-21	Tha Phay Thin Cho - Kone Gyi Village to Village	Metal/Macadam	2	136	576	B
			Sb-23	Myi Kyi Nar-Tae Kyi Village Entrance Road	Metal/Macadam	1	108	640	B
			Sb-24	Tha Fay Thin Cho to Shwe Bo-Kyun Myung Road	Metal/Macadam	1	136	576	B
			Sb-25	Shwe Bo-Kyauk Myung to Min Bay Road	Metal/Macadam	1	115	542	B
			Sb-30	Khin Taung Gyi (Road)	Metal/Macadam	5	817	4,532	A
			Sb-31	Ku Toet Seik - Thung Hut Kang (Road)	Metal/Macadam	5	1,376	7,026	B
Sb-34	Shwebo- Yae Oh Road-Saing Doe (Road)	Metal/Macadam	2	510	1,899	A			
Sb-37	Tha But Taw Ywar Ah Win (Road)	Metal/Macadam	1	218	951	B			
W1-1	Kyae Pin Kan - Le Kine Road	Metal/Macadam	2	211	921	B			
W1-2	Ywa Tun - Kan Thar Village to Village Road	Metal/Macadam	2	135	703	B			
W1-9	From Ta Ga Nan-Ma Hta Bo-Shwe Pon Thar Road - Kun Seik (Shwebo) Road	Metal/Macadam	3	196	933	B			
W1-10	Min Thi - Mu Kan Lay Road	Metal/Macadam	2	883	3,753	B			
W1-12	Min Thi - U Yin Thu (North) Village to Village Road	Metal/Macadam	2	660	3,416	B			
W1-13	Man Kyay - Zin Ba - Hnaw Bin - Ta Gaung Min - Pin Xin (Road)	Metal/Macadam	4	925	5,025	A			
Tz-9	Sin Sur-Kone Yoe Road	Metal/Macadam	6	382	2,004	A			
Tz-11	Ye U Kone-Myaung Inn Road	Metal/Macadam	6	853	3,727	B			
Tz-12	Tae Sur-Bay Yin-Mu Gwa Road	Metal/Macadam	9	1,206	6,300	B			
Tz-13	Nga Nyaung Kya - Kyun Le Road	Earth	8	2,969	5,593	B			
Tz-15	Ywa Shae-Ka Baung Kya Road	Earth	13	2,462	11,267	A			
YU-4	Oh Pho - Damm Doe - Melk Hti Lar - Nyi Nang Road	Metal/Macadam	9	900	6,170	A			
YU-5	From Kin Tai R.M.C to Nyung Lue-Nay Pa Kone entrance Road	Metal/Macadam	6	475	2,675	A			
YU-6	Zaya Wai - Tin Tin In Gyi Road	Metal/Macadam	19	2,148	11,980	A			
YU-7	Si Gyi-Pyi Daung Let Pan Gwet	Metal/Macadam	3	241	1,894	A			
YU-8	Chuang U Zee Kan-Sa Khan Thar	Metal/Macadam	3	311	1,530	A			

(4) Rural Road Classification of 2<sup>nd</sup> Year's Construction (2022 ~ 2023)

Annual Year	District	Township	No.	Description	Pavement Type (Upgrade Plan)	Effective		Classification of Road	
						Village	Houses hold		
4th Year	Kambalu	Kambalu	Kb-2	Zee Gone-Ywa Thir-Baw Di Gone-Se-Sone Gyi-Lay Hoke Village to Village Road	Metal/Macadam	5	1,895	9,861	A
			Kb-3	Kabo - Aung Chan Thar - I Paung Chiang Road	Metal/Macadam	3	911	4,696	A
			Kb-4	Kambulu - Nga Toe - Kyay Pin Act - Nga Pyaw The Road	Earth	6	1,923	8,022	A
			Kb-5	Han Gone-Zee Pin Thar-Ye Dwe-Htam Taw-Kine Yoe Village to Village Road	Earth	6	1,992	9,653	A
			Kb-6	Min River Bank to Nyang Zin - Nyang Zin Gyi - Tin Paung Kyin Road	Metal/Macadam	3	559	2,523	A
			Sb-1	Nyang Yin Kon - Pauk Ton Village to Village Road	Metal/Macadam	2	59	243	B
			Sb-2	Chang Zone - Pauk Ton Village to Village Road	Metal/Macadam	2	298	1,699	A
			Sb-16	Ta Kon Tai-Shwe Bo Road	Metal/Macadam	1	126	587	B
			Sb-17	From Kon Gyi to Thak Kal Tan Chung Road	Metal/Macadam	1	36	115	B
			Sb-18	Kyung Pin Kon - Tike Ka Taw Road	Metal/Macadam	2	146	625	B
			Sb-22	Thike Ka Taw - Thir Cho Pin Road	Metal/Macadam	1	21	100	B
			Sb-26	Ywa Mekh Thir - Ma Har Nadar Kan East Road	Metal/Macadam	1	233	1,072	A
			Sb-32	Min Kyang - Sim Kwet (Road)	Metal/Macadam	3	454	2,138	B
			W-E-3	Werle Ywe - Nat Kone Village to Village Road	Metal/Macadam	2	101	525	B
			W-E-8	Han Lin-Oh Pauk-Shwebo Road	Metal/Macadam	2	1,168	1,250	A
			W-E-14	Ye Cwin Gon - Lay De - Tha Byank Gon (Road)	Metal/Macadam	3	104	491	B
			5th Year	Shwebo	Shwebo	Tz-3	Thar Gaya-Mu Sate Road	Earth	7
Tz-8	Na Bet Gyi-Kyun Le Road	Metal/Macadam				7	669	3,794	B
Tz-10	Han Pin Sate-Mu Kwa Road	Metal/Macadam				6	876	4,329	B
Tz-13	Nga Nyang Kyin - Kyun Le Road	Metal/Macadam				8	2,969	5,593	B
Tz-14	Ywa Shue-Kone Aing-Han Pin Sate Road	Earth				4	1,136	4,551	A
Tz-15	Ywa Shue-Ka Baung Kya Road	Metal/Macadam				13	2,462	11,267	A
Tb-7	Nagar Twan-Tin Tam Yan Road	Metal/Macadam				4	471	2,191	B
Tb-9	Ma Ya Kan-Dai Net Road	Metal/Macadam				4	1,200	5,918	B
Tb-10	Kyi-Huang Tan Village to Village Road	Metal/Macadam				4	786	3,907	A
Tb-16	Huang Tan-Chang Yoe-Thar Yar Aye-Owne Chan Road	Metal/Macadam				4	246	1,418	B
Tb-18	Tae Taw MBC Road	Metal/Macadam				1	520	2,871	A
Tb-27	Kywe Toe Chon-Chuang Mes To-Oke Se	Metal/Macadam				3	403	2,000	B
Bd-1	Mang Huang - Ku Taw - Ywa Mon	Metal/Macadam				3	732	3,877	A
Bd-2	Ma Dang Kyin - Chang Mi Toe - Hanaw Pin Gyi	Earth				3	579	3,755	B
Bd-3	Mang Huang - Ku Kew Road	Metal/Macadam				14	3,081	15,689	A
Bd-5	Ywa Mon - Maik Tai Road	Metal/Macadam				3	669	3,668	A
Bd-7	Ku Taw - Wia Ye Road	Metal/Macadam				2	693	3,465	B

(5) Rural Road Classification of 3<sup>rd</sup> Year's Construction (2023 ~ 2024)

Annual Year	District	Township	No.	Description	Pavement Type (Upgrade Plan)	Effective		Classification of Road	
						Village	Houses hold		
5th Year	Kambalu	Kambalu	Kb-4	Kambulu - Nga Toe - Kyay Pin Act - Nga Pyaw The Road	Metal/Macadam	6	1,923	8,022	A
			Kb-5	Han Gone-Zee Pin Thar-Ye Dwe-Htam Taw-Kine Yoe Village to Village Road	Metal/Macadam	6	1,992	9,653	A
			Tz-3	Thar Gaya-Mu Sate Road	Metal/Macadam	7	1,179	5,927	B
			Tz-4	Maize Li Kone-Ai Gyi-Thar Gala Road	Metal/Macadam	5	734	3,300	A
			Tz-14	Ywa Shue-Kone Aing-Han Pin Sate Road	Metal/Macadam	4	1,136	4,551	A
			Tz-16	Han Bin Zalk - Hpat Than Gon - Bay Yin Ywa Thir - Mu Gyi (Road)	Metal/Macadam	6	876	4,329	B
			Tb-3	Thar Yar Kyin RMC Road	Metal/Macadam	1	290	1,460	A
			Tb-8	Paung Tang Ku-Tai Ti (East)-Tai Ti (West) Road	Metal/Macadam	3	241	1,252	B
			Tb-11	Inn Bote-Kone Yoe Village to Village Road	Metal/Macadam	3	435	2,206	A
			Tb-13	Paung Tang Ku-Lae Pyin Kyet RMC Road	Metal/Macadam	2	209	1,130	A
			Tb-14	Pa Gu (Dy-11) Road	Metal/Macadam	1	284	1,225	A
			Tb-15	Sar Pyar Kyin-Inn Pin Gyi-Chiang Oo Road	Metal/Macadam	3	313	2,016	A
			Tb-17	Inn Tai Lay-Nge Wae Taw Road	Metal/Macadam	2	123	627	B
			Tb-22	RMC-Kyant Ma Taw	Metal/Macadam	2	150	816	B
			Tb-23	YMCA Bayaz-Zee Phyu Kone-Taw Tam-Mya Yake	Metal/Macadam	4	396	1,937	A
			Bd-2	Ma Dang Kyin - Chang Mi Toe - Hanaw Pin Gyi	Metal/Macadam	3	579	3,755	B
			Bd-4	Ye Hwat - Lai Pan Road	Metal/Macadam	2	362	2,246	A
Bd-6	Butalin - Sin Yan - Kin Sin Road	Metal/Macadam	3	565	3,286	A			
Ad-1	Ayadaw-Nuang Gyi Aei-MaKyit KanKone Thar-Wat Pyit Access Road	Metal/Macadam	3	1,495	7,082	B			
Ad-2	Thar Ch-Nuang Gyi Act - Nuang Gyi Aei-Chin Pin Access Road	Metal/Macadam	2	750	3,704	B			
Ad-3	FokKone-Onk Shi Gyi-Kuang Thir Access Road	Asphalt	4	1,225	4,357	A			
Ad-4	Fokkone-KywanTaw Access Road	Metal/Macadam	1	200	2,129	A			
Ad-5	Ayadaw-Warawma Access Road	Asphalt	4	631	2,866	A			