Annex-B

The Photo of Road Condition for Pilot Area

The Site Survey for Roads in Ayeyarwaddy Region

Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*20.2.2013*	Route-2	Condition of the Road

Condition of the road near Mawlamyine-gym

Condition of the road near Ahwachaumg Village

Condition of the road near Pyalate Village

Condition of the road near Pyalate Village

Condition of the road near Hlaingbone Village

Condition of the road near Salongkya Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.3 Labutta-Tingangyi-Pinzalu

date	*21.2.2013*	*Route-3*	Condition of the Road

Condition of the road near Zinywellay Village

Condition of the road near Tingangyi Village

Condition of the road near Pyintaungtwin Village

Condition of the road near Thinpoundkwin Village

Condition of the road near Kankwin Village

Condition of the road near Lakekwin Village

The Site Survey for Roads in Ayeyarwaddy Region
Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*22.2.2013*	*Route-4*	Condition of Road

Condition of the road near Ahpyinyesai Village

Condition of the road near Ahtwinyesai Village

Condition of the road near Ahtwinyesai Village

Condition of the road near Ahpyinyesai Village

Condition of the road near Labuttalot Village

Condition of the road near Labuttalot Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.5 Bogalay-Kyeinchaung-Katonkani

date	*17.2.2013*	Route-5	Condition of the Road

Condition of the road near Magu Village

Condition of the road near Nyinaunglay Village

Condition of the road near Meethwaychaung Village

Condition of the road near Penfu Village

Condition of the road near Chaung-byle-gyi bridge

Condition of the road near Kyeinchaung Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.6 Bogalay-Setsan

date	*16.2.2013*	*Route-6*	Condition of the Road

Condition of the road near Bogalay

Condition of road at the left bank side of Bogalay Bridge

Condition of the road near Tha Kan Bridge

Condition of the road near Ye Tha Phyan village

Condition of road at the right bank side of Tha Kan Bridge

Condition of road at the left bank side of Tha Kan Bridge

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	Route-7	Condition of the Road

Condition of the road near Kyaonkadun Village

Condition of the road near Satema Village

Condition of the road near Dawyein Village

Condition of the road near Phayargone Village

Condition of the road near Bawathit Village

Condition of the road near Ama Township

The Site Survey for Roads in Ayeyarwaddy Region

Route No.10 Bogalay-Mawlamyine-gym

date	*17.2.2013*	*Route-10*	Condition of the Road

Condition of the road near Kywe Chan Bridge

Condition of the road near Nwaryekyaw Village

Condition of the road near Ahlalchaung Village

Condition of the road near Penkhayekyaw Village

Condition of the road near Kyeechaung Village

Condition of the road near Kyeechaung Village

Annex-C

The Photo of Interview to Local Residents

The Site Survey for Roads in Ayeyarwaddy Region
Route No.5 Bogalay-Kyeinchaung-Katonkani

date	*15.2.2013*	*Route-5*	Interview

Interview at Kyeinchaung Village

Interview at Kyeinchaung Village

Interview at Nyinaunglay Village

Interview at Kyeinchaung Village

Interview at Chaung-byle-gyi bridge (village)

Interview at Meethwaychaung Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*20.2.2013*	*Route-2*	Interview

Interview at Hlaingbone Village

Interview at Pyalate Village

Interview at Ahwachaung Village

Interview at Pyalate Village

Interview at Salongkya Village

Interview at Ahwachaung Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.3 Labutta-Tingangyi-Pinzalu

date	*21.2.2013*	*Route-3*	Interview

Interview at Lakekwin Village

Interview at Thinpoundkwin Village

Interview at Kankwin Village

Interview at Thinpoundkwin Village

Interview at Zinywellay Village

Interview at Tingangyi Village

The Site Survey for Roads in Ayeyarwaddy Region
Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*22.2.2013*	*Route-4*	Interview

Interview at Kyoutpharlay Village

Interview at Labuttalot Village

Interview at Patoutgone Village

Interview at Ahpyinyesai Village

Interview at Ahpyinyesai Village

Interview at Ahpyinyesai Village

The Site Survey for Roads in Ayeyarwaddy Region

Route No.6 Bogalay-Setsan

date	*16.2.2013*	*Route-6*	Interview

Interview at Right bank side of the Tha Kan Bridge

Interview at Right bank side of the Tha Kan Bridge

Interview at Left bank side of the Bogalay Bridge

Interview at Left bank side of the Bogalay Bridge

Interview at Left bank side of the Bogalay Bridge

Interview at Right bank side of the Tha Kan Bridge

The Site Survey for Roads in Ayeyarwaddy Region
Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*5.3.2013*	Route-7	Interview

Interview at Kyaonkadun Village


Interview at Oak Twin Village


Interview at Dawyein Village


Interview at Satema Village


Interview at No.(2) Bawathit Village


Interview at Ama Township

The Site Survey for Roads in Ayeyarwaddy Region
Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	*Route-7*	Interview

Interview at Phayargone Village

Interview at Kyaonkadun Village

Interview at Thameinhtaw Village

Interview at Kyaonkadun Village

Interview at Phayargone Village

Interview at Ama Township

The Site Survey for Roads in Ayeyarwaddy Region

Route No.10 Bogalay-Mawlamyine-gyn

date	*17.2.2013*	*Route-10*	Interview

Interview at Kyeechaung Village

Interview at Kyeechaung Village

Interview at Penkhayekyaw Village

Interview at Ahlalchaung Village

Interview at Nwaryekyaw Village

Interview at Nwaryekyaw Village

Annex-D

The Photo of Differential GPS Survey Active Records

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)
Primary Control GCP Stations for Differential Survey

Authorized GCP Station near Aungsetkyar Pogada at Bogalay

Authorized GCP Station near Aungsetkyar Pogada at Bogalay

Authorized GCP Station in USDP Office at Labutta

Authorized GCP Station in USDP Office at Labutta

Authorized GCP Station near Airport at Ama

Authorized GCP Station near Airport at Ama

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)
Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*11.3.2013*	*Route-2*	Soil Sample Location-2	GPS	46Q-721906(E)
					1782806(N)

View of GPS station R2-S2 at location-2

View of GPS station R2-S2 at location-2

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)
Route No.3 Labutta-Tingangyi-Pinzalu

date	*13.3.2013*	*Route-3*	Soil Sample Location-1	GPS	46Q-674301(E)
					1765315(N)

View of GPS station R3-S1 at location-1

View of GPS station R3-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*13.3.2013*	*Route-4*	Soil Sample Location-1	GPS	46Q-694281 (E)
					1808618(N)

View of GPS station R4-S1 at location-1

View of GPS station R4-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)
Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*13.3.2013*	*Route-4*	Soil Sample Location-2	GPS	46Q-679621 (E)
					1789831(N)

View of GPS station R4-S2 at location-2

View of GPS station R4-S2 at location-2

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.5 Bogalay -Kyeinchaung -Katonkani

date	*9.3.2013*	*Route-5*	Soil Sample Location-1	GPS	46Q-734411(E)
					1775600(N)

View of GPS station R5-S1 at location-1

View of GPS station R5-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)
Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*11.3.2013*	*Route-2*	Soil Sample Location-1	GPS	46Q-725141(E)
					1786870(N)

View of GPS station R2-S1 at location-1

View of GPS station R2-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.6 Bogalay-Setsan

date	*9.3.2013*	*Route-6*	Soil Sample Location-1	GPS	46Q-756284(E)
					1800870(N)

View of GPS station R6-S1 at location-1

View of GPS station R6-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.6 Bogalay-Setsan

date	*9.3.2013*	*Route-6*	Soil Sample Location-2	GPS	46Q-755248(E)
					1788463(N)

View of GPS station R6-S2 at location-2

View of GPS station R6-S2 at location-2

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*10.3.2013*	*Route-7*	Soil Sample Location-1	GPS	46Q-780970(E)
					1779200(N)

View of GPS Station R7-S1 at location-1

View of GPS Station R7-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*10.3.2013*	*Route-7*	Soil Sample Location-2	GPS	46Q-778556(E)
					1772149(N)

View of GPS Station R7-S2 at location-2

View of GPS Station R7-S2 at location-2

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*8.3.2013*	*Route-7*	Soil Sample Location-3	GPS	46Q-778189(E)
					1760634(N)

View of GPS Station R7-S3 at location-3

View of GPS Station R7-S3 at location-3

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*8.3.2013*	*Route-7*	Soil Sample Location-4	GPS	46Q-767870(E)
					1751019(N)

View of GPS station R7-S4 at location-4

View of GPS station R7-S4 at location-4

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*8.3.2013*	*Route-7*	Soil Sample Location-5	GPS	46Q-754828(E)
					1746815(N)

View of GPS station R7-S5 at location-5

View of GPS station R7-S5 at location-5

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*8.3.2013*	*Route-7*	Soil Sample Location-6	GPS	46Q-746765(E)
					1747076(N)

View of GPS station R7-S6 at location-6

View of GPS station R7-S6 at location-6

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.10 Bogalay-Mawlamyine-gym

date	*10.3.2013*	*Route-10*	Soil Sample Location-1	GPS	46Q-1804945(E)
					753352(N)

View of GPS station R10-S1 at location-1

View of GPS station R10-S1 at location-1

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

The Site Survey for Roads in Ayeyarwaddy Region (Differential GPS Survery)

Route No.10 Bogalay-Mawlamyine-gym

date	*10.3.2013*	*Route-10*	Soil Sample Location-2	GPS	46Q-753621(E)
					1805494(N)

View of GPS station R10-S2 at location-2

View of GPS station R10-S2 at location-2

View of GPS Station and Surrounding

View of GPS Station and Surrounding

Level survey between road and sampling point

View of GPS Station and Surrounding

Annex-E

The Photo of Soil Samples Location

The Site Survey for Roads in Ayeyarwaddy Region

Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*20.2.2013*	*Route-2*	Soil Sample (Location-1)	GPS	46Q-725141(E)
					1786870(N)

Location-1(Hlaingbone Village)

Location-1(Hlaingbone Village)

Location-1(Hlaingbone Village)

Location-1(Hlaingbone Village)

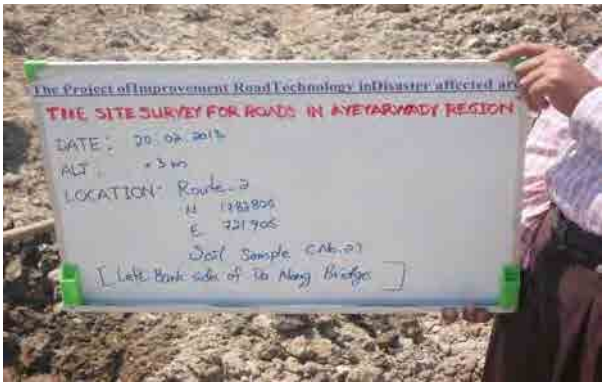
Location-1(Hlaingbone Village)

Location-1(Hlaingbone Village)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoat-Kwinpok-Pyinzalu

date	*20.2.2013*	*Route-2*	Soil Sample (Location-2)	GPS	46Q-721906 (E)
					1782806(N)



Locaton-2 (Salongkya Village)

Locaton-2 (Salongkya Village)

Locaton-2 (Salongkya Village)

Locaton-2 (Salongkya Village)

Locaton-2 (Salongkya Village)

Locaton-2 (Salongkya Village)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.3 Labutta-Tingangyi-Pinzalu

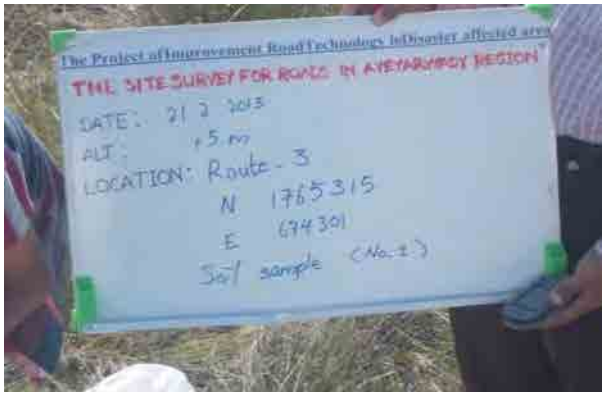
date	*16.2.2013*	*Route-3*	Soil Sample (Location-1)	GPS	46Q-674301(E)
					1765315(N)

Location-1(Tingangyi Village)

Location-1(Tingangyi Village)

Location-1(Tingangyi Village)

Location-1(Tingangyi Village)



Location-1(Tingangyi Village)

Location-1(Tingangyi Village)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*22.2.2013*	*Route-4*	Soil Sample (Location-1)	GPS	46Q-694281 (E)
					1808618(N)

Location-1

Location-1

Location-1

Location-1

Location-1

Location-1

The Site Survey for Roads in Ayeyarwaddy Region

Route No.4 Labutta-Tongwa-Oaktwin-Hteiksun

date	*05.03.2013*	*Route-4*	Soil Sample (Location-2)	GPS	46Q-679621 (E)
					1789831(N)

Location-2

Location-2

Location-2

Location-2

Location-2

Location-2

The Site Survey for Roads in Ayeyarwaddy Region

Route No.5 Bogalay-Kyeinchaung-Katonkani

date	*17.2.2013*	Route-5	Soil Sample (Location-1)	GPS	46Q-734411(E)
					1775600(N)

Location 1 (Kyeinchaung Village)

Location 1 (Kyeinchaung Village)

Location 1 (Kyeinchaung Village)

Location 1 (Kyeinchaung Village)

Location 1 (Kyeinchaung Village)

Location 1 (Kyeinchaung Village)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.6 Bogalay-Setsan

date	*16.2.2013*	*Route-6*	Soil Sample (Location-1)	GPS	46Q-756284(E)
					1800870(N)

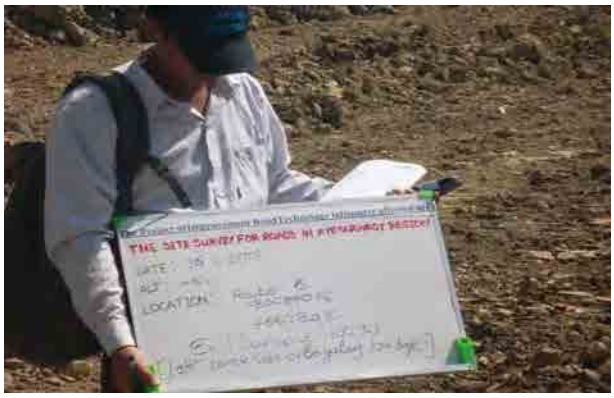
Location-1 (Left bank side of the Bogalay Bridge)

Location-1 (Left bank side of the Bogalay Bridge)

Location-1 (Left bank side of the Bogalay Bridge)

Location-1 (Left bank side of the Bogalay Bridge)

Location-1 (Left bank side of the Bogalay Bridge)



Location-1 (Left bank side of the Bogalay Bridge)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.6 Bogalay-Setsan

date	*19.2.2013*	*Route-6*	Soil Sample (Location-2)	GPS	46Q-755248(E)
					1788463(N)

Location-2 (Left bank side of the Tha Kan Bridge)

Location-2 (Left bank side of the Tha Kan Bridge)

Location-2 (Left bank side of the Tha Kan Bridge)

Location-2 (Left bank side of the Tha Kan Bridge)

Location-2 (Left bank side of the Tha Kan Bridge)

Location-2 (Left bank side of the Tha Kan Bridge)

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	Route-7	Soil Sample (Location-1)	GPS	46Q-780970(E)
					1779200(N)

Location 1

Location 1

Location 1

Location 1

Location 1

Location 1

The Site Survey for Roads in Ayeyarwaddy Region
Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	Route-7	Soil Sample (Location-2)	GPS	46Q-778556(E)
					1772149(N)

Location 2

Location 2

Location 2

Location 2

Location 2

Location 2

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	*Route-7*	Soil Sample (Location-3)	GPS	46Q-778189(E)
					1760634(N)

Location 3

Location 3

Location 3

Location 3

Location 3

Location 3

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	*Route-7*	Soil Sample (Location-4)	GPS	46Q-767870(E)
					1751019(N)

Location 4

Location 4

Location 4

Location 4

Location 4

Location 4

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	*Route-7*	Soil Sample (Location-5)	GPS	46Q-754828(E)
					1746815(N)

Locaton-5

Locaton-5

Locaton-5

Locaton-5

Locaton-5

Locaton-5

The Site Survey for Roads in Ayeyarwaddy Region

Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

date	*15.2.2013*	*Route-7*	Soil Sample (Location-6)	GPS	46Q-746765(E)
					1747076(N)

Locatin-6

Locatin-6

Locatin-6

Locatin-6

Locatin-6

Locatin-6

The Site Survey for Roads in Ayeyarwaddy Region

Route No.10 Bogalay-Mawlamyine-gyn

date	*16.2.2013*	*Route-10*	Soil Sample (Location-1)	GPS	46Q-1804945(E)
					753352(N)

Location-1 (Right bank side of the Kywe Chan Birdge

Location-1 (Right bank side of the Kywe Chan Birdge

Location-1 (Right bank side of the Kywe Chan Birdge

Location-1 (Right bank side of the Kywe Chan Birdge

Location-1 (Right bank side of the Kywe Chan Birdge

Location-1 (Right bank side of the Kywe Chan Birdge

The Site Survey for Roads in Ayeyarwaddy Region

Route No.10 Bogalay-Mawlamyine-gyn

date	*16.2.2013*	*Route-10*	Soil Sample (Location-2)	GPS	46Q-753621(E)
					1805494(N)

Location-2 (Left bank side of the Kywe Chan Birdge

Location-2 (Left bank side of the Kywe Chan Birdge

Location-2 (Left bank side of the Kywe Chan Birdge

Location-2 (Left bank side of the Kywe Chan Birdge

Location-2 (Left bank side of the Kywe Chan Birdge

Location-2 (Left bank side of the Kywe Chan Birdge

Annex-F

Detail GPS Observation Data

Project Report

Project name: R4-S1.ttp
Project folder: C:¥Documents and Settings¥Linn¥TopconTools¥Jobs¥JICA DATA¥13.03.13¥R4-S1
Creation time: 3/14/2013 4:54:54 PM
Created by: Soe Lwin
Comment:
Linear unit: Meters
Angular unit: DMS
Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL) (m)
GCP—0234	16° 09'05.51840N	94° 45'25.33915E	-45.124	688157.453	1786205.95	0.78
R4—S1	16° 21'03.35740N	94° 49'08.03924E	-44.349	694577.683	1808329.745	1.555

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—0234	16° 09'00.57196N	94° 45'35.80424E	-7.282	1.000039063	0° 29'22.8608
R4—S1	16° 20'58.46452N	94° 49'18.54259E	-6.71	1.000069359	0° 30'46.7941

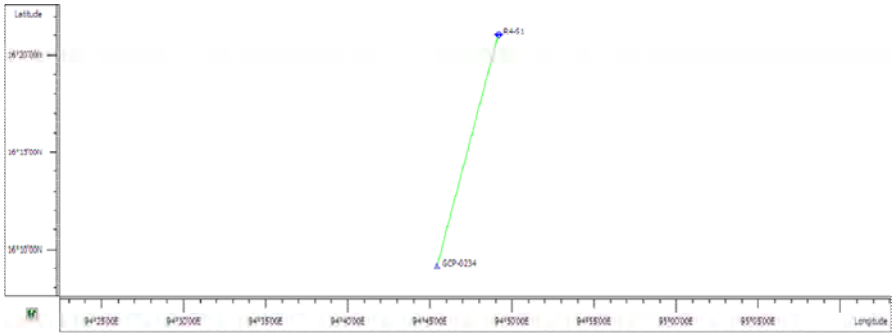
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GCP-0234—R4-S1	22123.795	6420.231	0.572	0.008	0.017	0.018

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-0234—R4-S1	16° 40'27.6846	23035.269	1:31:30	12	8	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 2
Number of plane control points: 1
Number of used GPS vectors: 1
A posteriori plane UWE: 1 , Bounds: (1 , 1)
Number of height control points: 1
A posteriori height UWE: 1 , Bounds: (1 , 1)



Project Report

Project name: R4-S2-R3-S1.ttp
Project folder: C:¥Documents and Settings¥Linn¥TopconTools¥Jobs¥JICA DATA¥13.03.13¥R4-S2-R3-S1
Creation time: 3/14/2013 5:34:06 PM
Created by: Soe Lwin
Comment:
Linear unit: Meters
Angular unit: DMS
Projection: Myanmar UTM zone 47
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL) (m)
GCP—0234	16° 09'05.51840N	94° 45'25.33915E	-45.124	688157.453	1786205.95	0.78
R3—S1	15° 57'40.00784N	94° 37'42.93824E	-45.031	674585.996	1765022.595	0.872
R4—S2	16° 10'56.21301N	94° 40'48.46133E	-44.509	679904.008	1789539.81	1.395

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—0234	16° 09'00.57196N	94° 45'35.80424E	-7.282	1.000039063	0° 29'22.8608
R3—S1	15° 57'35.01371N	94° 37'53.33592E	-7.349	0.999978184	0° 26'55.3530
R4—S2	16° 10'51.27907N	94° 40'58.89360E	-7.149	1.000001462	0° 28'08.8952

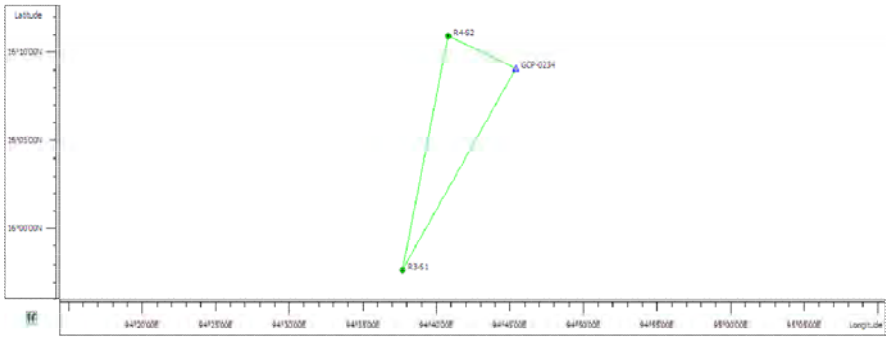
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GCP-0234—R3-S1	-21183.349	-13571.461	-0.077	0.009	0.017	0.019
GCP-0234—R4-S2	3333.858	-8253.442	0.138	0.006	0.012	0.013
R3-S1—R4-S2	24517.218	5318.01	0.192	0.007	0.016	0.018

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-0234—R3-S1	213° 07'56.8093	25157.654	1:43:50	11	11	Adjusted
GCP-0234—R4-S2	292° 29'05.4264	8901.163	1:41:30	11	11	Adjusted
R3-S1—R4-S2	12° 41'21.7273	25087.592	1:41:10	11	11	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 1.015997 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 0.8705491 , Bounds: (3.130495E-02 , 2.240536)



Project Report

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Created by: Soe Lwin
Comment:
Linear unit: Meters
Angular unit: DMS
Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL)(m)
GCP—1034	16° 17'53.21826N	95° 24'08.45744E	-42.818	756996.471	1803129.83	1.741
R5—S1	16° 02'40.34217N	95° 11'27.27851E	-42.911	734691.893	1774808.432	1.638

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—1034	16° 17'48.28106N	95° 24'19.21852E	-1.956	1.000417314	0° 40'31.2225
R5—S1	16° 02'35.35159N	95° 11'37.93783E	-2.5	1.000281744	0° 36'23.6862

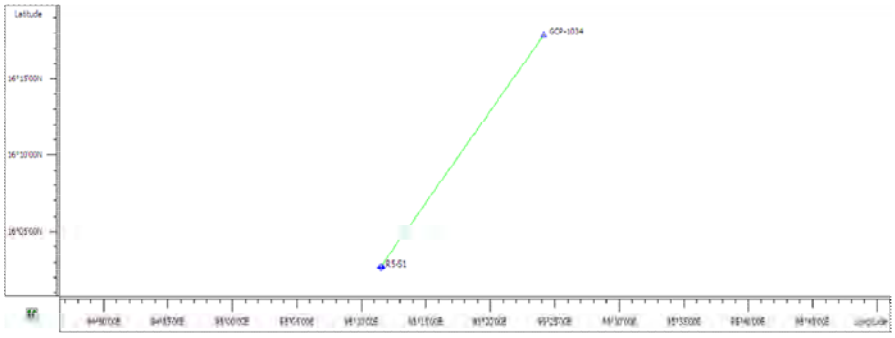
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GCP-1034—R5-S1	-28321.398	-22304.577	-0.544	0.012	0.022	0.025

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-1034—R5-S1	218° 53'30.3958	36037.299	1:32:20	12	10	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 2
Number of plane control points: 1
Number of used GPS vectors: 1
A posteriori plane UWE: 1 , Bounds: (1 , 1)
Number of height control points: 1
A posteriori height UWE: 1 , Bounds: (1 , 1)



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Linear unit: Meters
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Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL) (m)
GCP—1034	16° 17'53.21826N	95° 24'08.45744E	-42.818	756996.471	1803129.83	1.741
R6—S1	16° 16'30.42639N	95° 23'53.32898E	-42.278	756577.093	1800578.715	2.285
R6—S2	16° 09'47.36509N	95° 23'13.33184E	-43.01	755533.446	1788170.916	1.557

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—1034	16° 17'48.28103N	95° 24'19.21860E	-1.956	1.000417314	0° 40'31.2225
R6—S1	16° 16'25.48288N	95° 24'04.08700E	-1.377	1.000414561	0° 40'23.6372
R6—S2	16° 09'42.39057N	95° 23'24.07884E	-1.871	1.000408037	0° 39'56.2547

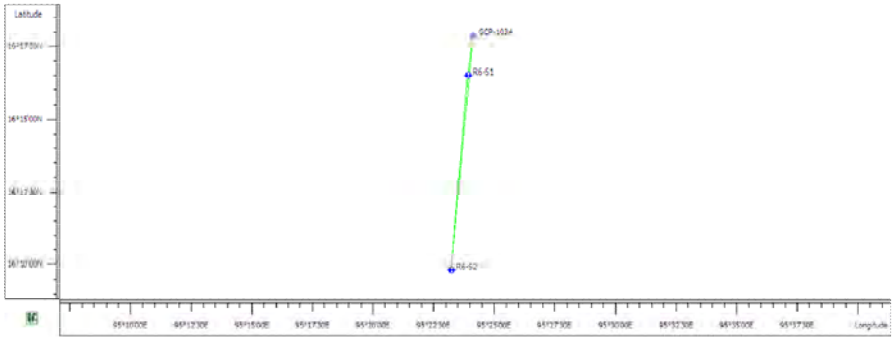
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GCP-1034—R6-S1	-2551.114	-419.378	0.578	0.002	0.003	0.004
GCP-1034—R6-S2	-14958.924	-1463.021	0.098	0.006	0.012	0.014
R6-S1—R6-S2	-12407.783	-1043.652	-0.512	0.008	0.015	0.017

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-1034—R6-S1	190° 00'33.8198	2584.28	1:43:10	12	9	Adjusted
GCP-1034—R6-S2	186° 15'27.7001	15024.094	1:41:20	12	10	Adjusted
R6-S1—R6-S2	185° 28'41.2736	12446.476	1:42:10	12	9	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 2.254966 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 1.688097 , Bounds: (3.130495E-02 , 2.240536)



Project Report

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Linear unit: Meters
Angular unit: DMS
Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL)(m)
GPS—1034	16° 17'53.21826N	95° 24'08.45744E	-42.818	756996.471	1803129.83	1.741
R7—S1	16° 04'36.24573N	95° 37'34.86789E	-43.447	781259.909	1778914.783	1.125
R7—S2	16° 00'48.00668N	95° 36'10.43520E	-42.261	778837.511	1771863.937	2.312

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GPS—1034	16° 17'48.28103N	95° 24'19.21860E	-1.956	1.000417314	0° 40'31.2225
R7—S1	16° 04'31.23481N	95° 37'45.71671E	-0.789	1.000578736	0° 43'42.7997
R7—S2	16° 00'42.97917N	95° 36'21.27016E	0.440	1.000561764	0° 43'09.3879

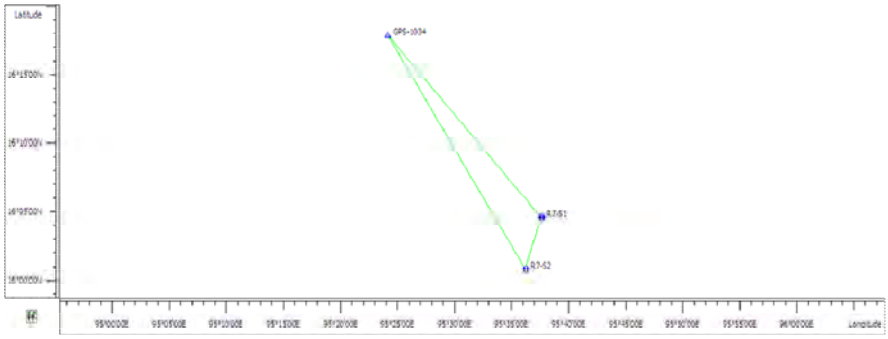
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GPS-1034—R7-S1	-24215.031	24263.444	1.150	0.012	0.023	0.026
GPS-1034—R7-S2	-31265.912	21841.033	2.416	0.012	0.025	0.028
R7-S1—R7-S2	-7050.842	-2422.395	1.226	0.005	0.010	0.012

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GPS-1034—R7-S1	135° 36'45.8508	34262.412	1:28:40	11	10	Adjusted
GPS-1034—R7-S2	145° 43'55.7144	38120.38	1:28:50	11	10	Adjusted
R7-S1—R7-S2	199° 41'13.3747	7451.11	1:28:00	11	10	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 2.627148 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 1.124319 , Bounds: (3.130495E-02 , 2.240536)



Project Report

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Linear unit: Meters
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Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL) (m)
GCP—1036	15° 47'27.20943N	95° 17'54.60286E	-42.374	746517.101	1746857.082	2.298
R7—S3	15° 54'33.42067N	95° 35'53.66523E	-42.987	778482.446	1760338.047	1.685
R7—S4	15° 49'25.03630N	95° 30'02.90224E	-42.846	768157.554	1750727.593	1.826

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—1036	15° 47'22.13471N	95° 18'05.29063E	-0.705	1.000351886	0° 37'35.6017
R7—S3	15° 54'28.36423N	95° 36'04.49253E	-0.029	1.000559401	0° 42'48.3901
R7—S4	15° 49'19.96075N	95° 30'13.68169E	-0.181	1.000489602	0° 40'59.0856

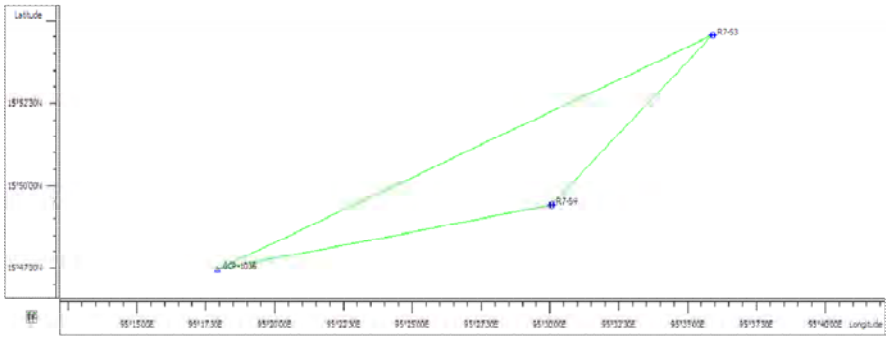
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision (m)	Vertical Precision (m)	RMS
GCP-1036—R7-S3	13480.965	31965.345	0.678	0.01	0.023	0.026
GCP-1036—R7-S4	3870.511	21640.452	0.524	0.006	0.015	0.016
R7-S3—R7-S4	-9610.454	-10324.892	-0.151	0.006	0.014	0.015

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-1036—R7-S3	67° 45'40.5101	34676.012	1:34:20	9	6	Adjusted
GCP-1036—R7-S4	80° 29'09.6213	21974.623	2:19:30	13	10	Adjusted
R7-S3—R7-S4	227° 45'47.5882	14098.073	1:34:20	9	6	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 8.145646E-02 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 7.121124E-02 , Bounds: (3.130495E-02 , 2.240536)



Project Report

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Comment:
Linear unit: Meters
Angular unit: DMS
Projection: Myanmar UTM zone 46
Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL)(m)
GCP—1036	15° 47'27.20943N	95° 17'54.60286E	-42.374	746517.101	1746857.082	2.298
R7—S5	15° 47'13.31523N	95° 22'43.16318E	-42.535	755112.867	1746525.327	2.14
R7—S6	15° 47'24.67673N	95° 18'12.55847E	-42.683	747052.511	1746785.054	1.992

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—1036	15° 47'22.13471N	95° 18'05.29063E	-0.705	1.000351886	0° 37'35.6017
R7—S5	15° 47'08.23548N	95° 22'53.88639E	-0.426	1.00040519	0° 38'53.6973
R7—S6	15° 47'19.60157N	95° 18'23.24842E	-0.985	1.000355199	0° 37'40.3974

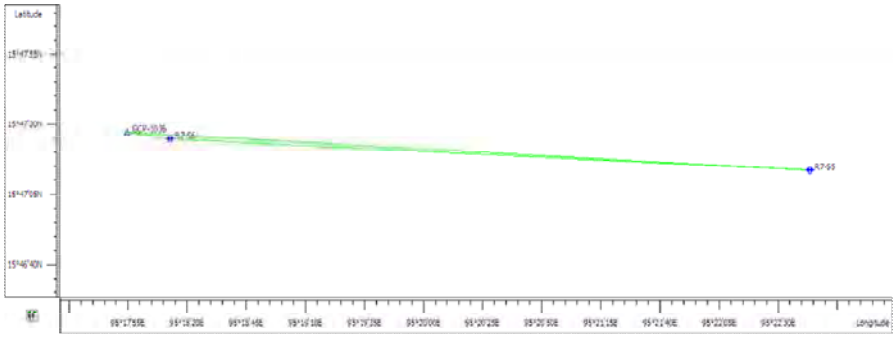
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision ( )	Vertical Precision (m)	RMS
GCP-1036—R7-S5	-331.755	8595.768	0.278	0.003	0.006	0.007
GCP-1036—R7-S6	-72.028	535.409	-0.28	0.001	0.002	0.002
R7-S5—R7-S6	259.728	-8060.355	-0.56	0.003	0.006	0.006

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-1036—R7-S5	92° 50'09.3576	8598.914	1:39:10	12	9	Adjusted
GCP-1036—R7-S6	98° 17'15.4868	540.042	1:39:20	12	9	Adjusted
R7-S5—R7-S6	272° 29'35.1035	8061.474	1:36:50	12	9	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 0.695524 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 0.2452612 , Bounds: (3.130495E-02 , 2.240536)



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Angular unit: DMS
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Datum: MMDatum 2000

Point Summary Report

Name	WGS84 Latitude	WGS84 Longitude	WGS84 Ell.Height (m)	Grid Easting (m)	Grid Northing (m)	Elevation (MSL) (m)
GCP—1034	16° 17'53.21826N	95° 24'08.45744E	-42.818	756996.471	1803129.83	1.741
R10—S1	16° 18'43.96426N	95° 22'15.86845E	-43.121	753634.762	1804651.127	1.445
R10—S2	16° 19'01.82728N	95° 22'25.17744E	-42.967	753904.794	1805203.621	1.601

Name	Latitude	Longitude	Elevation (Datum) (m)	Combined Ground to Grid Scale Factor	Convergence
GCP—1034	16° 17'48.28103N	95° 24'19.21860E	-1.956	1.000417314	0° 40'31.2225
R10—S1	16° 18'39.03259N	95° 22'26.61643E	-2.463	1.000396155	0° 40'01.5925
R10—S2	16° 18'56.89689N	95° 22'35.92685E	-2.309	1.000397826	0° 40'04.9231

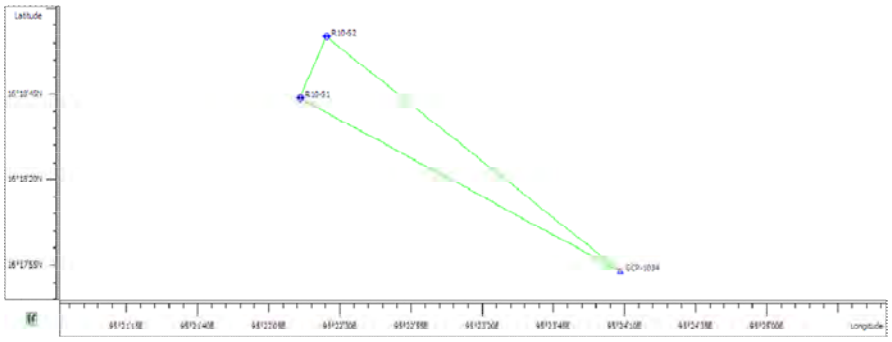
GPS Obs Report

Name	dN (m)	dE (m)	dHt (m)	Horizontal Precision (m)	Vertical Precision (m)	RMS
GCP-1034—R10-S1	1521.298	-3361.71	-0.51	0.002	0.004	0.004
GCP-1034—R10-S2	2073.789	-3091.675	-0.35	0.002	0.004	0.004
R10-S1—R10-S2	552.494	270.032	0.153	0.001	0.001	0.001

Name	Azimuth	Distance (m)	Duration	GPS Satellites	GLONASS Satellites	Status
GCP-1034—R10-S1	295° 01'23.8069	3688.411	1:26:20	11	9	Adjusted
GCP-1034—R10-S2	304° 31'38.0329	3721.258	1:26:30	11	9	Adjusted
R10-S1—R10-S2	26° 42'48.6125	614.708	1:26:40	11	8	Adjusted

Adjustment Report

Adjustment type: Plane + Height, Minimal constraint
Confidence level: 95 %
Number of adjusted points: 3
Number of plane control points: 1
Number of used GPS vectors: 3
A posteriori plane UWE: 1.193792 , Bounds: (0.1590597 , 1.920937)
Number of height control points: 1
A posteriori height UWE: 1.192905 , Bounds: (3.130495E-02 , 2.240536)



AGREEMENT
FOR
THE SITE SURVEY FOR ROADS
IN
AYEYARWADY REGION
IN
THE REPUBLIC OF THE UNION OF MYANMAR

This Agreement (hereinafter together with SCOPE OF WORK AND SPECIFICATIONS, called the Agreement) made on 7th day of February, 2013 between the Technical Cooperation Team of Japan International Cooperation Agency for the Project for Improvement of Road Technology in Disaster Affected Area, represented by Hideki YONEYAMA of Oriental Consultants Co., Ltd., 12-1, Honmachi 3-chome, Shibuya-ku, Tokyo, 151-0071.Japan (hereinafter referred to as "the Team") of the one part, and "Fukken Co., Ltd", No.5-C, Wingabar Road, Bahan, Yangon, Myanmar, (hereinafter referred to as "the Consultants"), of the other part.

WITNESS THAT

WHEREAS, the Team is required to perform the Survey for Roads in Ayeyarwady Region in Myanmar,
AND, the Team needs to provide Services for the execution of the work;
AND, the Consultants present itself to be able to undertake and offer to provide the Service to the Team.
NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties hereby agree as follows:

ARTICLE I - DEFINITION

Unless the context otherwise requires the following terms which shall have the following meanings in this Agreement.
1. The term "Service" means the work and services to be performed by the Consultants as set forth Article 3 herein, or any part of each work and services as the context may require.
2. The term "Project" means the works described in Article 2 herein.

ARTICLE 2 - PROJECT

The overall objective of the Project is to carry out the Technical Cooperation on

the Improvement of Road Technology in Disaster Affected Area in Myanmar.

ARTICLE 3 - THE SERVICES

The Services to be performed by the Consultants is to conduct Road Survey in Ayeyarwady Region in Myanmar including the reports in accordance with the instruction by the Engineer(s) of the Team.
The details specifications of the Services are shown in the attached Scope of Work and Specifications.

ARTICLE 4 - ASSIGNMENT AND SUBCONTRACTS

The Consultants shall not assign the Contract or sub let any portion of the work without prior written consent of the Team. Should the Consultants sub-let any portion to any third party after obtaining the consent of the Team, the Consultants shall still be responsible for the acts and omissions of its subcontractors and of its persons and shall not be relieved or released from any obligations and responsibilities of the Consultants under this Agreement.

ARTICLE - 5 OBLIGATIONS

In the course of conducting the Services, the Consultants shall cooperate fully with the Team, and shall always work in the best interests of the Team. The Consultants shall be responsible for all damages of properties in carrying out the Services in the Field.

ARTICLE 6 - COST OF THE SERVICES

The Team agrees the cost of the Services by the Consultants, Twenty five thousand one hundred thirty five US$ (25,135 US dollars), as shown in Table-2 "Cost Breakdown of Road Survey" of the attached Scope of Work and Specifications.

ARTICLE 7 - METHOD OF PAYMENT

All payments shall be in US dollar given herein. The Team shall pay to the Consultants in the following manner:
(1) Advanced Payment :
Forty (40) % of the provisional amount of the cost Ten thousand fifty four US$ (10,054 US dollars), within three (3) weeks after signing this Agreement.
(2) The Final Payment
Sixty (60) % of the provisional amount of the cost Fifteen thousand eighty one

US$ (15,081 US dollars), within one (1) month after the submission of the Report and signing of acceptance certificates based on the invoice of the Consultants.
The payment shall be made in US dollars to the bank account of the Consultants in Myanmar.
The Consultants shall bear the commission for the bank transfer.

ARTICLE 8 - EFFECTIVE DATE OF AGREEMENT AND COMMENCEMENT OF THE SERVICES

This Agreement shall be effective from the date signed by both parties.
The Consultants should commence the Services within 7 days from the day this Agreement is signed by both parties.

ARTICLE 9 - REPRESENTATIVES AND MANNER OF EXECUTION

1) Upon signing of the Agreement, the Consultants shall assign a representative satisfactory to the Team. The representative shall be responsible for handling all the important matters on behalf of the Consultants.
2) The Team representative, whose name shall be notified to the Consultants, shall have power to control and supervise the Services.
3) All the Services to be carried out under this Agreement shall be executed in accordance with the Agreement, Scope of Work and Specifications or where not specified therein in accordance with instructions and orders as the Team representative may give.
4) In the course of the Services, when the Team calls the Consultants for meeting, the Consultants and/or his representative shall at any time and at his own expense attend the meeting and shall report all actual state of the Services.

ARTICLE 10 - FORCE MAJEURE

1) If either party is temporarily unable by reason of force majeure or the law or regulation of Japan and Myanmar to meet any of its obligation under this Agreement, and if such party gives to the other party written notice of the event within fourteen (14) days after its occurrence, such obligations of the party as it is unable to perform by reason of the event shall be suspended as long as the inability continues.
2) Neither party shall be liable to the other party for loss or damage sustained by such other party arising from any event referred to in the above clause 1) of the article 10 or delays arising from such event.

3) The term "Force majeure" as described herein shall mean Act of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, wars, blockades, earthquakes, storm, lightning, floods, freeze on river, snow, washouts, civil disturbances, explosions, and any other similar events, beyond the control of either party and which by the exercise of due diligence neither party is able to overcome.
4) The party that shall have no possibilities to fulfill its obligations under this Agreement is obliged to submit documentary evidence of force majeure within 14 days to the other party.

ARTICLE 11 - INDEMNITY

Unless otherwise specified hereunder, the Consultants shall indemnify and hold the Team and its engineers, supervisors, officers and employees free and harmless from any and all liability for compensations, claims, suits, costs, or charges related to any losses as well as any personal or property injury or damages that may arise out of the performance of the Services or in connection therewith.

ARTICLE 12 - INSURANCE

The Consultants shall, at its own expense, carry and maintain necessary insurance in accordance with the terms and conditions necessary for the performance of the Services and in accordance with the provisions laws and regulations of the Japanese Government and with prevailing practice in Japan, with insurance companies acceptable to the Team for the whole period of the performance of the work, including but not limited to, the following:
(1) Workmen's compensation insurance for the Consultants employees engaged in the Services;
(2) Comprehensive Automobile Liability insurance covering owned, non-owned and hired automotive equipment used by the Consultants for damages against itself injury, death or property damages caused against any third party concerned with/or not concerned with/or concerned with the Services. In spite of the aforesaid insurances the Consultants shall still be fully responsible for the performance of all its obligations as specified herein and the Consultants shall assume all risks.

ARTICLE 13 - TERMINATION OF THE SERVICES

The Team shall have the right to terminate the Services of the Consultants under this Agreement for good and sufficient causes by giving fourteen (14) days notice in writing to the Consultants. Upon termination of this Agreement,

the Consultants shall be entitled to receive remuneration and any reasonable and justifiable installation and termination costs not otherwise recovered.
Should the Consultants failure to comply with its obligations under Article 5 herein or with any other requirement under this Agreement result in the suspension, this Agreement shall be terminated.
Should the work be stopped under an order of any court or other public authority not through fault or act of the Consultants or if the Team shall fail to comply with the provisions of Article 7 herein, then after notification of such occurrences and failure to come to an agreement, the Team may stop or terminate rendering of services.
The Consultants have a right to get compensation of all fees earned to the date of termination, all costs incurred by the Consultants for services performed, all items procured for the work, and for any all losses sustained by reasons of the works stoppage and termination.

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ARTICLE 14 - TIME SCHEDULE

The Services shall be scheduled to be completed up to the 15th day of March 2013. Notwithstanding this, the Agreement will be considered to remain in force until such time as the Team issues written notice to the Consultants, confirming satisfactory conclusion of the Services.

ARTICLE 15 - LANGUAGE

The English language shall be used in all written communications between the Team and the Consultants with respect to this Agreement.

ARTICLE 16 - APPLICABLE LAW

The Agreement shall be deemed to be a contract made under all which shall be governed solely by and construed in accordance with the laws of the Myanmar Government.

ARTICLE 17 - PRESERVATION OF PEACE

The Consultants shall take all reasonable precautions for preventing any unlawful, riotous or disorderly conduct which may be caused by the Consultants employees or may occur among them and for the preservation of peace and protection of persons and property in the work site and the area adjacent thereto.

ARTICLE 18 - INCOME TAX AND OTHER TAXES AND DUTIES

Under this Agreement, the Consultants shall be liable its corporation tax, income tax, duties, contributions and other taxes or charges which may be levied both on the Consultants and his staff and labors according to the laws and regulations of Myanmar.

ARTICLE 19 - ALTERATION OF THE SERVICES

At any time during execution of the work, the Team shall have the right to make any changes in the work by giving a written notice to the Consultants. In the event of any substantial change, the date of completion of the work may be adjusted by prior agreement between both parties.

ARTICLE 20 – BANK INFORMATION OF THE COMPANIES

(1) The Team

Account Name; Oriental Consultants Company Limited

Address: 12-1, Honmachi 3-chome, Shibuya-ku, Tokyo, 151-0071. Japan

Tel: +81-3-6311-7570、Fax: +81-3-6311-8020

Beneficiary Bank; Sumitomo Mitsui Banking Corporation (JPY A/C)

Branch Name; Tokyo Chuo Branch

SWIFT Code; SMBCJPJT

Account Number; 8178672

Address of the Bank; 2-1-10, Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan

(2) The Consultants: Fukken Co., Ltd. (Myanmar Branch)

Account Name: Fukken Co., LTD. (YANGON BRANCH)

Address: No. 39/49 Corner of Bank Street & Mahabandula Street, Kyauk Tada Township, Yangon

Tel: 951-373952, 951-373953

Beneficiary Bank; Kanbawza Bank

Name of beneficiary: Fukken Co., Ltd

Account Number; 06010906000397101

SWIFT Code; KBZMMMY

ARTICLE 21 – NOTICE AND CORRESPONDENCE

Any notice pertaining to the Consultants shall be served by sending the fax to or leaving the same at the Team's principal place of business with the address stated herein.

(1) The Team

Oriental Consultants Company Limited
Address: 12-1, Honmachi 3-chome, Shibuya-ku, Tokyo, 151-0071. Japan
Tel: +81-3-6311-7570、Fax: +81-3-6311-8020

(2) The Consultants

Fukken Co., Ltd. (Myanmar Branch)
Address: No.5C, Wingabor road, Bahan Township, Yangon
Tel: +951-544-856, 545-527
E-mail fukkenns@gmail.com

ARTICLE 22 - INSPECTION OF THE WORK

The Team shall at all times have access to the Works wherever it is in preparation or progress.
Where the Specifications require any work to be specially tested or approved, the Consultants shall give the Team timely notice of his readiness for inspection and, the inspection is by an authority other than the Team, of the date fixed for such inspection.

ARTICLE 23 - DISPUTES

In the event of any disputes arising between the parties hereto with respect to the Agreement and/ or performance of the Services, the parties hereto shall endeavor to take prompt steps to amicably settle such disputes.

ARTICLE 24 - REPRESENTATION AND WARRANTIES

The Consultants hereby represents and warrants to the Team as follows:
(1) The Consultants is a corporation duly organized, validly existing and in good standing under the laws of Myanmar, and full corporate power to conduct the business presently being conducted by it and is duly qualified to transact business with the Team.

(2) The execution, delivery and performance of this Agreement by the

Consultants have been duly authorized and approved by requisite corporate action of the Consultants.

(3) The person signing this Agreement is fully authorized to represent the Consultants. This Agreement when signed, shall be binding on the Consultants.

For and on behalf of
JICA Technical
Cooperation Team

Hideki YONEYAMA
JICA Technical
Cooperation Team

For and on behalf of
Fukken Co., Ltd.

U Nyunt Sein
Fukken Co., Ltd
Myanmar Office

Attachment

SCOPE OF WORK AND SPECIFICATIONS
FOR
THE SITE SURVEY FOR ROADS
IN
AYEYAREADY REGION
IN
THE REPUBLIC OF THE UNION OF MYANMAR

I. SCOPE OF WORKS

1. Introduction

The Site Survey for Road in Ayeyarwady Region (hereinafter refer to as "the Project") shall be carried out in accordance with the following items:

(1) Data collection from Public Works and analysis of road inventory (11 routs) in Ayeyarwady Region

(2) Existing conditions survey of candidate sites for Pilot Project (15 locations) in Ayeyarwady Region

(3) Reporting

2. Definition

2.1 "the Service" means the survey execution including all works specified in the specification.

2.2 "the Team" means the Technical Cooperation Team of Japan International Cooperation Agency for the Project for Improvement of Road Technology in Disaster Affected Area.

2.3 "the Consultants" means the representative to be able to offer the Service to the Team and to be able to undertake it.

3. Site Survey

3.1 The Consultants shall provide all equipment, materials and labors necessary for the Service.

3.2 The Consultants shall provide all transportation to or from the survey sites including local transportation of the Consultant's staff, labors, and equipment.

3.3 All accommodation and other expenses shall be borne by the Consultants.
3.4 All performances of the Service shall be accomplished in accordance with to the attached time schedule, and in full coordination with the Team.
3.5 Other condition not specified in the Specifications shall be settled by mutual agreements between the Team and the Consultants.

4. Official Permission

The Consultants shall arrange at his own expense for official permission from the authorities concerned regarding the execution of the Survice.

5. Insurance

The Consultants shall at his expense purchase accident and injury insurance for engineers, technicians, and laborers employed by the Consultants for the execution of the Service, and shall keep the Team free from any claims for the compensation of any accident and/or injury that occurs.

The Consultants shall at his own expense insure the equipment, materials, and facilities to be provided by the Consultants and keep each part thereof insured for its full value against loss, damage, and fire.

6. Tax and Related Charges

All taxes, levies, deductions, charges, fees, and similar assessments imposed, assessed, levied, or collected on execution of the Service, or any sub-divisions thereof or any taxing authority therein, upon the Consultants and his staff shall be paid and/or borne by the Consultants.

II. SPECIFICATIONS

1. Location of Road Survey

The location of road survey is shown in the following table-1.

TABLE-1

11 Routes for Road Survey

No.	Location	Length (km)
1	Maubin-Yelagale-shwedaungmaw-Kyaikpi-Mawlamyine-gym	82.8
2	Mawlamyine-gym-Hlaingbone-Thitpoak-Kwinpouk-Pyinzalu	115.8
3	Labutta-Tingangyi-Pyinzalu	79.4
4	Labutta-Thongwa-Oaktwin-Hteiksun	99.8
5	Bogalay-Kyeinchaung-Katonkani	66.0
6	Bogalay-Setsan-Htawpine-Ama	61.8
7	Pyapon-Kyaonkadun-Dawyein-Ama	82.6
8	Kyaonkadun-Setsan	30.6
9	Pathein-Thalaikhwa-Mawtinsum	153.6
10	Bogalay-Mawlamyine-gym-Wakema-Myaungmya	105.6
11	Patein-Ngapudaw	33.6
TOTAL		911.6

2. Location of Differential GPS Survey and Sampling

The Contractor shall carry out differential GPS Survey, Soil Sampling and General Information Survey at the following "Candidate Sites for Pilot Project" (15 survey points in total). Exact locations of 15 survey points shall be instructed by the Team. Laboratory Test for the sampled soil will be carried out in Road Research Laboratory (RRL) of Public Works in Yangon. Transportation of the sampled soil to RRL is included in the tasks of the Consultants.

On Route No.7 Pyapon-Kyaonkadun-Dawyein-Ama

(6 locations at the point instructed by the Client)

On Route No.2 Mawlamyine-gym-Hlaingbone-Thitpoak-Kwinpouk-Pyinzalu
(2 locations at the point instructed by the Client)

On Route No.6 Bogalay-Setsan
(2 locations, the left bank side of Bogalay Bridge, the left bank side of Tha Kan Bridge)

On Route No.10 Bogalay-Mawlamyine-gym
(2 locations of Kywe Chan Bridge)

On Route No. 3 Labutta-Tingangyi-Pyinzalu
(1 location at the point instructed by the Client)

On Route No.4 Labutta-Thongwa-Oaktwin-Hteiksun
(1 location at the point instructed by the Client)

On Route No.5 Bogalay-Kyeinchaung-Katonkani
(1 location at the point instructed by the Client)

4. Submission of the Report

The Report containing the following shall be submitted with the original and two (2) copies each to the designated address directed by the Team as digital data (MS Word files, MS Excel files, Auto CAD dwg files, PDF files)

The following data shall be included in the report and to be submitted to the Team.

1) Road Inventory Data
   Road Inventory Data by Public works for 11 routes shown in Table-1. All information shall be translated in English.
2) Bridge Data
   Bridge profiles and soil investigation data by Public Works, for up to 7 bridges, as instructed by the Team, including Maubin River Bridge, Thau Kan Chaung Bridge, Kwe Chan Ye Kyaw Bridge and Bokalay Bridge. All information shall be translated in English.
3) General Information of the Site

Following General Information collected from existing data or interviewing to the residents shall be included in the report for each survey point (15 survey points in total).

a) Beneficially data (Approximate number of people who may use the road)
b) Approximate Daily Traffic Volume (heavy truck, bus, light vehicle, motor cycle, bicycle, pedestrians)
c) Flood level (few years interval, at the time of Cyclone Nargis)
d) Laboratory test data sheet and graphs
e) Photographs at survey points (road conditions, soil sampling etc.)

5. Weekly Report

During investigation, the Consultants shall submit the weekly report of the Service to the Team. The report shall contain weekly progress and staffing information.

6. Occupation

The Team shall have a right to access the investigation work at any time to check the activities and to request the revision of survey manner.

7. Language

All drawing, report and letters from Consultants shall be in English.

8. Others

The Consultants shall give comments on the way and results of Laboratory Test performed by RRL.

FIGURE-1

SCHEDULE OF SITE SURVEY FOR ROAD

Description	2013	
	February	March
Mobilization		
Data Collection for 11 routes		
Site Survey at 15 points		
Reporting		

Remarks: The exact locations of site survey are instructed by the Team

TABLE-2

COST BREAKDOWN OF ROAD SURVEY

No.	DESCRIPTION	UNIT	QTY	RATE (USD)	COST (USD)	REMARKS
A	Data Collection and Analysis for Road and Bridge Data of Public Works					Including English Translation
	a) Senior Engineer	days	7	100	700	1 person x 7 days
	b) Junior Engineer	days	7	70	490	1 person x 7 days
	c) Car charge including driver	days	7	180	1,260	Round trip between Yangon and NPT, and within NPT
	d) Accommodations for Engineers	nights	14	65	910	in NPT
	Sub Total				3,360	
B	Existing Conditions Survey of Candidate Sites for Pilot Project (15 locations)					
	a) Senior Engineer	days	21	100	2,100	1 person x 7 days
	b) Junior Engineer	days	21	70	1,470	1 person x 7 days
	c) Car charge including driver	days	21	120	2,520	Round trip between Yangon and sites, and within sites
	d) Accommodations for Engineers	nights	42	45	1,890	in Bogalay
	e) Differential GPS Survey and soil sampling					
	Survey and Sampling	points	15	565	8,475	2 points per day
	Accommodation fro Surveyor	nights	48	45	2,160	8 nights for 6 surveyors
	Car Charge for GPS Survey	days	9	240	2,160	8 days 2 cars for 6 surveyors, pickup car
	Sub Total				20,775	
C	Reporting	lot	1	1,000	1,000	(in English)
	TOTAL			USD	25,135	only

平成 25 年 2 月 18 日

再委託選定経緯報告書（現況調査(1)）

１．案件名

ミャンマー国災害多発地域における道路技術改善プロジェクト

２．再委託契約名

The Site Survey for Roads in Ayeyarwady Region

３．再委託業者名

Fukken Co., Ltd. (Myanmar Branch)　担当者：U Nyunt Sein

住　所：No.5-C, Wingabar Road, Bahan, Yangon, Myanmar

電　話：+951-544856　E-mail：fukkenns@gmail.com

４．再委託契約履行期間

2013 年 2 月 7 日～3 月 15 日（37 日間）

５．再委託契約金額

US$ 25,135.-

６．再委託業務の概要

本件では、以下の項目については、調査業務の効率的実施の観点から、当該業務について豊富な経験・知見を有する現地コンサルタントに再委託で実施することとしている。

① パイロット事業対象候補地の現況調査

② 第一期事業現地調査・試験

このうち、今回の再委託「パイロット事業対象候補地の現況調査(1)」（英文再委託契約名"The Site Survey for Roads in Ayeyarwady Region"）は、上記①に関するもので、上記②（ボーリング調査を含む）は、現時点でボーリング位置が確定していないため、別途実施するものとした。

本業務を再委託で実施する場合の利点は以下のとおりである。

- 調査機材を豊富に有する現地業者が複数おり、再委託を行うことで、コンサルタントチームによる必要機材の調達・運搬が不要となり、直ちに調査が可能となる。
- 現地で収集する関連資料等はミャンマー語であることが多く、これらをコンサルタントチームで翻訳するよりも、再委託成果品を英文調査レポートとして求めることで、これら関連資料の翻訳時間・費用の節約が可能となる。

「パイロット事業対象候補地の現況調査(1)」の内容は、概ね以下のとおりである。

① PW のエーヤワディ地域における改良予定道路（11 路線）、計画・建設中橋梁等のインベントリデータ、および改良計画の収集と分析（英訳を含む：2 週間程度）

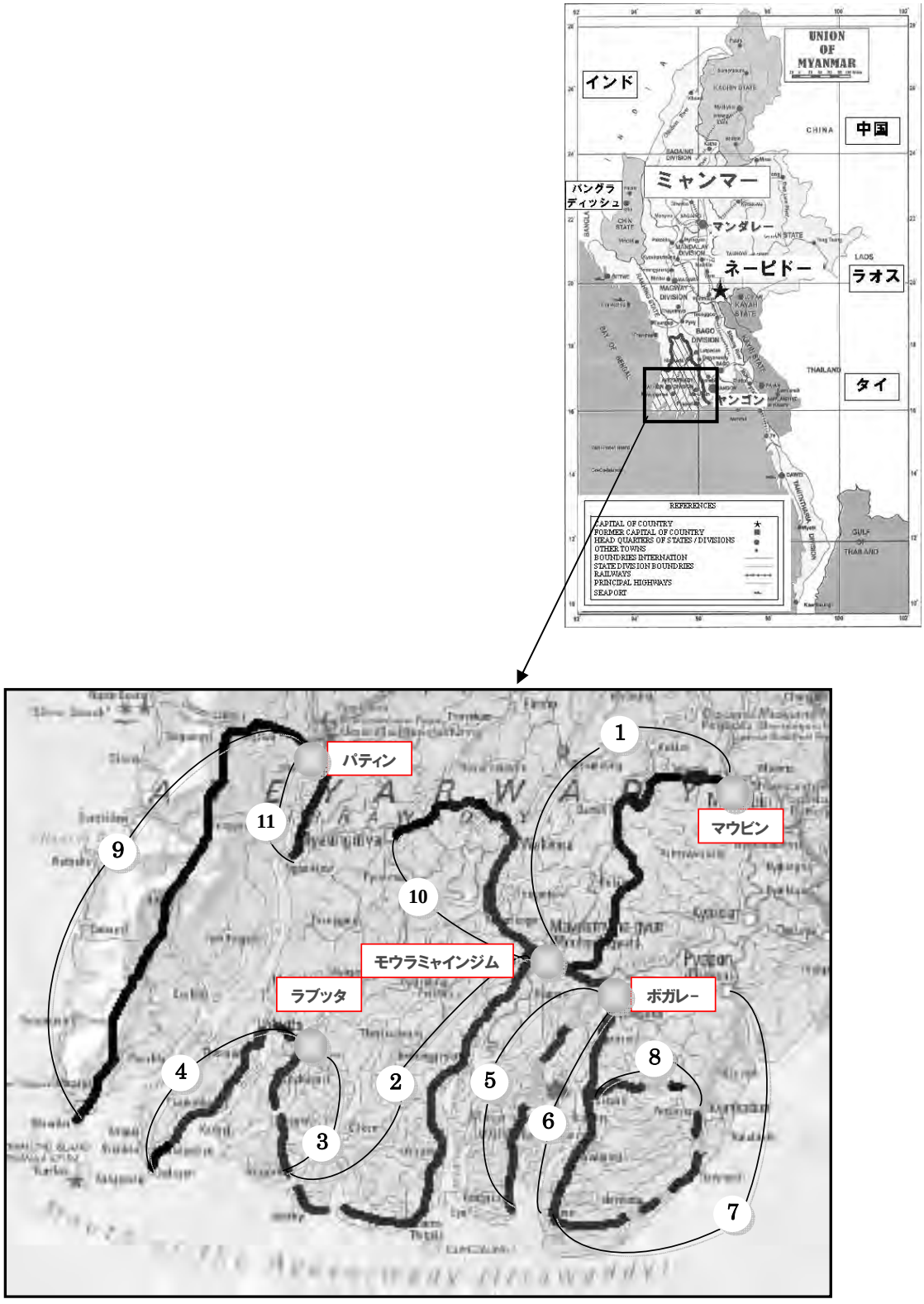
② 収集データを基に団員との協議を通じて設定する 15 箇所の候補区間の現状調査：3 週間程度）

- 舗装状態
- 路面の標高
- 洪水の履歴、周辺の人口ほか社会データ・災害時被害状況の聞き取り調査

- 現状道路路盤からの試料収集（物理試験：粒度・PI・最適含水比・CBR：PW の道路研究所に持ち込むまで。試験は PW が行う）

③　上記の写真等を添付した、調査レポートの作成

エーヤワディ地域における改良予定道路（11 路線）の位置を以下に示す。



７．選定方法

(1) ショートリストの作成

本件の提案書作成段階で、エーヤワディ・デルタ地域における地質調査業務の特殊事情（乾期であっても車両による移動が出来ない箇所が多々あり、移動用のボート等が必要となる）を考慮し、この地域での地質調査業務経験のあるコンサルタントであることを条件に、以下の 3 社を選定した。

再委託先候補	連絡先	担当者名
Fukken Co., Ltd.　(Myanmar Branch)	951-544856	U Nyunt Sein
Pioneer Survey and Map Consulting Co., Ltd	09-8613295	U Myo Nunt
Saramayri-Fuji Construction Company Limited	09-8612397	U Tin Min Zaw

(2)　再委託先選定方法

提案書の作成段階で得た見積書をもとに、本件の再委託予定金額は、約 220 万円と予想されたことから、再委託先の選定方法は、最低コストに基づく「指名見積競争」によるものとした。

(3)　見積依頼書の発出

見積依頼書は、ショートリスト先に対し、2013 年 2 月 4 日に送付し、見積書提出期限を 2013 年 2 月 6 日正午とした。

(4)　見積書の開封

2013 年 2 月 6 日正午までに、ショートリスト先の 3 社より見積書が提出され、同日 14:00 に、JICA ミャンマー事務所において、見積書を開封した。開封結果は、下表のとおり。

再委託先候補	金　額	交渉順位
Fukken Co., Ltd.　(Myanmar Branch)	USD 25,135	1
Pioneer Survey and Map Consulting Co., Ltd	USD 29,680	3
Saramayri-Fuji Construction Company Limited	USD 27,680	2

(5)　契約交渉・契約

2013 年 2 月 7 日 10:00 より、交渉順位 1 位となった Fukken Co., Ltd.　(Myanmar Branch) と契約交渉を行い、支払い方法を含む契約内容を確認、合意したため、同日、午後契約書を取り交わした。

契約金額は、USD 25,135（約 1,976,000 円：換算レート 1USD=78.63 円）で、予算との差額（3,927,000− 1,976,000＝1,951,000 円）は、現時点では実施位置が確定していないボーリング調査を今後行う場合の再委託費用とする。

平成 25 年 2 月 18 日

見積書開封状況（2013 年 2 月 6 日：JICA ミャンマー事務所）

シールの確認

見積書開封